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Monitoring and Evaluating Classroom Behavior In Early Childhood Settings

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Abstract

Monitoring and evaluating classroom behavior in early childhood for the purpose of improving teaching and learning is critical. There is a clear link between social behavior and academic learning. Classrooms where students are following expectations, engaging academically, and transitioning effectively between activities are classrooms where students spend more time accessing instruction. In order to make efficient and effective decisions for class-wide supports, data should be collected on the class as a whole. With accurate data, interventions can be implemented for the whole group that will increase instructional time.

In this paper we propose quick and efficient data collection methods for three key behaviors: following expectations, engagement, and transitions. With minimal disruption and effort, teachers can collect data that will enable them to support appropriate behaviors, ensure that students understand behavioral expectations, maintain an organized environment, improve positive interactions, and decrease the number of students needing intensive, individualized supports.

Positive Behavior Supports
Time Sampling
Event Recording
Systematic Intervention
Informed Decision Making
Classroom Management

PBS
Data Collection Methods
Observation
Primary Intervention
Classroom Behavior

Tier 1 Supports
Data-Based Decision Making
Prevention
Group Observation
Behavior Management

Ms. Johnson just returned to her preschool class after attending a conference on teaching rules and expectations, and improving outcomes for her students by minimizing disruption in the learning environment. She attempts to implement what she has learned. Ms. Johnson creates and teaches simple rules for her students, arranges the environment to encourage independence and organization, and increases her ratio of positive-to-negative interactions. It seems like there are fewer disruptions during class and that students are spending more time attending to task, but she is not sure how much of a difference her efforts have made and what she might still need to improve. How can she find out what she needs to know to keep improving?

When making decisions regarding planning and instruction for young children such as Ms. Johnson is trying to make, valid and recent data should always be considered. Therefore, assessment must be an important part of any program for young children. The National Association for the Education of Young Children (NAEYC) defines assessment in developmentally appropriate programs as assessment integrated with curriculum, “with teachers continually engaging in observational assessment for the purpose of improving teaching and learning” (Bredekamp & Copple, 1997, p.21).

Positive Behavior Support (PBS) offers a useful framework for thinking about monitoring and evaluating student behavior. PBS focuses on a three-tiered model to provide comprehensive behavioral support for all students. At the primary level or first tier, interventions focus on prevention and designing environments that are predictable,

consistent, positive and safe for all students (Carr et al., 2002; Horner, Sugai, Todd, & Lewis-Palmer, 2005). At the secondary level, or second tier, interventions focus on providing additional support for some students who are not responding to tier one interventions (Crone & Horner, 2003). Finally, at the tertiary level, or third tier, interventions focus on providing individualized, function-based supports for a small number of children who are not responding to either tier one or tier two interventions. (Crone, Horner, & Hawken, 2004).

The PBS model focuses on providing prevention support (tier one and tier two) in order to decrease the number of students needing intensive support (tier three). After all, “prevention is the most effective form of behavior management. That is, the most efficient way to eliminate misbehaviors is to prevent their occurrence or escalation from the beginning” (Barbetta, Norona, & Bicard, 2005, p. 11). Research on PBS demonstrates that primary or class-wide supports will be sufficient to manage the behavior of 80-85% of students, another 5-15% of students will respond to secondary supports, and 1-7% will require intensive, individualized interventions (Crone & Horner, 2003).

Ongoing assessment is the key to the PBS model. In order to effectively and efficiently support all students, we need strategies and systems for collecting data and using that data to guide decision making for primary or class-wide interventions. While our goal is one of prevention, interventions in preschool settings currently tend to be more individualized and reactive. Typically, “interventions are developed in response to one child’s disruptive behavior without systematically reducing the risk of other children in the classroom developing similar patterns of challenging behavior” (Benedict, Horner, & Squires, 2007, p. 174-175). While these types of individualized interventions are critical to reduce severely disruptive behaviors, they do not address the needs of the entire class.

Similarly, while data for individual students are critical for designing teaching techniques and ensuring the success of every student in the class, it is also possible to use group data to ensure that as many students as possible are able to achieve success with class-wide supports. Observation of individual students, while necessary, takes away from time spent teaching and interacting with the entire group. It can be overwhelming for a classroom teacher to conduct observations on multiple children. Often, after the individual observation has been done, it can be determined that some potential interventions may benefit the entire group. While this is beneficial, it is also possible that the need for class-wide supports could have been determined in a shorter amount of time with less intensive data collection.

Data collection that provides information regarding the group rather than specific students is important because it is more efficient and less time-consuming than multiple individual assessments. Since 80-85% of students will benefit from whole-group supports (Crone & Horner, 2003), data collected on the whole group will guide decision making that will be most effective and efficient for all students.

“Data collection is the foundation of informed teacher decision making”, yet “the disconnect between research and practice is most visible in the collection of data for educational decision making” (Gunter, Callicot, Denny, & Gerber, 2003, p. 4). The purpose of this paper is to suggest ways to collect data on a whole group and use this data to develop class-wide supports. This paper will identify ways to collect data on groups of students for such behaviors as engagement, transitions, and following expectations. The focus will be to present data-collection methods that are efficient and effective for teachers in early childhood settings. It is not necessary to collect large amounts of data. It is more beneficial to collect data relating to effective environments and use this data to guide decision-making.

Monitoring Classroom Behavior

There are several types of data-collection methods appropriate for collecting data regarding behaviors in the classroom. Though many of these methods are more frequently used to document individual behaviors, they can be adapted to document group behaviors. This data can then be used to make informed decisions regarding the implementation and modification of class-wide supports benefiting the majority of the students in a class. By collecting data and making informed decisions on whole-group behaviors, teachers can help to prevent challenging and off-task behaviors.

In this section, we will discuss data collection and decision-making methods for three key classroom behaviors in early childhood: following expectations, on-task behavior, and transitions. For each behavior we will discuss why it

is important to monitor, present one method for effectively and efficiently monitoring it, discuss using data for decision-making, and present variations for use.

Following Expectations

Following expectations is important for the safety of all students, increases on-task time, and encourages respect among students. Teachers typically implement rules and routines that ensure an orderly, efficient, and safe environment. Classroom expectations may include rules regarding personal space and the treatment of peers, teaching staff, and materials. When students follow rules and expectations, there are fewer disruptions and distractions in the classroom. Students are also clear about the expectation regarding treatment of their peers which helps foster positive relationships and respect among students.

Monitoring Following Expectations. One data collection method that is both efficient and effective for monitoring following expectations is a simple tally. While it is recommended to gather data on appropriate behaviors, initially it may be easier to collect data on when students are not following expectations. By simply making a tally each time a student or students do not follow classroom expectations, teachers can gather useful information about which expectations students are following, which expectations may require further teaching and what times of day (or days of week) are more challenging for students. We propose that teachers can gather this information while they are teaching without disrupting instruction or student behavior.

<See Figure 1>

Figure 1 provides a sample of a completed simple tally data sheet Ms. Johnson used to monitor when students were not following classroom expectations. At the top of the data sheet, Ms. Johnson recorded the dates in which data collection occurred and the specific classroom expectation that data was being collected on (keep our friends safe). In the far left column, she filled in her regular classroom schedule. Across the top row, the days of the week are listed. This data sheet can be used for one entire week to gather information about patterns of behavior. Throughout the day, Ms. Johnson made a simple tally mark in the corresponding box when she observed students not following directions.

Decision-Making for Following Expectations. At the end of the week, Ms. Johnson added up the tallies for each day and calculated the average number of tallies in each routine for the week. Ms. Johnson then identified days and routines that stood out (i.e., Wednesday and Friday had more tallies than the other days of the week and playground, outside time and centers had more tallies than other routines). By looking at this data across the week Ms. Johnson was able to inform her instruction. Given her data, Ms. Johnson decided to re-teach the expectation of *Keep Our Friends Safe* when out on the playground and while at centers. Depending on which routines stand out, Ms. Johnson may be able to analyze other factors that individual routines have in common. For example, if more inappropriate behavior occurred during centers and free choice, Ms. Johnson might ask herself what these two routines have in common. It may be that students have less interaction with the teacher during this time and Ms. Johnson needs to work with students on appropriately working with peers. In the example in Figure 1, Ms. Johnson was also able to notice that her regular classroom aide was out sick on Wednesday and Friday. She decided to make sure to train any substitute aides in her classroom on the classroom expectations at the beginning of the day.

Variations for Following Expectations. While recording data for an entire week can provide useful information about student behavior, it is not necessary to record data during every routine or activity every day. Teachers may want to target specific times of the day when they know their students are having more difficulty. Teachers may also want to collect data on more than one classroom expectation at a time. Our goal is not to collect as much data as possible, but to collect the most useful data possible and to use that data to guide instruction.

We have provided a form that is simple and effective to use but it is not necessary for teachers to carry this form around with them everywhere they go. One simple variation is to record data in a more convenient place and then transfer the data to the data sheet for summarizing and decision making later. Some teachers place a piece of masking tape on the back of their hand, record tally marks on the tape during their lesson or while out on the playground and then transfer the tallies to the data sheet at the end of the day or the end of the routine.

Engagement (On-Task Behavior)

Engagement in the classroom includes “behaviors that are important for learning (e.g., attending to instruction, completing seatwork and assignments, generally expending effort needed to understand class material) and social behaviors that facilitate learning (e.g., following classroom rules, working cooperatively with other students) and *not* engaging in activities that detract from learning” (Finn & Pannozzo, 2004, p. 79). When students are not engaged in the classroom either academically or socially, they are less likely to benefit from instruction and more likely to disrupt the teacher or other students, having an effect not just on their own learning but also the learning of the entire class (Finn & Pannozzo). Increasing students’ on-task behavior in the classroom will allow teachers to maximize learning time and have the greatest impact on their students.

Monitoring On Task Behavior. Monitoring on-task behavior consistently throughout the day can be onerous. One easy-to-use alternative is take snapshots of the behavior at different points during the day using time sampling (Mann, Have, Plunkett, and Meisels, 1991). Rather than observing continuously, data is only recorded at the end of a specified period of time (Alberto & Troutman, 2006). By using a timer or other device to signal when to record on task behavior this system becomes very practical for teachers to use throughout a variety of activities including teacher-led instruction, individual work and group activities.

<See Figure 2>

Ms. Johnson decided to use time sampling in her class to observe students’ on task behavior during centers. Given the data she collected on following rules and her own knowledge of her classroom, she was concerned about students’ engagement during this time. Figure 2 shows the data that Ms. Johnson collected. At the top of the form she filled in the date and activity, the start and stop time of her observation, the number of students present that day, and the length of the interval she chose to observe. Ms. Johnson chose to use a 5-minute interval for two reasons: (a) it would be easy for her to look up and observe students every 5 minutes (not too often), and (b) since her centers were 45 minutes in length she would still be able to get 9 data points. Ms. Johnson filled in the intervals down the left hand column, set her stopwatch for five minutes and then observed. Every five minutes she would look up, count the number of students who were not engaged, and fill in the box corresponding to that number of students.

Decision-Making for On-Task Behavior. At the end of the activity, Ms. Johnson drew a line connecting each interval to the next. Rotating her data sheet 90 degrees counter-clockwise she had a quick graph of her students’ engagement. Ms. Johnson’s first reaction was that she was concerned about the number of students who were off task at the end of the activity. Her next thought concerned what she could do to improve this situation.

Ms. Johnson realized that she could use this data to determine an appropriate length of time for activities in her classroom and that when the number of students who were off-task reached a number that was unacceptable to her she would know that the activity had extended beyond the length of time the majority of students are able to stay actively engaged. In this example, a large number of students begin to engage in off-task behaviors 25 minutes into centers. Ms. Johnson decided that she should consider one of two things: (a) limit centers to 25 minutes, or (b) alter the format of centers (i.e., incorporate motor or sensory activities at this point or require students to move from one center to the next).

Variations for On Task Behavior. The data sheet provided could be used in a variety of different ways, including (a) throughout different activities (i.e., independent work, group work, teacher-led instruction), (b) to provide feedback on individual students, and (c) with different behaviors (i.e., to monitor appropriate use of materials). Gathering information on student engagement during teacher-led instruction or independent work could provide useful information to inform decisions regarding teaching methods, the optimal length of time for lessons, the need for review or remediation, and the appropriateness of the difficulty and complexity of an assignment. Although the data form provided does not formally record which individual students are off-task, teachers may begin to notice patterns and could choose to record the initials of those students who are off-task at each interval. This information may be helpful to determine if some individual students need targeted interventions. Finally, although this data sheet was developed to record students’ academic engagement, teachers could easily record other behaviors of interest. For example, if Ms. Johnson was concerned about how students were using classroom materials, she could collect data at each interval on the number of students who were using materials inappropriately.

Transitions

Transition refers to a change. Behaviors such as moving from one activity or setting to another and listening and following directions are important in maximizing learning time. The longer it takes students to transition among activities or to begin a task after receiving directions, the less time the students are able to spend on-task or the teacher can spend teaching. Efficient transitions also increase structure in the environment, empower students, and reduce opportunities for students to engage in appropriate behaviors.

Monitoring Transitions. One simple and efficient way to monitor transitions in the classroom is to time them. Since the amount of time students spend in transitions is time they are not spending engaged in learning, gathering information about how long transitions take throughout the day can provide very useful information. Recording the length of time it takes students to complete a transition from the time the direction for change is given is referred to as latency. There are several advantages to this type of data collection, including: (a) it is easy to use a timer over short durations (i.e., transition times), (b) the teacher does not need to record data during the transition (only at the conclusion), (c) it is simple to compare one transition to another, (d) students can be involved in goal-setting and progress monitoring (i.e., teacher can tell students how long the transition took them yesterday and ask if they think they can do better), and (e) teachers can quickly evaluate procedures and environments.

<See Figure 3>

Figure 3 shows data Ms. Johnson collected on the transitions in her classroom over a one-week period. This data form is similar to the form used for following expectations and is meant to be used with a teacher's classroom schedule. Ms. Johnson began by filling in the dates she would be recording data at the top of the sheet and her classroom schedule down the left column. Throughout the week, Ms. Johnson carried a stopwatch with her (around her neck) and recorded the number of seconds each transition took (i.e., the top left cell represents the number of seconds it took the class to transition to free choice on Monday). If there were transitions when Ms. Johnson was unable to collect data, she would just put a line through the cell.

Decision-Making for Transitions. At the end of the week, Ms. Johnson calculated the average number of seconds spent in transition (a) each day, and (b) for each activity across the week (she calculated the average rather than the total in order to account for those transitions when she was not able to collect data). Reviewing the data for the week, Ms. Johnson saw two transitions that concerned her, the transition from centers to circle (230 seconds average), and the transition from lunch to rest time (250 seconds average). Given this information, Ms. Johnson decided to re-teach the expectations for these transitions with her class, practice the routines involved and set goals as a group. She involved students in goal setting and monitoring progress by using the timer and having the class attempt to beat their previous times. Ms. Johnson also used the data to identify some positives in her classroom. The transitions to morning circle and to group snack looked very efficient. Comparing those transitions to the transitions to circle and rest time helped Ms. Johnson identify procedures she had in place for the morning circle and group snack transitions that she may be able to include within other routines. Teachers can use data collected on transitions to identify routines that require additional teaching or practice, strategies that are working well, and possible changes that are required in their daily schedule (i.e., teachers may notice that students consistently have difficulty transitioning from recess to rest time and they may want to consider reorganizing their schedule so that students do not move from a high-activity routine to a low-activity routine so quickly).

Variations for Transitions. The data sheet provided for transitions can be used in several different ways including: (a) to target specific transitions, (b) to include students in goal setting, and (c) to target following directions. It is not necessary for teachers to complete the entire form gathering data on all transitions each day. Often teachers are aware of which transitions go smoothly and which transitions are more difficult. It can be very informative to gather information just on those transitions that are more difficult. This can be an effective way to include students in goal setting as well. After teachers collect the data and depending on the developmental level of their students, they can have students graph the data for the day. This can be a wonderful visual representation for students for how they are doing in reaching their goals. Finally, latency data may be used to record the amount of time it takes to begin an activity after being given directions. This would indicate to the teacher the number of students who understood the directions and/or assignment and, possibly, whether the directions were too difficult.

Putting It All Together

Data collection should be deliberate and the data yielded should be used to inform decisions, not only about rules and behavior intervention, but also instruction. Barbeta, Norona, and Bicard (2005) list missing the link between instruction and behavior as one of the common mistakes made in regard to classroom behavior. Keep in mind that procedures and aspects of the environment that influence students' on-task behavior include a variety of both social and academic variables. Teachers should consider procedures, routines, rules, visuals, clear and defined classroom areas, teacher instructions, length of lessons, types of lessons, difficulty of assignments, and group dynamics (including peer interactions) when making decisions regarding modifications that are needed.

It is important that data be collected regularly and consistently. However, it is not necessary or advisable to attempt to collect several different types of data at one time. Teachers should determine what types of data collection work best in their classroom and are least disruptive to the learning environment. Methods that involve a quick check and simple recording are easiest to manage in a classroom setting during instruction. While constant recording may produce more information, it is not likely to be very efficient or practical.

The most important consideration in choosing a data collection method is that it is manageable. Elaborate systems that require a great deal of time and effort are not likely to be utilized consistently. Take only necessary data, encourage and teach students to self-monitor (i.e., graphing transitions times and setting goals), and remember to start with what is manageable and do not get discouraged. It gets easier with practice.

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Figure Caption

Figure 1. Following Expectations Observation Form

Figure 2. On Task Behavior Observation Form

Figure 3. Transitions Observation Form

Observation Form Following Expectations

Date (week of): April 6 – April 10, 2008 **Expectation:** Keep Our Friends Safe

Daily Schedule	Monday	Tuesday	Wednesday	Thursday	Friday	AVERAGE
Free Choice	111	11	1111	11	111	2.8
Outside	11111	1111	1111111	11111	111111	5.4
Wash Hands	1		1	1		0.6
Morning Circle	11	11	11	1	111	2.0
Group Snack	1			1	1	0.6
Centers	1111	11111	111	111	11111	4.0
Circle	11	1	111	1	11	2.0
Playground	1111	111111	111111111 111	111111	1111111	7.0
Lunch	1	11	1		11	1.5
Rest Time	1	1	1	1	1	1.0
Circle	1	11	111	111	1	2.0
Departure	1	1	1	1	1	1.0
TOTAL	26	26	38	25	32	

*Tally each time the target expectation is broken in each routines

Observation Form On Task Behavior

Date: April 6, 2008 **Activity:** Centers

Start Time: 10:00am **End Time:** 10:45am **Length of Interval:** 5 min.

Total Number of Students in Group: 18

Interval (in minutes)	Number of Students Off Task
5	
10	
15	
20	
25	
30	
35	
40	
45	
50	
55	
60	

Observation Form Transitions

Date (week of): April 6 – April 10, 2008

Daily Schedule (transition to)	Monday	Tuesday	Wednesday	Thursday	Friday	AVERAGE
Free Choice	45	40	45	40	45	43
Outside	75	85	80	120	95	91
Wash Hands	120	100	120	110	100	110
Morning Circle	35	30	25	30	30	30
Group Snack	35	----	35	---	35	35
Centers	95	120	110	---	120	111.25
Circle	200	240	220	---	260	230
Playground	45	40	45	40	50	44
Lunch	60	50	60	50	45	45
Rest Time	260	240	250	260	240	250
Circle	65	60	65	60	65	63
Departure	65	60	55	65	55	60
AVERAGE	91.7	96.8	92.5	86.1	95	

*Record data in seconds