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CHILD OBSERVATION IN PRESCHOOLS (COP)

**ADAPTED VERSION FOR SWEDISH PRESCHOOL CONTEXT
FOR THE COMBINED TUTI AND PEPI DATAFILE 2018**
Adaptations were made to the COP version from May 2014 and are marked in red.

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Introduction to the COP

The Child Observation in Preschools (COP) is a system for observing children's behavior in preschool classrooms across a day-long visit. **Note: In Sweden, preschool children refer to children from 1 up to 5 years of age. In the PEPI project, children were between 3-5 years. In the TUTI project, children were between 1,5 and 5 years. This means that toddlers were also observed in the TUTI project, and most often they were enrolled in specific units for children under 3 years. Therefore, the manual has been adapted to fit toddlers as well. The observations are conducted both indoors and outdoors. Some of the codes below have been collapsed and are marked in grey letters.** The purpose of using the COP system is to provide specific information about how each child in a classroom spends his/her time. Although other observational tools examine the classroom from a top-down perspective, focusing on how the classroom is organized as a whole (e.g., what the teacher's focus or intent is, how involved children are as a group), the COP allows for detailed glimpses into the classroom experience of the individual child. The COP is based on a series of snapshots of children's behavior across a period of time. Each snapshot may be, by itself, an unreliable piece of information, but collectively, they combine to provide a picture of how children are spending their time in a classroom (as an aggregate), as well as information about individual differences in children's experiences. **Note: In the TUTI project, all children in the classroom were observed, but in the PEPI project, only consented children (M: 64% of the children at the preschool unit) were observed.**

This manual is designed to introduce COP observers to the categories and codes used, as well as providing detailed examples of how children's behaviors are coded in classrooms. It includes sample scenarios designed to illustrate how the codes are used, as well as the subtle differences that distinguish how codes are applied in different scenarios. There is also a supplement to this manual that includes videos taken from real classrooms with detailed information about coding. This information is provided with the caveat that becoming a proficient and reliable COP observer requires much practice in real-life classrooms with experienced coders. First, however, before all the technical details of coding are addressed, it is important to understand the theoretical and practical rationale behind the established COP categories and codes. This manual is organized by COP category, and a brief description of the theoretical rationale for each category is found below. (Click the hyperlink to jump to that category in the manual for more details. The MS Word Navigation pane can also be used to navigate this document and move between sections.)

Verbal/To Whom

The *Verbal* and *To Whom* categories capture whether children are talking or listening, and to whom they are speaking or listening. These behaviors are important to code because, according to Vygotsky, language facilitates children's internalization of social structures and rules through their interactions within the social world around them (1962). For example, children's language use is related to how well they can take another's perspective and understand different emotional states or points of view (Nelson, Skwere, Goldman, Henseler, Presler, & Walkenfield, 2003.) Not only is talking and listening behavior important for children's socio-emotional development, but it may relate to learning and achievement as well (Hofer, Farran, & Cummings, 2013).

In addition to verbal interactions with others, the *Verbal/To Whom* categories also capture whether children are talking to themselves (i.e., self-talk/private speech), which

Vygotsky suggested was important for regulating both thought and behavior. Research regarding children's use of private speech has suggested that self-talk may help guide children's cognitive functioning, helping them work through difficult problems (Berk & Garvin, 1984; Krafft & Berk, 1998). In addition to capturing private speech, the *To Whom* category allows observers to characterize the nature of verbal interactions in the classroom by recording whether children are talking to the teacher or to other children, to the whole group or a small group.

Schedule

The *Schedule* category refers to how the children are organized in different learning settings (e.g., whole group, small group), rather than any official daily schedule that may be posted. Recognizing that teachers have many different ways of grouping and organizing children for learning activities, it is important to capture how these groups are being used in the classroom. Of particular interest might be how frequently children are in a large group setting or small group setting, and how much time is spent in centers. Further, this category also gives an indication of how much down time children are experiencing in transition from one activity to the next.

Proximity

The proximity category is different from the schedule category in that it records who is within a three-foot radius of the target child, regardless of classroom schedule or organization. **Note: When children are outdoors, the definition of proximity has been more generous, specifically, the radius of proximity is 1,5 meters for TUTI and 3 meters for PEPI.** Schedule and proximity are contextual factors that might affect whether children are or are not engaged in learning. If children are engaged in learning, schedule and proximity may also help determine how they are interacting with others and the complexity of what they are learning.

Interaction State

The codes in the *Interaction* category capture the social parameters of the child's learning experience. Children's interactions can be determined in part by preference, in part by developmental competence, and in part by what is allowed and engineered by the teacher. Parten (1932) described types of play among young children as being solitary (i.e., alone), parallel, associative, or cooperative in nature, and these categories are still widely used (e.g., Farran & Son-Yarborough, 2001). Children who are playing *alone* may be in proximity to others, but they have unique materials and are not interacting with other children in any way. *Parallel* learning occurs when children are using similar materials or engaging in a similar learning activity, but each is working independently. *Associative* interactions occur when children are sharing materials and interacting, but there is no distinguishable goal for the group. *Cooperative* play, however, involves children working together with some sort of shared goal, rules, and/or organization. Associative play and cooperative play require children to communicate and work with peers. They also require children to monitor their own behavior and adapt to the needs and expectations of the group to accomplish a certain task.

One of the most important distinctions COP observers make is whether children are engaged in a learning activity or not. It is impossible, of course, to be in a learning activity all the time in a classroom; non-academic activities and transitions are ordinary and essential elements in any classroom. The *Interaction* category includes a "non-academic" code for the alternatives to learning interactions in which children can be engaged -- they might be engaged

in classroom routines like hand-washing, toileting, putting on coats, etc. or they might be waiting for learning opportunities to begin (e.g., waiting on the rug as the other children finish cleaning up). But children may also not be engaged in learning because they are unoccupied, appearing to have difficulty getting engaged. In line with Parten's (1932) original designations, the COP also records whether children are *unoccupied*, despite the presence of a learning activity. Children can also be coded as *onlookers*, if they are observing an activity in which they are not directly participating.

There is a hierarchy of complexity within this category, ranging from unoccupied all the way to cooperative, with each successive type of interaction requiring a higher-level of participation and engagement with peers than the preceding one. Associative and cooperative forms of play potentially provide the most opportunity for children to talk to one another and to learn to take another's point of view (Farran & Son-Yarborough, 2001). Parten's initial study found that older children tended to engage in more associative and cooperative interactions than younger children, a finding that suggested a natural developmental progression of children's play.

Type of Task

The *Type of Task* category is used in conjunction with *Interaction State* to describe how the child is experiencing the learning task. In coding the *Type of Task*, observers consider both the demands of the learning task, and how the child is engaging with the task to characterize the complexity of this interaction. Are children supposed to passively receive instruction usually with no materials to explore on their own? Are they exploring (non-sequential), or following a predictable sequence of steps (sequential)? Perhaps they are attempting to act out a predetermined script (as in Fantasy Drama)?

Similar to *Interaction State*, there is an inherent hierarchy within this category, depending on the type of learning demands placed on the child in order to be engaged with the activity. For example, *Fantasy Drama* and *Sequential* tasks require more active participation from the child than *Passive Instruction* or *Non-sequential* activities. There is continued debate regarding what types of instructional practices and learning experiences are most productive for children (e.g., Connor, Morrison, & Katch, 2004), thus capturing how learning is experienced by individual children in the classroom is important to understanding these complex processes.

Involvement

Much research supports the idea that people learn and retain more when they are actively and intensely involved. A primary advantage of using the COP as an observational tool is the ability to focus on individual children's behaviors – and determining on how involved children are in the classroom learning environment is one of the most important aspects that observers can capture. Unlike classroom-level measures which may assess an overall level of involvement, the COP offers the opportunity to rate *each child's* involvement level a total of 20 times (or 30 times for the PEPI project) throughout the day. This is particularly important as children may respond differently to various types of learning activities. While the overall class might be moderately engaged, individual children can vary widely from very low to very high levels of involvement.

Materials and Focus

Learning experiences in preschool are very broadly defined. Preschool teachers cover a wide variety of topics and often use an even wider array of materials to help children learn. Further, children and teachers may use materials in non-traditional ways. The COP uses two separate codes to capture the instructional content in the classroom: first, the type of materials being used, and second, what the learning focus is. Coding the instructional content in this manner helps examine not only the overall learning context of the classroom (in aggregate form), but also how instructional content is received by individual children. Understanding the types of activities in which children are engaged can be particularly useful during center/free choice time when children have some level of autonomy in directing their learning. Children can be involved in a wide range of activities during these times, and the COP captures the nature of each child's learning during his/her sweep. In addition, children may use materials in a variety of ways. By coding materials and focus separately, observers can more precisely document the learning experience.

Coding children's learning materials and focus requires the use of specific coding rules that can be applied across classrooms to ensure that these aspects are coded consistently from place to place. Materials codes are fixed – that is, the type of material is coded the same way across classrooms, regardless of how that material is being used. Focus codes, however, vary according to the content of the learning activity. (See the Materials/Focus table on page 38 for examples of commonly occurring learning activities and how they are coded.)

CODING BEHAVIORS

Coding Procedure: As children arrive, have a teacher or assistant identify each child and record identifiable descriptive information (e.g., blue striped shirt, overalls). To code, locate the first child, observe the child's behavior for a count of 1, 2, 3, and then begin scoring. The first things to attend to are whether a child is listening or talking (Verbal), and To Whom. The next category to observe is the child's Involvement level. After those decisions are made, the observer can continue to observe the other behavioral categories within the count. This approximately 2-3 second window has proven sufficient to determine what the child is doing but not so long that the child will be engaged in several activities in the same category. If you cannot code a behavior, make a note of the sweep and the problem.

At the end of the observation, you should have 20 snapshots of behavior; snapshots should be spaced across the full observation. **Note: In the PEPI project, up to 30 sweeps were possible.** This requires careful attention to both the time each sweep of the room is taking and **number of children in the classroom schedule.** ~~For example, if you know the class will be out of the room for 45 minutes for outdoor play, you might shorten the time for each sweep, whereas if you have a full uninterrupted morning, you could lengthen the time between sweeps.~~ You should aim to have completed 20 full sweeps within the observation window. A full sweep during whole group time will take 8-10 minutes; a full sweep during center time will take 12-15 minutes. Do not finish early. ~~Do not code when class is outdoors, in specials (i.e., gym or music), or napping.~~ **Note: Children were coded independent of the schedule code both for indoor and outdoor activities.** If a child is in the bathroom, skip the sweep. When the child returns, complete the sweeps missed, if possible. If a group of children leaves the classroom, continue coding the remaining children and catch the other children up when they return. If the teacher leaves the classroom and the children remain, stay with the children in the room and continue to code.

VERBAL & TO WHOM

During the coding interval, look first to see if the child is talking or listening, and to whom. Sometimes both listening and talking can occur within the same 3-second interval. Code whichever occurs first, NOT both.

IS THE CHILD TALKING OR LISTENING?

NO (N)

Child is neither talking nor listening to someone else.

YES (Y)

Child is talking (either understandable words or other sounds count).

LISTENING (L)

Child is listening to another person (tape recorders, TVs, and videos do NOT count). To code *Listening*, attend to what is around the child. Listening is conveyed by eye contact, body posture, and responsiveness.

FUSS/CRY (FC)

Child is fussing, whining, crying, arguing, or yelling.

TO WHOM IS THE CHILD IS TALKING OR LISTENING?

NO TALK/LISTEN (NT)

Not talking or listening to anyone.

TEACHER (T)

Teacher or Assistant (adult).

CHILD (C)

One other child.

SMALL GRP, NO TCHR (SG)

Group of children (more than one other child besides the target child) that does not include teacher or adult.

SMALL GRP W/TCHR (SGT)

Group of children (one other child besides the target child) with adult or teacher.

WHOLE GRP, NO TCHR (WG)

75% or more of the class, but no teacher present.

WHOLE GRP W/TCHR (WGT)

75% or more of the class with teacher present.

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SELF WORDS (SW) and SELF NOISE (SN) below are combined into one code. Because in the COP version from October 2014 used in the PEPI project, the SW and SN constitute one single code **Self talk/sound (STS)**.

SELF (SW) Child is talking to self, using understandable words (includes talking to non-persons like dolls and telephones).

SELF (SN) Child is talking to self, making noises such as animal sounds or truck (e.g., “vroom vroom”) sounds.

Coding Notes:

- General tips
 - Position yourself so you can see the target child’s mouth.
 - If child is participating in WG fingerplay or singing, code Verbal Yes (Y) to WG or WGT (watch lips).
 - Be alert to code To Whom *Self* (look for lips moving) and distinguish between the child using words (SW) or noises and sounds (SN).
 - Giggling is Yes for Verbal. A child can be listening to another child giggling.
 - Fuss/Cry can be toward another person or to self.
- Coding Listening
 - When a teacher is reading and the child is attending, code *Listening*.
 - When the teacher is instructing the group and the child is attending, code *Listening*.
 - Just because the teacher is talking does not mean the child is listening; judge by head orientation, focus of eyes, and responsiveness. If child is looking away or clearly not involved, code NT.
- Coding Listening to Teacher
 - If child is in a whole group with the teacher and is looking *only* at the teacher or adult leader and none of the students, code listening to T.
 - If child is calling out an answer and is looking at the teacher, code talking to T.
 - If child is listening to but not participating in the class recitation of a fingerplay or singing of a song, code *Listening* to WG or WGT.

SCHEDULE

This is not necessarily the teacher's posted schedule. Rather, this is a description of types of learning settings one would find in most preschool classrooms. Thus, this category can be used across many varieties of curricula. The observer should be familiar with the lesson plan for the day and be able to recognize and record the appropriate component. The teacher's posted schedule is the beginning point; the schedule as enacted may be different. The same schedule code continues until 75% of the children have begun to do something different.

WHOLE GROUP (WG)

Whole groups occur when the entire group is meeting together, and some form of content is being discussed. If children are gradually taken out of the group for toileting and hand washing, continue to code WG until 75% of the children have moved away from WG. If half the children are removed from the classroom for another activity (including toileting at a hallway bathroom), the remaining children constitute the whole group.

SMALL GROUPS (SG)

Only code SG if the students are working in small groups that are facilitated by an adult and/or are assigned by an adult, an adult calls a specific child over to participate, and the activity is not optional. The adult may have assigned one or more children to an area to work on specific tasks or with specific materials. All children in the room must be expected to be working in small groups for this code to be used.

CENTERS (C)

Center time (sometimes called "Activity Time" or "Free Play") is characterized by children having relatively more freedom about what they do and where they go, although teachers may place limitations on children's choices. Thus, centers can be tables where children have a limited number of choices about what they can do (puzzles, journals) or center time can be freer play, during which children are allowed to move about the classroom freely. Another type of center time can be seen when children are assigned to areas but have complete freedom to choose what they do in that given center area. **Note: In the TUTI project, the schedule code "Centers" was used when the children were having center time either outdoor or indoor. In the PEPI project, a new schedule code "Playground" (PG) was available from the October 2014 COP version. The definition for PG is available below. After consideration, PG was combined with C in the combined TUTI and PEPI datafile.**

PLAYGROUND (PG)

Code PG when children are playing on the playground or in another outside area designated for outdoor play/recess. ~~Only one sweep should be recorded during outdoor play.~~

MAKE BELIEVE PLAY (MBP)

~~Make believe play is when the individual centers are set up to align with a theme and the children are expected to enact roles and scenarios according to that theme. Children can use roles to cross center boundaries and continue the scenarios in different areas of the classroom. (Children may not be carrying out the roles very well or at all. What is important for coding MBP is the expectation that children will carry out roles connected to the classroom theme.)~~

COMBINATION OF SMALL GROUP AND CENTERS (SGC)

If small group(s) and center time are simultaneously occurring in the classroom, then code SGC. Confusion could occur when there are not enough adults in a classroom to have one for every small group. If a group of children has been assigned a specific activity to complete without adult supervision and the other children are in adult-led groups, code SG, not SGC. SGC is NOT coded for the times during centers when a teacher may sit in a certain center to facilitate activities. Sometimes assistants are assigned one area to monitor and even lead activities while the teacher is in another area. This usually is NOT coded SGC.

TRANSITION (T) and TRANSITION WITH INSTRUCTION (TI) below, are combined into one schedule code because the “TI” code had been removed in the COP version from October 2014 used in the PEPI project.

TRANSITION (T)

Code T if the sweep takes place during a transition time, such as brushing teeth, lining up, or washing hands. In the case of gradual transitions (such as center time to another part of the day), 75% or more of the class must be transitioning for the sweep to be coded as such. Transitions may also begin when an activity has clearly ended (e.g., storytime) and the next activity has not yet begun. If half of the class transitions to the restroom in the hall and the other half remains in the room, continue to code in the classroom. If all of the students leave the classroom, code until the teacher and students leave the classroom; resume coding when the teacher and students re-enter the classroom.

TRANSITION WITH INSTRUCTION (TI)

Code TI if the teacher is leading an activity anytime during a transition, such as a finger play, singing a song while waiting to leave classroom, making patterns with children (girl, girl, boy) in line, pretending to be an animal while moving from activity to activity, or having children count children waiting in line. To be coded TI, however, the expectation has to be that 75% or more of the class is supposed to be participating. If the teacher is doing finger plays with the small group of children who have already assembled at the door, this is not TI until 75% of the children are involved.

For both T and TI, the code relates only to the Schedule and does not affect what else you code for the child’s behavior. Children can be engaged in a variety of activities during T and TI.

OTHER (O)

Code O if the activity is something else not listed and describe the activity. Nap/rest times that occur with the light on and during which children are able to get a book and read on their mats are coded as O. (If an observer encounters something in the schedule that he/she does not know how to classify, code O and write down a detailed description for later decision making. Questions regarding codes should be resolved immediately upon returning from the field. **Note:** In the PEPI project, new schedule codes for “Gym” (G) “Specials” (SP) and “Nap” (N) were available from the COP manual from October 2014. See definitions of G, SP, and N below. Therefore, after consideration, these new schedule codes were changed to “Other”. For the TUTI project, since it was rare with observations during the nap time, the code O was used when the schedule was something else not listed.

NAP (N)

Nap/rest times that occur with the light on and during which children are able to get a book and read on their mats are coded as N. Code the time leading up to nap when children are getting mats out as Transition (T), until 75% of children are on their mats, then code Nap (N). ~~Only one sweep should be recorded during nap time, finish the sweep even if the lights go out.~~

GYM (G)

Code G when children are playing in the gym, or another inside area designated for play/recess. ~~Only one sweep should be recorded during gym.~~

SPECIAL (SP)

Some classes participate in special activities outside the classroom, such as music, art, and/or computer. When children are participating in these activities, code the schedule as SP. SP is also coded when special assemblies or programs (e.g., puppet shows, music performances) take place. These classrooms can be inside the classroom (the Specials teacher comes into the class) or outside (the children are taken to the Specials room). ~~Only one sweep should be recorded during specials.~~

MEAL TIME (MT)

Meal time is coded if students eat in their room, including snack time. Code MT as soon as the students have started to eat or to pass the food (in the case of many Head Start classrooms). If students are sitting at their places but not yet allowed to eat (or the food has not been passed out), the appropriate Schedule code is *Transition*.

Coding Notes:

- When students are scheduled to leave the classroom, code until the students have walked into the hallway; stop coding once the students exit the classroom. Do not code outdoor play even to finish a sweep. If children leave the classroom before a sweep is finished, finish that sweep when the children re-enter the classroom.
- If children are sitting at tables doing different activities at each table and an adult is involved, code the schedule as SG.
- If the children are at tables and they are all doing the same worksheet/activity and the teacher is directing or monitoring the work, code the schedule as WG.
- If MBP and centers are occurring during the same time, code the schedule as the grouping that has the most centers involved. If a classroom is doing half MBP centers and half free choice centers, code MBP as schedule.

- Code only one classroom sweep during meal time in the classroom. This would mean coding the entire class one sweep during breakfast and one sweep during lunch if the meals occur in the classroom.
- **Clarification: When 75% of the children are eating outside, the schedule code "MT" should be used.**

PROXIMITY

Proximity describes who is near the child regardless of whether they are interacting. Proximity includes anyone within 3 feet of the child, or approximately an adult-arm's reach. If the child is in a defined area of the room (enclosed on 3 sides), anyone else in that area (e.g., the library corner) would be coded as in proximity.

Note: When a child is outdoors, proximity is considered as anyone within 1.5-meters (For TUTI) and 3 meters (For PEPI) radius of the child. E.g., If the child is in a defined area of the playground (enclosed on 3 sides), anyone else in that area (e.g. in the sandbox) would be coded as in proximity.

TEACHER (T)

Child is within arm's length of the teacher, but not near other children. If the child is with more than one adult, still code T. (T is synonymous with *adult*, including assistants, parent visitors, "grannies," etc.)

CHILD (C)

Child is near a single child.

SMALL GROUP (SG)

Child is in a small group of children (at least 3 children including the target child) that is a subset of the whole group, but without an adult or teacher as part of the group.

SMALL GROUP WITH TEACHER (SGT)

Child is in a small group of children, but not the whole group, with a teacher, assistant, or other adult as part of the group (at least 2 children including the target child and an adult).

WHOLE GROUP (WG)

Child is with the whole group but the teacher or assistant is not present or cannot be touched by anyone in the group of children (e.g., adult is behind a podium or separated from the group by a large rug). (75% or more of the group constitutes *whole group*.)

WHOLE GROUP WITH TEACHER (WGT)

Child is with the whole group and the teacher or assistant is present. When the child is in a whole group activity led by teacher, code proximity as WGT (unless the teacher is physically separated by a barrier).

SELF (S)

Child is alone or set apart from others. Reaching around 3 feet, the child could not touch anyone else.

Coding Notes:

- If the child is in an open area, proximity includes anyone within 3 feet of the child.
- Remember to look around the child. For example, if a teacher/assistant is in a center area (defined by shelves, rug, etc.), code the teacher as in proximity to the children in that center, even if the teacher is not necessarily within an arm's reach.
- Code children seated at desks as being in proximity to other children seated at desks within a 3-foot radius.
- If ALL children are seated at desks or tables and *could* form an unbroken chain by touching one another, code WG for Proximity; if the teacher/assistant is within an arm's reach of the whole group, code WGT.
- If some children are seated while others are supposed to be moving about, code the children who share a table as being in proximity.
- For outdoor, proximity means the teacher or children who are within nearby i.e. 1.5-meter or 3-meters radius of the child.

INTERACTION STATE

Interaction State examines with whom the child is engaged. It is not a code for proximity. Teachers and other adults are coded as part of the interaction. These codes are an adaptation of Parten's 1932 scale, altered to reflect the types of interactions children have in a classroom setting.

NON-ACADEMIC (NA)

Child is engaged in a non-academic (non-learning-related) activity.

There are four common situations in which NA is coded:

- Child is *transitioning* from one activity to another (clearly distinguish from wandering – child has to be purposely going some place, such as moving to a new center, lining up at the teacher's instruction, coming to the rug for whole group, etc.).
- Children are participating in appropriate, often required *classroom routines* (e.g., standing in line to go outside) in contrast to being unoccupied. Also, tying shoes, washing hands, cleaning up, and/or looking for materials would be coded NA.
- Children are in a *forced wait time* must wait and have nothing to do (e.g., the teacher does not have materials ready, the teacher interrupts the activity to give a lengthy admonishment to the group or an individual about behavior). These are NOT to be confused with ordinary pauses in ongoing instructional interactions, such as, children waiting their turns, attending to other children's responses, or holding materials but not actively engaging with them. NA *should not* be broadly interpreted to include these kinds of wait times.
- *Meal times* when students are just eating, not engaged in social conversation or another type of academic interaction either with peers or with the teacher.

Set codes: When the NA code is used, it triggers other *set codes* in the sequence that will be filled in automatically on the tablet. When NA is coded, code Type Task as *Other* (O), Involvement as *Low* (L), Materials as *None* (N), Focus as *None* (N).

PARALLEL (P)

Child is working by him/herself but with materials that are like those that other children are using; children do not interact with each other about the task. Children are not co-creating a product. Be sure to scan children nearby to see if anyone has similar material to the child (e.g., blocks, puzzles, writing tools) and code P if they do. Ask yourself if the activity would change if a portion of the group was removed. If children are not affecting each other, code P.

Examples of Parallel Interactions:

- working independently on an activity (e.g., worksheet, art project, puzzle) that others in the room also are working on
- participating in whole group choral responding/singing
- listening to a story being read in whole group
- **Two children are sitting in the sandbox and pouring sand in a bucket, but they do not talk, code P. Or if two or more children bicycles on each cycle at the playground.**

ASSOCIATIVE (AS)

When children (with or without the teacher) are interacting in the context of an activity or task that does not have predetermined rules, code the interaction state as AS. Children can be in an associative activity with adults as well as children.

Examples of Associative Interactions:

- building a tower together
- sharing a book
- assisting each other with a task
- pretending with each other in dramatic play
- co-constructing an idea in whole group (e.g., brainstorming on how a postman could carry letters, during which everyone can talk)

COOPERATIVE (C)

Cooperative interactions are characterized by group identity, rules, and organization. In general, in this state, children are following predetermined rules and those rules govern the steps or sequence of a child's behavior. These interactions can include: formal games, competitions aimed at winning something, and groups formed by children or by the teacher for doing things together in sequence with a clear goal. These instances may require an additional second or two or observation to establish whether there is a predictable sequence to the interaction, particularly when children are involved in dramatic play.

Examples of Cooperative Interactions:

- Playing "Duck, Duck, Goose"
- Completing a computer activity/game in a sequence while following rules and taking turns
- Acting out a restaurant scenario, with appropriate role-speech and interactions that follow a script (predetermined sequence)

NOTE: *Cooperative* CANNOT be paired with *Non Sequential* under Type Task. If the task is *Non Sequential*, change the Interaction code to whatever is appropriate.

ALONE (AL)

Child is working alone in an activity that is unique from the activities of all others in the classroom. *Alone* refers to the interaction state of the child — not the proximity of other people. Thus, a child who is in the same location as others but clearly engaged in a unique activity is coded AL for Interaction.

Examples:

- Acting as "teacher" during morning circle
- Demonstrating the solution of a math problem in front of the whole group
- Playing with blocks while everyone else is finishing an art project
- Using writing tools while other children are doing puzzles, or other center-based activities that do not involve writing

ONLOOKER (O)

Child is an onlooker when he/she is observing other children or a teacher doing an academic (learning) activity that is not part of the target child's activity. An onlooker may ask other children questions or watch the teacher instruct another child but *does not participate* directly in activities with them. The child's active interest in other children's behaviors and actions distinguishes being an onlooker from being unoccupied.

The activity being observed must be a *learning* activity.

Interactions that **do not** constitute Onlooking:

- Waiting for a turn in a group activity
- Watching a teacher give another student directions for a group activity in which the target child is also a participant
- Attending to a teacher disciplining another child
- Watching a personal conversation between two teachers

Set codes: When O is coded as the interaction state, Type Task is coded as *None* (N), the observer makes an independent decision about the Involvement and Materials codes, and Focus is coded as *None* (N).

SOCIAL (SOC)

Social is coded when there does not appear to be a learning topic, but the child is interacting with one or more children and/or a teacher or adult with no evidence of pretend play and, typically, no visible objects. This state is reserved for interactions among classroom members that are not about learning activities. *Social* is coded only when it is appropriate to have social interaction (centers, lunch, or transition); if children are supposed to be attending, for example in whole group, but are talking instead, the code would be *Unoccupied*. However, children who are talking with each other during wait times can be coded as *Social*. *Social* is used relatively rarely.

Examples:

- Hugging or other physical signs of affection
- Talking about a television program from the night before
- Informal talk between teachers and children/families about holiday plans or weekend activities

Set codes: If Interaction is coded as SOC, Type Task is coded as SOC, ~~Involvement as Low (L)~~, Materials as *None* (N) and Focus as *None* (N). **Note: The set-code relationship between SOC Interaction and Involvement has been removed. Consequently, when Interaction is coded as SOC, Involvement can be coded anything from Low to High.**

UNOCCUPIED (U)

The child is not attending to any learning-related activity around him/her. He or she may stand in one spot, look around the room, perform random movements that do not seem to have a goal, or sit in whole group giving clear indications of not attending to the ongoing activity. A child in WG or SG may be *Unoccupied* if he/she is distracted and is watching a non-learning

activity outside the group. Children can also be coded as *Unoccupied* when they are fussing/crying and are distracted from learning (or are distracting to others).

Be careful not to code brief inattention or glances away as U; it is best to always count again to three before coding *Unoccupied*.

Set codes: If Interaction is coded as U, Type Task is coded as *None* (N), *Disruptive* (D), or *Disruptive* (Dx), Involvement as *Low* (L), Materials as *None* (N) and *Focus* as *None* (N).

TIME OUT (TO)

Children can be isolated from the group in variations of time out. Some teachers have a time out chair. Some have the children stand or sit away from the group wherever the teacher tells them to be. Others may send the child to a closet or out of the room. (If you see a child not participating and isolated from the main activity, check carefully to see if the child is in time out; teachers sometimes do this so quietly, it can be hard to tell.)

Set codes: TO for Interaction and Type Task, *Low* (L) for Involvement, and *None* (N) for Materials and Focus. If a child is removed from the classroom for a time out (behavior is the clear reason for removal) code the sweeps when the child is out of the classroom as Verbal N, To Whom NT, (Schedule), Interaction TO, Type Task TO, Involvement *Low* (L), Materials and Focus *None* (N).

Coding Notes for Interaction Category:

- Codes for *Interaction* can change depending on the nature of the activity, so do not assume that what was coded for the previous sweep will still be true for subsequent sweeps, even if on the surface the activity looks the same.
Example scenario:
 1. Two children are sitting at the same table quietly doing separate math games or drawing, etc. but not interacting with each other to create a shared product, code *Parallel* (P).
 2. One child stops his/her game to assist the other child in that child's activity, the state would change to *Associative* (AS).
 3. The two children begin working together and taking formal turns with something like a math game, the state would change to *Cooperative* (C).
- Whole group discussions can be tricky to code.
 1. Use *Associative* (AS) for discussions in which children are both listening to the teacher and contributing.
 2. If the whole group activity is structured so that the children are responding in a set order (taking turns around the circle to answer a question), the responding child is *Alone* while the others -- if they are listening -- are coded as *Parallel* (P)
 3. If children have specific roles in the activity (e.g., acting out a story), code *Cooperative* (C).
- If children are listening to school announcements and doing nothing else, code as Verbal N and Interaction NA. If the children are allowed to continue activities during announcements, continue to code what the children are doing. (If announcements are delivered through TV, code Interaction and Type of Task as Parallel-Passive Instruction.)
- Children who cannot be roused after nap time are coded as *Unoccupied* (U).

TYPE of TASK

This category captures the task demands of the learning material with which the child is engaged, as well as the type of learning engagement the child is displaying. Code independently of subject matter focus or materials. The emphasis is on what the child is attending to and intellectually engaged with.

PASSIVE INSTRUCTION (PI)

Child is the recipient of instruction rather than an active participant. That is, the primary task of the child is to listen to the teacher or to another child. Typically, the child is not actively engaged and will not be actively engaged with materials.

Examples:

- Listening to teacher read aloud (in whole group without engaging students)
- Watching calendar/weather routines during morning group
- Listening to teacher instruction about a concept or how to do an activity
- Raising hand to answer known-answer question posed by teacher
- Waiting to use materials and listening to teacher instructions in small group
- Watching video/TV show with academic content

NON-SEQUENTIAL (NS)

Child is involved with an activity or materials but not following a predetermined set of steps. An observer would have a difficult time predicting what comes next, and the activity itself is open-ended.

Examples:

- Doodling on paper
- Browsing through the books in the classroom library
- Pushing toy trucks around on the rug
- Playing with blocks (without planning/building something specific)

SEQUENTIAL (SQ)

Child is involved with activities or materials that involve a sequence of steps. Sequential activities may include activities without objects if there are turns and organization to the activity. When children are engaged in sequential activities, the observer can make predictions about what will come next.

Examples:

- Reading (either actually reading or looking carefully at the pictures)
- Conducting a science experiment
- Working a puzzle
- Writing a story
- Creating a recognizable drawing
- Using math manipulatives in a sequenced manner

NOTE: Webbing and brainstorming discussions in whole group are coded (*Associative Sequential*).

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FANTASY/DRAMA (F/D)

Fantasy/drama includes sequenced and predictable make believe and pretend play enacting familiar stories or plays or role activities. The children have defined roles and are acting out the roles with role speech while engaged in play. Observer can clearly see roles and scenarios being enacted by the two or more children. When children are in a dramatic play area, do not automatically code their activity as *Fantasy*; children may be engaged in non-sequential or sequential activities.

NONE (N)

Child is not directly engaged in an activity or with materials and is not engaged in social talk. By definition, the Interaction State is either *Onlooker* (O) or *Unoccupied* (U). Type Task is always *None* (N) for *Onlooker*, and is *None* (N), for *Disruptive* (D), or *DisruptiveX* (Dx) and *Unoccupied*.

OTHER (O)

Classroom tasks expected of children are coded *Other* when the focus is not on learning.

Examples:

- Waiting for the teacher to check materials or provide assistance
- Lining up at the door
- Taking a bathroom break/washing hands
- Putting napkins out for snack

Set codes: When Interaction State is *Non-Academic* (NA), Type Task is *Other* (O).

SOCIAL (SOC)

Social interaction with other children or adults that, typically, does not include objects (see extended definition under Interaction State).

Set codes: When Interaction State is *Social* (SOC), Type Task is also *Social* (SOC).

DISRUPTIVE (D)

Any behavior that draws other people off task is coded as *Disruptive*. This includes aggressive behavior (physical or verbal), inappropriate use of materials, and inappropriate actions toward other children. (Code *Unoccupied* (U) for Interaction State.) Knocking over someone's blocks or taking away materials during clean up time would be coded as *Disruptive*. A child who pulls another off task is coded as *Unoccupied-Disruptive*; the child who was pulled off task is coded as *Unoccupied-None*. If the child is being disciplined by the teacher, code *Disruptive* for the child even though you did not see the misbehavior or might not have thought the behavior warrants disciplining. In those cases, code Dx.

DISRUPTIVEX (Dx)

A child is being disciplined for no apparent reason or the wrong child is being disciplined for an altercation.

TIME OUT (TO)

If the child is in time out, code TO for Interaction and Type Task, *Low* (L) for Involvement, and *None* (N) for Material.

Common Occurrences by Interaction AND Type Task

Interaction	Type Task	Examples
Parallel	Sequential	<ul style="list-style-type: none">-Child reads a book, writes words, completes a math worksheet, or draws a picture (while others in room are engaged in same/similar task)-With peers, student choral reads from text or recites memorized letter names or sounds when teacher displays a flash card-Student participates in teacher-directed Q&A when widespread response to teacher questions is expected (raised hands or choral responding), even if teacher asks low-level, known-answer questions-Children are singing a song together in whole group
Parallel	Passive Instruction	<ul style="list-style-type: none">-The task for most children is to listen to the teacher and/or another child-Teacher provides a definition of a noun and then gives several examples-Teacher reads a text (WGT or SGT) without involving students or asks a few closed-ended/known-answer questions to a few students-The class watches a video connected to the unit content-A child is watching/ listening but not singing with everyone in a whole group
Parallel	Non-Sequential	<ul style="list-style-type: none">-Many children sit together, flipping through pages of their books, but the lesson has not begun and children do not appear to be reading the story-Two children browse through the books in the classroom library, without having chosen a particular book-Children call out together random answers to non-inferential questions in whole group instruction-A child is at the same table as other children and has the same materials as the other children but is watching the other children do the activity
Associative	Sequential	<ul style="list-style-type: none">-Children work together to assemble a jigsaw puzzle-Teacher reads a story (WGT or SGT) and interacts with students throughout, asking open-ended questions that build shared understandings-Students (with or without teacher) work together to complete a story map that identifies the beginning/middle/end of the story-Children paired to create a single product-Children take turns adding to or developing the song in a whole group (e.g., Old MacDonald Had a Farm, when randomly, children are asked for the next animal)

Associative Non-Sequential

- Teacher and students engage in inferential brainstorming in which the main goal (of the teacher) is to elicit students' background knowledge, for instance, when introducing a study of Africa, teacher invites students to share random ideas/ understandings of Africa (teacher and students working together)
- Children work together to fold a sheet that is being used as a costume for a performance, but with no plan for folding, and with no real success

Cooperative Sequential

- Children take turns when playing a board game
- Children are playing Simon Says
- Children have individual Bingo cards and are playing Bingo

Cooperative Fantasy/Drama

- Children enact a scripted play
- Children are engaged in the dramatic play center and have definite roles
- They act out a story or engage in high level pretend play in which each participant is interacting with the others in their role

SCENARIOS

Often, what may appear to be the same task on the surface can vary greatly in terms of complexity, according to the ways that children are interacting with each other and with the task itself. The following scenarios provide examples of how the same types of materials can be used differently, resulting in different *Interaction* and *Type of Task* codes.

Whole Group INTERACTION / TYPE TASK

1. The teacher invites contributions from the whole group as she writes out the morning message. She elicits guesses about the words she is writing and then has the group read the message together.

Parallel Sequential	The child helps construct and read the message with the group.
Parallel Passive Instruction	A child sits and listens letting other children respond.
Unoccupied None	The child is not paying attention, playing with shoe or daydreaming.
Unoccupied Disruptive	The child is causing distraction to another child by pulling him/her off task.

2. Children are in a whole group and the teacher is showing them a stack of cards with a picture and a letter or letter blends. The children say the letters and sounds in unison, and then go to the next card in the same order.

Parallel Sequential	The child knows the correct answer and the next card and order is the same. The child performs the task from memory.
Parallel Passive Instruction	A child sits and listens letting other children respond.
Unoccupied None	The child is not paying attention, playing with shoe or daydreaming.
Unoccupied Disruptive	The child is causing distraction to another child by pulling him/her off task.

3. The class is doing a worksheet. The child is supposed to write his/her name at the top, and then trace letters on the worksheet.

Parallel Sequential	The child is writing letters in his or her name.
Parallel Non-Sequential	The child is looking at the materials and has his/ her hand on the pencil, but is not doing the worksheet.
Associative Sequential	The child turns to another child or teacher and discusses the worksheet or letters in his/ her name.
Unoccupied None	The child is sitting in chair and staring at the ceiling.

Non Academic Other

The teacher has not passed a worksheet out to the child and the child is waiting.

4. A teacher is reading a book to the whole group.

Parallel Passive Instruction

The teacher reads the story without any questions or interaction and the child appears to be listening.

Parallel Sequential

Children read together in unison.

Associative Sequential

The teacher reads the story and interactively engages the children while reading through questioning and discussion and the child is participating.

or

A child volunteers questions, answers, or information *relevant to the story* without being asked or called upon.

Small Group, Centers, Individual Child INTERACTION / TYPE TASK

1. Children are playing with puzzles during centers.

Parallel Non-Sequential	Children scatter pieces from different puzzles on the floor.
Parallel Sequential	Children each work a puzzle – looking for pieces, rotating pieces to fit.
Associative Sequential	Children work together on the same puzzle – looking for pieces and attempting to fit them together.

2. Children are reading books during centers.

Parallel Non-Sequential	Children individually look through books on shelf or randomly flip through pages.
Parallel Sequential	Children individually “read” books (looking at pages, turning pages).
Associative Sequential	Children “read” books together.

3. Children are playing with play-dough at the art center.

Parallel Non-Sequential	Children squish, roll, and shape play-dough.
Parallel Sequential	Children individually craft recognizable animals out of play-dough using picture cards as a guide.
Associative Sequential	Children work together to build play-dough animals for a zoo scene.

4. Children are using markers in the writing center.

Parallel Non-Sequential	Children scribble with markers on paper.
Parallel Sequential	Children work independently to write their names on paper.
Associative Sequential	Children talk to each other and write each other’s names (discuss spelling and letters).

5. Children are playing with dinosaur counters in the math center.

Parallel Non-Sequential	Children play independently with dinosaur counters, making dinosaur sounds and/or talking like dinosaurs.
Associative Non-Sequential	Children play together with dinosaurs, making dinosaur sounds and/or talking like dinosaurs.
Parallel Sequential	Children individually count dinosaurs.
Associative Sequential	Children count dinosaurs together; one child points and the other counts, or they count out loud together.
Cooperative Sequential	Children take turns counting piles of dinosaurs. One child counts and others check the answer.

6. Two children are in the block center. They are talking about a cartoon they saw last night.

Social Social	The conversation is not about the materials, and children are not actively playing with the blocks while they are talking.
Parallel Non-Sequential	Children are playing with the blocks while still talking about the cartoon last night. (Their involvement would be lower because they are not attending to the material.)

7. Two children are playing in center time. One child is acting like a dog and chasing the other child.

Associative Non-Sequential	Children are interacting, but it would be hard to predict what happens next.
Unoccupied Disruptive	The target child becomes disruptive and/or disturbs other children.

8. Two children are playing in the dramatic play “kitchen” area.

Parallel Non-Sequential	Children are handling pretend food or dishes independently -- not working together, and with no clear scenario or plan.
Associative Non-Sequential	Children are pretending to eat food at a table; they are sharing, but there is no dramatic scenario evident.
Associative Sequential	Children are making cupcakes – they are working together and there is an order/sequence to their actions that is somewhat predictable.
Associative Fantasy-Drama	Children pretend they are working in a bakery and make cupcakes together.
Cooperative Fantasy-Drama	Children have clear roles in the bakery, and each child enacts that role with appropriate role speech and interaction with other children.

Computer INTERACTION / TYPE TASK

1. Children have the opportunity to play on the computer during center time.

Parallel Non-Sequential	Two children are doing the same activities on two separate computers, moving the mouse around and randomly clicking.
Parallel Sequential	Two children are playing the same activity on two separate computers; the game has set procedures that need to be followed to complete the activity (e.g., "paint" or other similar activities).
Associative Non-Sequential	Two children are playing on the same computer; the activity has no set rules and involves random movements.
Non-Academic Other	The child is sitting in front of a broken/malfunctioning computer with an error message.
Cooperative Sequential	Two children are playing together on the same computer; they are playing a game, taking turns and following rules.
Alone Sequential	A child is playing a game with rules alone.

INVOLVEMENT IN LEARNING

Involvement captures how focused and engaged the child is in whatever learning-related activity he or she is doing. This is the only code that is a rating scale rather than an event sample. Utilize the entire scale when rating involvement. During the 3-second interval, check involvement level immediately after checking to see whether the child is talking or listening and to whom. Track Involvement codes as you conduct sweeps. Involvement is usually normally distributed. In only very unusual classrooms would *Medium* not be the most frequent code. Ratings should be distributed on either side of *Medium* with the fewest at *High* and *Low*. Classrooms certainly differ on how engaging they are and ratings should be valid reflections of overall class engagement.

HIGH (H)

Child is intensely focused on the activity and displays genuine involvement in learning. It would be hard to distract him or her. Seems oblivious to noise and the behaviors of the other children. Child appears to be concentrating and seriously pursuing the activity. **Toddler tries to get the attention of the teacher on a specific material or activity by grabbing clothing or a hand.**

MEDIUM HIGH (MH) Between *Medium* and *High*.

MEDIUM (M)

Child pays ordinary attention to the activity. Child may look up now and then to see what others are doing, but then returns to the activity. Seems interested in the activity but could also easily give up that activity for another. **Toddler pay attention to a task that another child or teacher carries out and tries to imitate the behavior of others within the activity.**

MEDIUM LOW (ML) Between *Medium* and *Low*.

LOW (L)

Child clearly not interested in the activity. *Low* is reserved for a child who is truly off task, not attending at all, or disruptive. Child may sit with materials but stare off into space or thoughtlessly look at what other children are doing (different from onlooking). If sitting with materials, it may appear as if child is doing so only because someone has directed him/her to be there.

Set codes: Involvement is *automatically* coded as Low when the Interaction State is coded *Non-Academic* (NA), *Unoccupied* (U), ~~*Social*~~ (SOG), or *Time Out* (TO).

Low levels of Involvement can also be coded when the child is coded in other categories, such as *Parallel* (often *Parallel* and *Passive Instruction*). Child may still be oriented to the activity but very uninterested in it (eyes down, bored expression, not following the activity). *Unoccupied* and *Low* is more disaffected and disengaged than *Parallel-Passive Instruction* and *Low*, distinguished by the child often physically turned away from the activity in *Unoccupied*.

Coding Notes:

- Code involvement as it is related to learning. A child deeply intent on drumming with a pencil is coded *Low* (L) for Involvement.
- If the child is even slightly involved in the activity, code Interaction and Type Task as you would if he/she were fully engaged. Code Involvement *Low* to *High*, accordingly. If the child is totally disengaged from the activity, code *Unoccupied* (U) for Interaction and *Low* (L) for Involvement.
- TV/Video: If the content of the program is academic or learning-related, then rate Involvement. If the content is not learning-related, then always code Involvement as *Low* (L).

INDICATORS FOR INVOLVEMENT LEVEL

HIGH (H)

- Multiple indicators of involvement (listed below under *Medium High*) PLUS the following:
- Intense concentration on task
- Seems oblivious to noise and the behaviors of the other children. **Toddler: tries to get the attention of the teacher to a specific material or activity by grabbing clothing or a hand.**

MEDIUM HIGH (MH)

- Eager expression
- Relevant Self talk during *Alone* task
- Volunteering response
- Positive affect
- Looking at material throughout entire count of 3
- Tension in body
- Leaning forward
- Persistence
- Talking about task
- **Toddler: more intensive exploring of objects through turning, throwing, shaking, and without noticing others passing.**

MEDIUM (M)

- On task
- Eye contact with teacher
- Participating
- May briefly look around but immediately comes back to task
- **Toddler: less intensive exploring of an object through hitting, shaking, tasting.**

MEDIUM LOW (ML)

- Looking at teacher and/or material inconsistently
- Flat affect
- Looking bored
- Visible attention going in and out
- Wiggling, tapping pencil, antsiness
- Lacking body tension, slouched
- Lack of persistence
- **Toddlers: distracted exploration of materials.**

LOW (L)

- Brief indication of attention
- Sitting quietly
- There in body but not in mind

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- Fiddling with another child's hair or clothing, picking at scab, etc.
- Eyes not focused on ongoing activity
- There are also set codes where *Low* must be coded: see *Non-Academic, Transition, Social, Disruptive*.

MATERIALS

This code is a classification of the material of the activity with which the child is engaged. It is NOT a code of the learning focus of the child. Material also captures the content of the lesson a teacher may be teaching when children do not have their own materials (e.g., teacher is reading a book, or the teacher and children are doing math fingerplays).

MATH (M)

Math materials are defined as materials that were specifically designed to facilitate the teaching and learning of math (number, comparing number, operations, shape, comparing shapes, composing shapes, spatial reasoning, measurement, patterning, classification). These materials are typically found in instructional material catalogs or are made by teachers to aid in math instruction.

- **Numbers:** counters, counting wands, counting jars, abacuses, unifix cubes, plastic/magnetic numbers, number stamps, any material that associates numeral to quantity (e.g., number cards and loose objects, peg number boards, counting cakes, two-part number match-up puzzles), calculators, fraction circles, number lines, hundreds boards, materials/worksheets that require quantity comparison (more/less), place value units, real or pretend money, calendars (considered math materials because they involve a sequence of numbers)
- **Shapes:** attribute blocks, geometric solids, magnetic shapes, foam shapes (not blocks), shape sorters, shape cards, tangrams, geoboards, shape stencils
- **Measurement** (including length, volume, weight, area, and time): balance scales, rulers, yardsticks, measuring cups, measuring tapes, calendars, clocks, sand timers, thermometers, inch cubes, materials used to compare sizes (e.g., nesting cups, sequenced graduated cylinders, stacking rings)
- **Patterning:** patterning materials such as pattern strips or tags, pattern blocks, and cutouts
- **Classification/Sorting:** collections for sorting and classification (e.g., keys, buttons, colored tiles)
- Some materials may be listed under one heading but used for other skills (e.g., inch cubes used for counting, patterning, or measurement).
- **Puzzles:** all puzzles, including self-correcting, floor puzzles, etc. Even though not specifically designed for math instruction, puzzles are about shapes and matching shape, teaching the spatial component of math.
- **Nonstandard Measuring:** includes nonstandard measurement tools such as string, popsicle sticks, shoes, and other materials, specifically intended to be used by the children to measure.

LITERACY (L)

Materials related to reading/writing print, vocabulary, and comprehension or other materials made by teachers to aid in literacy instruction.

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- Reading: books, sequencing cards that tell a story, magnetic alphabet letters, letter stamps, letter play-dough cutters, floating foam letters, name-recognition materials (name tags, name cards), picture-recognition materials (e.g., pictures of the daily schedule)
- Writing: recording tools (e.g., pencils, markers, white boards, letter and numeral stencils)
- Other: puppets (finger-size and larger), flannel boards

SCIENCE (SC)

Materials related to exploring physical science and nature or other materials made by teachers to aid in science instruction.

- magnifying glasses, microscopes, binoculars, nature collections (seashells, stones, leaves, etc.), transparent Plexiglas color paddles, mystery bags/feely boxes, seeds, plants, care of classroom pets, weather aprons, science photo cards (e.g., life cycle sequencing cards, science photo library), discovery bottles (filled with various liquids), magnets, sink/float materials, flashlights, prisms, mirrors, simple machines (levers, pulleys, gears, inclined planes, pendulums, rack & pinion gears, gear trains), plastic stretch/collapse tubes, stethoscopes (real), butterfly habitats, sand/water/beans/rice and all sensory materials (In the sand/water/sensory table are often multiple materials (e.g., measurers, trucks, figures))
- Food is also considered to be a science material when used in a learning context (e.g., counting or talking about food groups), including during meal times if the teacher/assistant begins to use the food to teach a science lesson. Food (e.g., cereal pieces, fish crackers, dry pasta) can also be used to make art projects, or in math (counting/patterning) activities. Regardless of the focus, food is coded as a *Science* material.
- Materials for filling/dumping/pouring (e.g., cups, buckets, funnels at the sand/water table)

SOCIAL STUDIES (SS)

Materials related to understanding people, emotions, community helpers, globes, and maps. Often, SS Material and Focus are coded the same because the discussions do not involve artifacts.

- Includes discussions about empathy, honesty and other character content, including discussions of how to behave in class and why (e.g., why it is a good thing not to hit your neighbor).
- Does NOT include a reminder of classroom rules unless there is a discussion of the reasons for the rules.
- Circle time conversations that involve sharing personal information
- However, if children are hearing a book read to them about community helpers, code L for Material (but SS for learning Focus). If teachers are discussing the roles of various characters (e.g., cashiers, waiters, doctors) prior to make believe play, code SS. However, if teachers are demonstrating and modeling how to act like one of the roles, code D for Material (but SS for learning Focus).

TOYS & GAMES (T)

Materials that are toys or related to play or fine motor activity.

- Games: all commercial games, including board games, card games, playing cards (52 card deck) (*code teacher-made games according to instructional content*)
- Blocks: unit blocks, LEGOS, hollow blocks, Lincoln Logs, building manipulatives of all types
- Fine Motor: bead stringing, lacing, pegboards, clothespins, locks and keys, sewing, lockboxes, stickers
- Other: woodworking, pretend animals, people, road signs, vehicles, Mr. Potato Head, etc.

ART (A)

Materials related to the arts.

- Visual Art: crayons, chalk, paint brushes, play-dough, clay, scissors, collage materials, easel painting, hole punches, tape, glue, pipe cleaners, wire, discussion/admiration of art posters (does not include recording tools, such as pencils and markers, which are coded as Literacy)

MUSIC/MOVEMENT (M/M)

- Music: singing, musical instruments (sticks, sand blocks, drums, cymbals, tambourines, maracas, tone blocks), dance props (streamers, scarves), music tapes/CDs, dancing to music
- Fingerplays to Music: Freeze Games and partner fingerplays (e.g., “Five Little Monkeys”)
- Gross Motor: walking cans, balance boards, balance beams, beanbag toss, yoga, “shaking the wiggles out”, “going on a bear hunt” (with no music), any materials/activities relating to large muscle movement and control in the classroom, hallway, or gym (~~outside time is not coded~~). **Outside examples: bicycling, climbing walls, swings or teeter.**

DRAMATIC (D)

Materials relating to pretend (fantasy) play.

- Clothes, hats, play phones, baby dolls, action figures, figurines, fake food, fake utensils, doll houses, dress-up clothes, pretend stoves/refrigerators, cash registers, costumes (When items such as blocks are used as symbolic play materials, code the materials as Toy; capture the dramatic play under learning Focus.)

COMPUTER (C)

Activities conducted on computers, SMART Boards/Tables, or iPads are coded C.

WORKSHEET (W)

A worksheet is any prepared piece of paper that usually includes instructions about what to do. It includes cut and paste worksheets as well as coloring pages.

TV/VIDEO (TV)

Includes any inanimate source of sound, including PA systems, televisions, CD players, audio tapes or CDs in the listening center. (If the teacher has other materials, such as a book, code that as the material, even if also accompanied by music or a story from a CD player.)

NONE (N)

No activity with academic/learning-related materials.

- Non-academic activity (washing hands, cleaning up, transition without an instructional focus)
- Unoccupied in learning or in time out
- Social conversation
- Roughhousing or other disruptive behavior

CAN'T CODE (CC)

If an observer encounters materials/content that he/she does not know how to classify, code CC and write down a detailed description in note section for later decision making. Questions regarding codes should be resolved immediately upon return from the field.

Coding Notes:

- If the child is not actively manipulating materials in the activity but the activity is ongoing, continue to code the activity. For example, if the child is showing a book to the teacher, code L; if the child is talking to another child about a building project, code *Toy* (T); if the child is waiting his/her turn in a shape bingo game, code *Toy* (T). However, if the child is clearly disengaged, staring into space, or not attending to the activity (coded *Unoccupied* (U) under Interaction State), code *None* (N) for Material (i.e., if Interaction and Type Task have been coded as something other than *Unoccupied*, code Material).
- If a child is coded *Onlooker* (O) for Interaction, code the material to which the child is attending.
- Materials are materials and always coded the same, but multiple learning foci may be seen with the same materials. These foci do not change the Material code.
- If more than one material is being used, code the most essential material. Materials are the mechanism for delivering the learning focus. With multiple materials, decide the primary mechanism delivering the learning.
- In cases without tangible materials, Material and Focus are typically coded the same.

FOCUS

The *Focus* category captures the learning content of the child's activity. Materials can be used to learn many different things. In coding this category, capture the intent or content focus of the learning regardless of the materials being used. Materials and Focus are independent of each other. Just because a child has material of a certain type does not mean that he or she will be using it a certain way. Focus captures the content of the material and what the child is doing with the material. For example, if a child has a book (coded as a *Literacy* material), but is counting the number of pages, or the book is about numerals, then the Focus code would be *Math*. In another example, if a child has dinosaur counters (coded as *Math* materials), but is enacting a play fight, Focus should be coded as *Other*, not *Math*.

Learning focus also can occur without materials, such as when the teacher initiates a discussion of the reasons people feel the way they do (emotions), or if the teacher is leading a discussion about a book read the day before. In cases without tangible materials, Material and Focus are coded the same.

LANGUAGE ARTS (LA) (Code-Based)

Code LA if the learning focus is on learning letter sounds and names and/or writing and spelling.

- recognizing alphabet
- practicing letter sounds
- writing single letters, not words or connected text
- spelling
- naming numerals without reference to their quantitative characteristics
- naming shapes with no discussion of definitional aspects of the shape
- alphabet puzzles
- toddlers: pictures used as alternative communication and language support.

READING (R)

Code R if the focus is on connected text with meaning.

- book handling or browsing through a book or magazine
- storytelling
- reading silently or pretend reading
- reading aloud to oneself or others
- listening to recorded story with book
- listening to story read by the teacher

LITERACY (L)

Code L if the focus is literacy-related (i.e., LA and R occurring together).

- scribbling (invented writing) or tracing
- dictating or writing text with meaning
- illustrating a self-created book
- writing using invented writing forms
- name writing or recognizing the names of other children in the class
- conversations and communication for the purpose of language development
-

MATH (M)

Code M if the focus is math-related (number, comparing number, operations, shape, comparing shapes, composing shapes, spatial reasoning, measurement, patterning, classification).

- identifying numbers and quantity
- writing or tracing numbers (only when accompanied by an understanding of quantity associated with the number)
- sequencing numbers
- adding and subtracting
- drawing or tracing shapes
- shape matching in puzzles, other than the alphabet

SCIENCE (SC)

Code SC if the focus is science-related (related to exploring physical science and nature).

- color mixing with colored water or paint
- talking about or exploring senses

SOCIAL STUDIES (SS)

Code SS if the focus is social studies (related to understanding people, history, character, social/behavioral skills and emotions).

- discussions about empathy, honesty and other character content, including discussions of how to behave in class and why (e.g., why it is a good thing not to hit your neighbor)
- circle time conversations that involve sharing personal information
- Pledge of Allegiance or School Pledge

DRAMA (D)

Code D if the focus is drama related.

- roles are being enacted
- scenarios are being developed
- play revolves around a specific theme
- **Outside example: Two or more children are pretending to be a family in a wooden house in the playground.**
- Merely having dramatic materials does not make the learning focus *Drama* – children must be pretending with the materials for the focus to be coded *Drama*.

OTHER (O)

Code O if the focus is on anything other than language arts, reading, literacy, math, science, social studies, or drama. Typically, the *Other* code involves playing with toys (building with blocks, puzzles, matching, etc.) or doing an art or music activity.

Below are codes added to separate content originally referred to the Other (O) category.

GROSS MOTOR (GM)

The child is focused on large muscle movement, e.g., child is climbing a wall, large rock, or competing in running, jumping, or bicycling.

FINE MOTOR (FM)

The child is focused on fine motor activities, e.g., beading pearls on a string, or pegboards. Shaping clay with his/her hands, filling up a cookie jar, or using a rolling pin.

NONE (N)

Code N if Material code is *None*.

Coding Notes:

- When children are watching a video/TV, Focus is coded according to the content if it is an educational program and coded O if it does not have a learning focus.

MATERIAL / FOCUS CODING EXAMPLES

Scenario	Material	Focus
Children are working in a small group at a table labeled art. The children are attaching a head and a body of a moose to a paper bag for a puppet. The children are gluing the moose as the assistant is saying that “moose” starts with the sound “mmm.” The target child is gluing and saying “mmmm says M” to the assistant.	Art	Language Arts
A child is cutting out numerals.	Art	Language Arts
A child uses play-dough to make cookies for children to “sell” in their bakery.	Art	Drama
A teacher sets up a dinosaur shop in her dramatic play area, with a cash register. The children are counting, buying and selling dinosaurs.	Dramatic	Math
A child is calling out or recognizing numerals off of flash cards.	Literacy	Language Arts
In a whole group big book reading, the teacher points and talks about objects on the page. The objects are a variety of pictures. The teacher is just pointing and naming the objects.	Literacy (a book)	Literacy
A child is intentionally flipping through a book without words as if reading the story.	Literacy (a book)	Reading
In a whole group big book reading, the teacher points and talks about objects on the page. The pictures are of different street signs. The teacher points to a yield sign and describes it as a triangle, and repeats the process with other signs.	Literacy (a book)	Math
A child is using a wand to count children in the class.	Math	Math
A child is putting numerals in order (a number line).	Math	Math
Child uses pretend coins/money to buy something in dramatic play center.	Math	Drama
Songs (general rule)	Music/ Movement	What is the song about?
Clapping out syllables in words	Music/ Movement	Language Arts
Children use their bodies to make letters.	Music/ Movement	Language Arts
Singing Hokey Pokey	Music/ Movement	Science
A game of follow the leader	Music/ Movement	Other

The children are taking multi-colored goldfish sorting them and arranging them on a graph. They count the fish and talked about most and least.	Science (food)	Math
Child fills a turkey baster with water at sand/water table, then squeezes water into a measuring cup. She repeats until cup is full.	Science	Math
At sand/water table, child repeatedly fills a shovel with sand and dumps it out, feeling the sand in his fingers.	Science	Science
Teacher has pictures of clothing (jackets, shorts, hats, etc.). She leads class in discussion of what clothing is appropriate at different times of year/seasons.	Science	Science
A child is doing a worksheet about letters. He is coloring the letter K's.	Worksheet	Language Arts
A child is coloring a pre-printed picture of a Turkey.	Worksheet	Other

LOCATION

New category that captures children's physical locations in preschool.

PLAY HALL (PH)

Code Play Hall if the room is used for larger gatherings, e.g., circle time or activities where most of the children are present.

GROUP ROOM (GR)

Code Group Room when the room is suited for a smaller group of children. E.g., when a teacher/staff brings a smaller group of children into a separate room for book reading.

DINING ROOM (DR)

Code Dining Room when the room is used for meal time. Note: A Dining Room can be the same room as the one being used as a Play Hall, but when children are having a meal/snack in the room, the code DR should be used. Consequently, the observer needs to consider the coding of the schedule category to decide whether the code DR should be used or not.

HALLWAY (H)

When children are present in the hallway, including the bathroom area.

OUTDOORS (O)

Code Outdoors (O) when children are out in the playground. Note: In the TUTI project, the observations ceased if the child group and staff went to the woods (outside the preschool) and were resumed once the group returned. But, in the PEPI project, if 75 % of the children went to the woods, the observer followed and continued to code.

EMOTIONAL STATE

This new category has been added to describe the emotional state of the child. It can be detected by observing the child's facial expressions and body language. This category is independent from the rating of other categories, e.g., type of task or level of involvement.

HAPPY (H)

If the child gives the impression of being happy, positive, interested, code Happy (H). A happy emotional state can be seen by a genuine smile, sparkling eyes, skipping about, humming for him/herself.

ANGRY (A)

If the child seems furious or angry, code Angry (A).

SAD (S)

If the child seems sad, low-spirited, worried, afraid, code Sad (S).

NEUTRAL (N)

If the child does not show any specific emotional state, code Neutral (N).

SET Code Relationships

These have been programmed into the tablets. Every set code will fill in automatically. Observers only code where there are choices.

INTERACTION	TYPE TASK	INVOLVEMENT	MATERIALS	FOCUS
<i>Non-Academic</i> NA	<i>Other</i> O	<i>Low</i> L	<i>None</i> N	<i>None</i> N
<i>Unoccupied</i> U	<i>None</i> N	<i>Low</i> L	<i>None</i> N	<i>None</i> N
	OR			
<i>Unoccupied</i> U	<i>Disruptive</i> D or DX	<i>Low</i> L	<i>None</i> N	<i>None</i> N
Onlooker O	<i>None</i> N	<i>Case Specific</i>	<i>Case Specific</i>	<i>None</i> N
<i>Social</i> SOC	<i>Social</i> SOC	<i>Case Specific For Swedish context</i>	<i>None</i> N	<i>None</i> N
<i>Time Out</i> TO	<i>Time Out</i> TO	<i>Low</i> L	<i>None</i> N	<i>None</i> N

COP coding sheet as it should appear on tablet. Drop down menus have code letters.

No	Teacher	WG	Teacher	NonAcad	Pass Inst	High	Math	Literacy	Play hall	Happy
Yes	Child	SG	Child	Parallel	Non Seq	MedH	Literacy	LangArts	Group room	Sad
Listen	Sm Grp	Centers	SG	ASsoc	SeQ	Med	SCience	Reading	Dining room	Angry
FssCry	SGT	MBPlay	SGT	Coop	Fantasy Dr	MedL	SocStudies	Math	Hallway	Neutral
	Wh Grp	SGC	WG	ALone	None	Low	Toy	SCience	Outdoor	
	WGT	Transition/ TI	WGT	Onlooker	Other		Art	SocStudi es		
	Self Talk/ Sound	MealTime	Self	SOCial	SOCial		Music/Move	Drama Other		
	No Talk	Other		Unocc	Disruptive		Dramatic	Gross M. Fine M.		
				TimeOut	DisruptiveX		Gross M.	None		
					TimeOut		Fine M.			
							Computer			
							Worksheet			
							TV / video			
							None			
							Can't Code			

Time	SW	Verbal	To Whom	Sched.	Prox.	Interact	Type Task	Invol.	Material	Focus	Location	Emot.
	1											
	2											
	3											
	4											
	5											
	6											
	7											
	8											
	9											
	10											
	11											
	12											
	...											
	30											