Using Child Preferences to Increase Play Across Interest Centers in Inclusive Early Childhood Classrooms

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Using Child Preferences to Increase Play Across Interest Centers in Inclusive Early Childhood Classrooms

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Naturalistic teaching methods are often used to facilitate explicit child-directed instruction within early childhood environments. Naturalistic approaches incorporate developmental theory and behavior analysis learning principles (Pretti-Fronzak & Bricker, 2004). Developmental theory suggests that development is a product of maturation and that a child's learning will progress along a predictable sequence (Bailey & Wolery, 1992). Behavior analysis learning principles suggest that skills emerge as a result of repeated reinforcing experiences within the environment (Alberto & Troutman, 2005). These principles converge to form the basis of naturalistic teaching procedures, in which developmentally appropriate materials and reinforcing materials are used as a consequence for the child's initiation or play behaviors.

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& Bricker, 2006; McDonnell, 1998). The teacher's role is to design the environment and select materials, activities, and routines that will promote children's opportunities to perform specific skills (McDonnell, 1998). When the opportunity arises (e.g., the child indicates interest or begins to interact with toys or an activity), the teacher provides the instructional support necessary to assist the child to participate successfully in the activity or routine and complete the skill. Some examples of naturalistic instructional approaches include incidental teaching (Hart & Risley, 1975), milieu teaching (Hart & Rogers-Warren, 1978), activity-based instruction (Losardo & Bricker, 1994) and embedded learning opportunities (Sandall & Schwartz, 2002). Although these techniques cover a relatively broad set of procedural characteristics, they share an emphasis on the use of naturally occurring events in the child's everyday environment as instructional occasions. When children neglect interest centers in the classroom, they are not able to take advantage of the environmental opportunities the teacher has designed to address their learning objectives. For that reason, it is important for teachers to identify if children are neglecting interest centers and to plan an intervention that will engage them in a variety of activities.

The purpose of this article is to share strategies, consistent with naturalistic teaching methods, which support and enhance the inclusion of young children with special needs in early childhood environments. These strategies build on high-quality early childhood programs to facilitate child-specific instruction by helping teachers (a) examine the environment, (b) observe engaged toy play within classroom learning centers, (c) identify preferred qualities of toys, (d) embed toys with preferred qualities within least preferred learning centers, and (e) determine and use required levels of adult prompting to elicit learning objectives (Sandall, Schwartz, & Joseph, 2001). The collective purpose of these strategies is to encourage and support the play of children with disabilities in the inclusive preschool classroom.

Sandra stands in the middle of her classroom preoccupied with the events of the day. Her interest centers are decorated with theme accents. The children's artwork brightens every wall. She knows that her environment is developmentally appropriate because her program has recently received accreditation from the National Association for the Education of Young Children (NAEYC). Still, she wonders why Yolanda, who has a diagnosis of Down syndrome, and Gordon, who has a diagnosis of autism, do not play across all of the interest centers in her classroom. Sandra is having difficulty getting Gordon to use pretend play items appropriately or to imitate others' use of pretend play items. This would benefit Gordon by providing him opportunities to practice social skills. She has also been having difficulty addressing Yolanda's fine motor objectives (holding a writing instrument with fingers, isolating a finger, using a refined pincer grasp).

Examining the Environment

Addressing the global quality of the classroom environment for all children is the first step in ensuring quality for individual children with identified special needs within group settings. One strategy to guide preparation of your classroom is to use an environmental rating scale, such as the Early Childhood Environment Rating Scale–Revised (ECERS-R; Harms, Clifford, & Cryer, 2004) to examine the global quality of the classroom. The ECERS-R is designed to evaluate classrooms for children ages 2 and a half to kindergarten and consists of 43 items organized into seven subscales: Space and Furnishings, Personal Care Routines, Language-Reasoning, Activities, Interactions, Program Structure, and Parents and Staff. One recommendation for designing high-quality classroom environments is that early childhood classrooms have interest centers that include materials designed to enhance skills across all developmental areas (Copple & Bredekamp, 2009; Harms et al., 2004).

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Interest centers allow children to make choices from a variety of materials that teachers have provided to address developmental skills. The free-choice format of interest center time prevents children from having to wait in large groups and allows children to spend more time engaged with materials. Although teachers should strive to create multiple opportunities for children to practice a variety of skills across interest centers, it is likely that not all skills will be embedded in each interest center. Often, individual children avoid certain areas of the classroom. It is desirable for children to play in a variety of interest centers to take advantage of all available learning opportunities.

Providing multiple meaningful opportunities for children to practice specific skills with a variety of materials across different situations aids generalization as well as skill development. Practicing writing skills to make a grocery list in the dramatic play center, to draw a picture and label it at the art center, and to record observations in their nature-science center journal are all examples of authentic writing. When children remain in specific interest centers during the majority of the school day or choose not to play in certain interest areas at all, they may miss opportunities to practice targeted skills.

Sandra decided to observe Gordon and Yolanda systematically to identify their most and least preferred interest centers and to look at the specific attributes of toys and materials in these areas. Sandra carefully jotted notes and discussed her observation with other professionals who also work with Gordon and Yolanda. Gordon rarely played in the dramatic play center and most frequently played with fine motor toys (blocks, puzzles); he seemed to frequently play at the computer and seemed to prefer toys with auditory and visual feedback. Yolanda rarely chose art or fine motor materials (or those areas of the classroom) and seemed to prefer the dramatic play center and the pretend play materials, especially toys with movement (e.g., mixer, fan). Both children’s neglect of

Table 1
Example Matrix of Time Gordon Spent Across Interest Centers During a Free-Play Period

Time	Art	Fine Motor	Blocks	Dramatic Play	Physical Play	Nature/ Science	Sand and water play	Music and movement
9:00		X						
9:10		X						
9:20		X						
9:30			X					

> “Teachers should observe each child to determine where he or she spends time, the types of toys the child uses, and how he or she interacts with the toys.”

specific centers contributed to Sandra’s difficulty in addressing the objectives their educational team had targeted for each child. Sandra wonders how she can encourage each child to spend time in the interest center where he or she currently do not seem to be interested in engaging.

Observing Engagement With Toys Within Centers

Children have very different play styles and needs; however, the process for recording their preferences is the same. Teachers should observe each child to determine where he or she spends time, the types of toys the child uses, and how he or she interacts with the toys. A matrix can be used to capture the different interest centers where a child plays (Table 1). A teacher can record where the child plays by observing the child at different times during the free-play period. In the example matrix, note that Gordon spent the greatest amount of time in the fine motor interest center and was in the block interest center less frequently. He did not enter any other centers. This process should be repeated until the teacher feels that he or she understands the child’s typical use of interest centers. Observations of multiple children can be recorded simultaneously by entering each child’s initials into the table. Additional notations should be made to determine whether the child is merely present in the center or actively engaged in purposeful play (i.e., appropriate) with materials.

Sandra makes notes about how each child currently spends time. Yolanda seems to enjoy playing with the Magna Doodle. She picks up the pen and scribbles. She will even say, “Dot, dot, dot,” as she scribbles. Sandra speculates that Yolanda freely chooses the Magna Doodle but refuses to go to the art center because the art center is more adult directed and she plays with the Magna Doodle independently.

Gordon runs through the dramatic play center, where a group of children are having a tea party. He approaches the computer and presses the touch window to activate a song, then immediately runs to the front of the classroom and stares at a brightly colored flag hanging from the ceiling. Sandra thinks about how Gordon seems to prefer both auditory and visual toys (such as the music and animation

Table 2
Example Matrix of Types of Toys Gordon Used During Free Play

Time	Auditory	Vibrating	Movement	Visual	Tactile
9:00	X			X	
9:10	X			X	
9:20	X		X		
9:30				X	

provided by the song on the computer) and rarely plays near other children.

After making her observations, Sandra wonders what reasons might underlie why Yolanda and Gordon choose the toys they do and how she can use this information to help both children practice their learning objectives.

Identifying Preferred Qualities of Toys

In addition to noting where a child spends his or her time, it is also important to identify the sensory characteristics (e.g., auditory, vibrating, movement, visual, tactile) of the toys a child chooses (Table 2). If a particular toy has two of the qualities in the table, both qualities are marked. In the example matrix, Gordon played with toys that provided auditory, movement-related, and visual stimulation.

These matrices can be used simultaneously or at different times. Information in both matrices is important in making modifications to low-preference interest centers in an effort to make them more appealing. Preferred sensory properties can act as a bridge to attract children who are sensory seeking to approach toys; after children initiate interest, adults can provide prompting on how to interact with the toy. This may allow the child to experience the naturally reinforcing properties of the toy (i.e., forming a picture when all of the puzzle pieces are put together), and the sensory material (i.e., tactile property, such as fur) can be removed or added to another material to attract child interest.

Sandra creates a matrix to track each child's time spent in different interest centers. From this, she identifies the centers that Gordon and Yolanda are in the most and the least. She also creates a matrix to identify the sensory properties of toys that each child selects. She then plans her intervention; she will take the sensory property each child seems to prefer and put that sensory property into a toy in a low-interest center. She does not merely change the location of toys the children already like to other centers of the classroom; she uses this information to add materials that "fit" into the interest center but also have the preferred sensory attributes for each child. For Gordon, she embeds lights and auditory attributes within the dramatic play center (his least preferred play area). She also adds a mirror that lights up when a switch is pressed and pretend car keys with

auditory feedback (sounds of a horn, car motor, etc.). For Yolanda, she puts items with movement in the fine motor interest center; she adds lights and sounds by using a brightly colored "car" in which Yolanda can turn the steering wheel, honk the horn, and shift the gears.

Embedding Toys with Preferred Qualities within Least Preferred Interest Centers

After a teacher has determined the toy qualities an individual child prefers, as well as the less preferred interest centers, modifications can be made to the toys in the low-contact interest centers in the classroom. This is done by comparing the toys present in the low-contact interest centers and toys that an individual child prefers. The example matrix (Table 1) documents that Gordon did not play in the dramatic play interest center. The information in Table 2 shows that he plays with toys that have auditory, movement, or visual qualities. These qualities (auditory, movement, and visual) should be added in the dramatic play center. Some toys that might be selected include a musical spoon (auditory), a stove that lights up (visual), or a battery-operated mixer (movement). His interest in this stimulation should encourage him to approach these types of toys and provide his teacher with the opportunity to provide prompting to assist him to use the toys functionally. Researchers have found embedding of a preferred sensory attribute beneficial in increasing play with a particular toy (Vanderhayden, Snyder, DiCarlo, Stricklin, & Vagianos, 2002); additionally, children are more amenable to adult prompting when interacting with toys that have preferred properties (e.g., sensory).

Even after manipulating the sensory attributes of toys in the respective centers to make them more appealing for each child, Sandra did not see a big change in the way the children played in these areas. The sensory attributes got each child to the different interest centers of the classroom, but they were using the toys briefly or not appropriately. She began to think about specific prompting strategies she could use to guide the children through play with these materials.

Determining Required Levels of Adult Prompting

Identifying preferred sensory properties and low-interest centers is a first step in attracting children who are sensory seeking to explore materials with added sensory properties in low-interest centers of the classroom. It is imperative to recognize that *how* the children play with these toys is what is more likely to lead to skill development. Adults are still an important component to most children's learning and must be involved for children to benefit maximally from the environment (McWilliam & Casey, 2005). After toys have been added to the low-interest centers, children may need an adult to introduce the new materials.

"It is imperative to recognize that *how* the children play with these toys is what is more likely to lead to skill development."

Table 3
Example of Using a Least-to-Most Prompt Hierarchy for a Play Dough Activity

Prompt	Description
Present material: Adult presents the play dough to the child	Adult waits 5–7 s for the child to respond or interact with the play dough. Adult praises the child for taking out the play dough; if the child does not respond, proceed to verbal request.
Verbal request: Adult instructs the child to take the play dough out of the container	Adult waits 5–7 s for the child to begin to take the play dough from the container. Adult praises the child upon completion; if the child does not respond, proceed to providing a model.
Model prompt: Adult shows the child how to remove the play dough from the container	Adult waits 5–7 s for the child to respond. Adult praises the child upon completion; if the child does not respond, proceed to physical assistance.
Physical assistance: Adult takes the child's hand and guides him or her to take the play dough out of the container while repeating the request	Adult praises child for taking the play dough out of the container.

Teachers can provide choices between two low-interest centers, using object or picture cues as visual prompts. After the child has selected an interest center, the teacher can go with the child and show him or her the added toys.

Children demonstrate varied learning styles in play. Some children respond to adult prompting, some prefer solitary exploration, and others prefer a combination. Solitary exploration may be enhanced by introducing toys with preferred qualities into low-interest centers. For children who prefer solitary exploration, the addition of preferred toys can be what draws them into the area, thereby setting the stage for learning to occur. For other children, the mere introduction of these toys may not be enough, and additional adult prompting may be needed.

A variety of prompts can be used to assist the child in playing with available materials. Teachers can use verbal prompts, model prompts (demonstrating to the child how to interact with a toy), or physical prompts (guiding the child to complete the behavior). One adult prompting strategy that can be used is a least-to-most prompting strategy (see Wolery & Gast, 1984). This method of prompting consists of providing increasing levels of assistance to a child to assist him or her in completing a task (see Table 3). This prompting strategy should have built-in wait time to allow for child responding. Because higher-level prompts are provided only if the child does not respond to initial prompts, this prompting strategy has a built-in fading component, meaning that by always beginning with the presentation of materials

and increasing assistance only if the child does not complete the skill, the prompts are automatically faded. Using this format, teachers can determine which level of prompts is effective with individual children.

Sandra sits back and smiles as she glances across her classroom. The addition of each child's preferred opportunities for sensory feedback has drawn each child to the previously identified low-interest center. She looks over at Gordon in the kitchen center with a doll and a musical spoon (auditory) while the classroom assistant prompts him to feed the doll. He is now taking advantage of the opportunity to address two of his objectives: imitate pretend play actions and interact with peers. Yolanda is nearby in the fine motor interest center playing the light-up piano (visual and auditory), which addresses her fine motor objective of isolating a finger. Sandra thinks the modifications and prompting she has implemented made a difference for both children.

Conclusion

When examining the play skills of children within a developmentally appropriate setting, many factors need to be considered. First, observation should be conducted to determine which interest centers are rarely or never entered by a child. An additional observation should be conducted to determine the qualities of toys a child seems to prefer. Next, toys with preferred qualities can then be embedded within least preferred interest centers. Levels of adult prompting required to sustain a child's interest and participation within an activity or interest center should be determined and used to provide the child optimal learning opportunities and then faded as children develop the skills they need to maintain play.

Note

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