The Environment as the Third Teacher

Throughout the history of early childhood education, numerous educators have viewed the environment as the third teacher, and therefore as having equal importance as the teacher. How is thinking about the environment as the third teacher beneficial? A well-designed environment can support and enhance all areas of children's development and learning, just as a poorly planned environment can detract from overall development and learning.

How does the environment "teach" children?

It is difficult to think of the environment as more than an inanimate object, however, consideration of the work of Urie Bronfenbrenner can lend insight into how the environment can teach. In his work examining the interaction between children and their environments, Bronfenbrenner developed the concept of bidirectionality, which states that the child impacts the environment, and is in turn impacted by the environment. Based on this, for every action there is a reaction, and it is the processing of this interplay that allows development to occur.

To support looking at the environment in a systematic fashion, Katz's (1987) framework for children's learning can be employed. According to Katz (1987), the four categories of learning that are relevant to the education of young children include the following:

- Knowledge, which refers to facts, concepts, ideas, vocabulary, and stories.
- Skills, which are small units of action that occur in a relatively short period of time and are easy to observe and document. Skills might include such things as drawing, cutting, counting, entering play, and engaging in appropriate physical activities.

- Dispositions, which refer to habits of mind. Katz argues that needed dispositions include curiosity, creativity, cooperation, and friendliness.
- Feelings, which include competence, belonging and security.

Katz's four goals can serve as a template for organizing the teaching aspects of the environment. When looking at how the environment can support children's learning, consider the following:

The environment as a teacher: Providing support for knowledge

How can early childhood environment support children's knowledge? Important environmental aspects of knowledge include providing information for the senses, supporting the unique needs and preferences of children, providing experiences that are content-rich, and which provide feedback.

Environments should support learning through the senses. One of the foundational principles of early childhood education is that the senses play a large role in children's development, and that a carefully designed environment support children's exploration through their senses.

How can environments take into account each of the five senses? Within the field, the areas of visual and tactile development often receive the most attention, with brightly colored objects and carefully selected objects for little hands to explore adorning the classroom. Certainly, the senses of sight and touch are important, but often uninformed choices are made about what best supports children's senses, and not only is support for vision and touch misused, it often eclipses inclusion of sound, smell, and taste.

When designing environments that accommodate children's senses, consider the following, which are adapted from the Council on Rural Services Program website:

- Sight: Brain research informs that children respond to various colors in a variety of ways. When thinking about the colors for a classroom, think about the amount of time children might spend in the environment each day, and the program objectives. Brightly colored walls are often a staple in early childhood environment, with the idea that primary colors communicate "kid space." Bright colors, however, serve to support alertness, and for a child spending a long period of time within a brightly colored classroom, this might serve to actually interfere with their ability to concentrate within the environment. More subdued colors, on the other hand, can have an overall calming effect, the therefore support children's attention and concentration.
- Touch: A sensory rich environment will give children a variety of tactile experiences, and it is important to note that these tactile experiences provide important information to children about their world. Incorporating a variety of textures, and accompanying these textures with rich language, can provide children with needed information.
- Taste: Allowing children to explore a variety of different tastes can give them information about likes and dislikes, as well as supports their developing vocabulary. For young children, keep in mind that they learn important material about objects from placing them in their mouth, and therefore are likely to taste anything within reach! Because of this drive for mouth exploration, safety is paramount, and anything infants and toddlers can access needs to be safe for this exploration to occur. For older children, exposing them to a variety of different tastes can help support a diverse palate.

- Smell: Different smells stimulate the brain in different ways. For example, peppermint, orange and cinnamon make us more alert, while chamomile, lavender, and rose have a claming effect. Be sure to include the sense of smell as an integral part of the curriculum adding scents to play-dough and paints, and having potpourri (out of children's reach) in the environment.
- Hearing: A variety of sounds can serve to stimulate, but be careful not to overstimulate. The sounds in the environment need to complement the activity—calm, soothing music for nap, and catchy tunes for movement, for example.

When considering how to include the sense within the early childhood environment, it is important to balance the fact that overstimulation can interfere with children's ability to focus, and that multisensory experiences best support children's learning.

Environments should support play and the learning needs and preferences of each child. How can environments support children's play and unique ways of interacting with materials as well as one another? The answer is as diverse as the multitude of different needs children bring within the classroom, but is as simple as keeping one important factor involved: well designed environments allow children to act. How children act upon the environment, what ways they choose to experiment, how they process the material within it—each of these factors are determined by the individual child, based on their own individual needs. A good environment, based on this, will provide children with a variety of options that support the varied explorations they might embark upon. This is supported by the work of "playeducation" specialists Cosco and Moore (1999), who argue that the richer and more diverse the possibilities offered to children within their worlds, the more children will gain in terms of knowledge, understanding, and the meaning of place and space in their own lives. Careful attention to material selection, activity center design, and area placement

will be covered later in the chapter, but each of these are critical to ensuring the environment provides extensive options.

Environments should be content-rich. Not only it is critical that early childhood environments support children's play and work, but environments also need to be content-rich. Historically, many of the field shied away from stressing the importance of the content-rich environment, thinking that this in some way might be construed as support for an academic approach. Within the field of ECE, there is growing concern that the academic approach--including the focus on literacy and numeracy skills—is often introduced before children are ready, and includes activities that are not reflective of children's developmental needs.

The appropriate alternative to the academic approach, according to Lilian Katz (1991), is one that supports children's developing intellectual skills. The process for supporting these skills includes the development of a child-directed environment that is both rich in choice and content. From this child-directed environment, children learn habits of mind that allow them to interpret experiences. It is this ability to interpret that Katz sees as a critical aspect of cognitive development, and the content-rich environment supports development of this goal.

Environments should provide feedback. When you think about the environment as the third teacher, it is useful to entertain just what the environment's teaching role might be. Environments, despite the fact that they are inanimate, can provide children with feedback for their actions. Consider again the work of Urie Bronfenbrenner regarding bi-directionality—the child impacts his or her environment, and it in turn impacted by the environment.

Based on the concept of bi-directionality, children's actions provide opportunities about impact. An eight-month old who throws a rattle onto the floor from a high chair hears a crash, and, after peering over the edge, sees that the rattle is now on the floor. A great lesson in object permanence, provided through the environment.

Consider the three-year old who pours sand through a funnel, and watches the slow stream as the sand makes its journey through the narrow end. The funnel, in this case, serves as a conduit, not only for the sand, but for the child's knowledge of the function of that particular object.

Watch the first-grader study the butterfly garden he and his classmates have developed. On one side of the black-eyed susans that form an enticing border, the children have prepared a natural soap mixture to ward off June Beetles. On the other side, nature was allowed to run its course, without the interference of their natural bug treatment. The result? One side of the plants leaves are sturdy and intact, and on the other untreated side, the leaves are a polka-dot pattern of holes, where the bugs have passionately pursued their mid-day (and early day, and late day) snacks.

In each of the above cases, children learn from their actions, and the environment serves as a vital teacher. For this learning to occur, environments need to be designed in such a way that feedback is cultivated, and just as teacher need to observe the effects of the environment on children, children need to be taught to pay careful attention to the feedback the environment gives them.

The environment as a teacher: Support for the development of skills

The volume of skills children need to learn during early childhood is daunting—not only are children developing fine motor skills for such tasks as writing and drawing, but they are learning how to physically navigate the environment, how to get along with others, how to

communicate in ways that they are understood, different means of representation (including the written word) and how to utilize these skills to communicate ideas, and basic academic skills such as numeracy and letter identification.

Environments should include a wide variety of tools and opportunities to practice and acquire skills. Proper placement of tools and opportunities within the environment can provide a rich foundation for exploring, developing, and practicing the myriad of skills children are expected to develop. Consider the following:

- Tools as a means of supporting skill development.

  What kinds of tools can support skill development? Tools can be thought of as a device that supports the accomplishment of a task, and when considering all the developmental tasks of early childhood education, the tools that can support this development are numerous. Tools that support fine motor development might include having scissors, pencils, markers, crayons, paint brushes, beading, and legos, to name a few. For gross motor development, objects like balls, climber, and swings are important. Getting along with others and communicating to be understood can be supported by interaction in a language-rich environment. Therefore, opportunities for individual, small group, and large group activities with a teacher providing labeling, interpretation, and support can be effective tools. An environment rich with labels, pictures, and books can support the development of representation skills, with children being afforded many opportunities to represent their own ideas. Finally, basic skills such as letter identification can be supported through the print-rich environment, and opportunities for counting, exploring wholes and parts, and ordering can support basic numeracy skills.

The environment as a teacher: Providing support for dispositions

Dispositions refer to habits of mind. Katz argues that there are dispositions which are most supportive of children's overall learning in the classroom, and it is important that these are cultivated.

Environments should support curiosity, creativity, cooperation, and friendliness. Katz identifies curiosity, creativity, cooperation and friendliness as important dispositions that support children's learning. Blaustein (2005) extends these dispositions into the basics three i's of education, including interactions, imagination, and integration. Interactions meet children's needs to socialize, and through these interactions, children gain important information about knowledge, social skills, and language abilities as well as the self-esteem and confidence needed to successfully approach challenges in the future (Blaustein, 2005).

Imagination-play based activities allow children the opportunity to explore and test creative ideas through engagement and to participate in open ended, meaningful curriculum. Blaustein argues that participation in this kind of play allows children to explore their imaginations, the power of wonder, and creative play activities, each of which create the medium for rehearsing skills, refining language, and building social skills.

Through integration, children participate in multi-sensory learning that allows them generate new ideas, wonder, explore possible options and different outcomes. The learning that integrates each of the child's sense supports their overall knowledge of, and passion for, learning.

How can the physical environment provide opportunities for development in each of these areas? Design provides a backdrop through which interactions can occur, and the care and attention through which materials are placed in the environment can serve as a

springboard to children's imaginations. Integration provides children with the opportunity to experience the world through their senses, and as stated earlier, sensory stimuli can be effectively utilized to create a engaging supportive atmosphere.

Environments should support childhoods. According to Jim Greenman, early childhood advocate and guru of environmental design, children who enter full-time care at six weeks of age may—by the time they have entered kindergarten—have spent up to twelve thousand hours in child care, which is more time than s/he will spend in all of elementary and high school (Greenman, 2005). Child care is an incredibly prevalent world for young children, with statistics including that 30% of children under the age of three and 50% of children under the age of five attend early childhood centers (Children's Defense Fund, 1999). Based on these statistics, the early childhood environment is one that many American children are in for extensive amounts of time.

What does it mean for an environment to support childhoods? To address that question, there must be a shared perception of what "childhoods" are. Greenman argues that childhood is a time when human beings should fall in love with the world, including all of its untidy and occasionally scary complexity, delights, and mysteries. To support these spaces for childhoods, he encourages all early childhood environments provide children with: a place to live that supports competence, comfort; and children's individuality; a place of beauty; an environment that promotes and accommodates families to create community through supporting security; a place that support cooperative and creative learning; a place that encourages responsibility, compassion, and community; and a place connected to the natural world, the larger community, and the world beyond. Through careful attention to environmental design, support for the disposition of loving the world can be cultivated.

Environments should be aesthetically pleasing. What role does aesthetics play in environmental design? Aesthetics must be included as a vital part of the early childhood curricula, and environments that are aesthetically pleasing serve to reinforce the ideas that aesthetics are a vital facet of our world.

What does it mean for an environment to be aesthetically pleasing? According to Elliot Eisner, a passionate art educator and educational philosopher, an aesthetically pleasing environment is one that recognizes, engages, and embraces the imagination as a source of content (Eisner, 1997). Based on this, a child's imagination plays as critical of a role in their development as, for example, their language does. Therefore, cultivating the child's imagination should receive the same attention as support for language development.

What kinds of environments serve to ignite a child's imagination? Environments need to reflect what children know in ways that are respectful and inviting. The works of art of children in the classroom should adorn the walls, as opposed to cute store-bought cut outs. Pictures of children and their families should visible throughout the classroom, in contrast to cartoon renditions of children on the walls. In each of these examples, children's lives and work is valued, and their contribution to the overall classroom respected and cultivated. What a great atmosphere in which to cultivate imagination!

The environment as a teacher: Support for the development of feelings.

How can the environment support children's feelings? The success in each of the other area of learning—knowledge, skills, and dispositions—will impact how children feel about their interactions with the environment, and in turn, how they feel about themselves.

Environments should support feelings of competence, belonging and security. Careful attention to the design of the early childhood environment can maximize one of the most important environmental advantages: the capacity to give feedback. As

discussed earlier, the concept of bi-directionality provides knowledge that not only does the child impact the environment, but the child is also impacted by the environment. With this in mind, the competence that children gain from successful interaction with the environment can be highlighted.

Consider Jack, a 10-month old who is putting together his first puzzle. Jack is practicing his skill of eye-hand coordination through grasping the large knobs that are attached to the puzzle pieces. These knobs, which can also be referred to as tools, allow his developing grasp an easy target. Jack is gaining important spatial knowledge through his puzzle making, and the fact that it is taking two to three attempts to get the correct piece in the corresponding hole is supporting the disposition of persistence. And when the puzzle is done? The feeling of competence! Jack worked to achieve something within his environment, and because careful attention was paid to his developmental and learning needs, he was successful.

A feeling of belonging can be cultivated in the environment through attention to children and their worlds. Through community building, children are taught that they are an essential person within the early childhood community. Concrete practices that support community building include placing pictures of children and their families throughout the room, as well as adorning the walls of the rooms with children's creations. Through these simple practices, you are giving children a sense of place, and communicating to them that they are important parts of that place

Security is another important feeling to cultivate in the early childhood environment, and attention to the importance of relationships is critical in developing children's security. Within the environment, providing children with opportunities to form and maintain relationships is vital. For infants and toddlers, creating environments that value physical

contact—as opposed to placement in swings and playpens—can help support developing security. For older children, the need to have contact and develop a strong relationship with the teacher is complemented by the need to develop relationships with peers. Providing space to gather up for a private chat in the corner or snuggle up with a good book all become important practices that support security.

Developing an environment that teaches

How can the environment be enlisted to teach, and support all these varied goals? The process begins with careful observation looking at how the environment is presently used, as well as how effectively it meets children's needs. Next, brainstorm how your environment can be adapted to meet each of the learning goals. Are there materials to be added? Do you need to engage in room arrangement revisions? Are there materials presently in your environment that detract from the overall goals?

It is important to enlist the help of children in environmental design, as it is—of course—their learning you are working to support. Supporting children's learning is one of the mandates of early childhood education, and by enlisting all resources—including the environment—to help attain this goal, success can be attained.

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