the physical environment

A powerful regulator of experience

by Elizabeth Prescott

Anytime I encounter children who have been in a child care center, I ask them what they remember about it. Invariably their memories are about the agony of lying still at nap time, playing in the sand pile, having to eat beans, having one's back rubbed at nap time, or being outside on hot days. Apparently their memories are stored primarily as tactile sensory impressions.

This phenomenon suggests to me the importance of paying attention to the physical environment we create in a child care program. I would like to address five key dimensions of environment which impact on the experiences of children. Then I will demonstrate how to consider these dimensions in solving some typical problems in child care settings.

Dimensions of the environment

Softness/Hardness. Softness is provided for in a center's environment through the presence of objects which are responsive to one's touch — which provide a variety of tactile sensory stimuli. Such objects include sand, water, grass, swings, rugs, pillows, soft furniture such as large pillows and couches, finger paints, play dough/clay, and laps to sit on.

A common characteristic of these soft materials is that they provide experiences where the environment responds to the child. You can use your body the way you want to on a rug. You push sand around or pound on clay, and each does what you want it to do.

Hard surroundings (tiled floors, wooden furniture, asphalt playgrounds) provide a different experience. You just don't feel as comfortable sitting on a tiled floor, and you don't feel inclined to roll around on an asphalt play yard. In like manner, a straight hard chair tells your body what to do.

These hard materials give the message that "you better shape up and do what the environment requires" — it's not going to give in to you. I think young children are not developmentally ready for this message for very much of the day. Especially in a full day program, inhabitants — big and little — of a hard environment will inevitably experience tension and fatigue.

Open/Closed. Play equipment that is open has no one right way of using it — it can be manipulated in a variety of ways. For example, sand, collage materials, and dress up clothes can be played with in a wide variety of ways — none of these ways is inherently incorrect.

Closed equipment, on the other hand, can only be played with in one way; it can only be manipulated one way to come out right. With a puzzle, for example, the pieces must be fitted the proper way to complete the puzzle. Lotto games and nearly all Montessori equipment exhibit this closed nature. Such equipment is useful and can give a sense of competence, but only if it is well matched to a child's growing edge — if a child has learned how to do the one operation, it is no longer interesting; and if he can't do it at all, it is often frustrating.

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Then there is some equipment which is in between. Legos® and tinker toys are good examples. They require you to pay attention to their qualities. They won't do everything you want them to do, but if used in the proper way, they permit some opportunity for creativity.

I feel that a center needs to provide all these kinds of experiences for children. But for preschool children it is especially important to have open equipment available. Sometimes centers believe they are well equipped if they have lots of puzzles and cognitive games. Often open equipment is considered less important and is provided in a haphazard, thoughtless way. The opportunities available in open equipment need to be taken seriously.

Simple/Complex. Play equipment can differ in its holding power, i.e., the capacity to sustain attention. We have called this dimension complexity and have rated play units according to the number of different materials which are combined. A simple unit has one manipulable aspect, a complex unit has two different kinds of materials combined, and a super unit has three different kinds of materials that go together.

For example, a sand pile with no equipment is a simple unit. Add digging equipment and it is a complex unit. If you add water as a third element, it becomes a super unit. Play dough by itself is a simple unit. With toothpicks it is a complex unit, and with toothpicks and cookie cutters it is a super unit.

The advantage of a super unit is that it is much more complex so that it holds children's interest for a much longer time. As you add more features or materials to a unit, you geometrically increase the number of things that can

be done with it. The usefulness of this concept is that when you look at play that isn't working well you can often get it to work better by making it more complex.

Intrusion/Seclusion. This dimension describes opportunities for privacy and control over one's own territory.

To me, this is an especially important issue in child care. It is one thing for a child to go to a morning nursery school, where the main goal is to give the child a social experience. But a child going to a child care center where he has to deal with many people for an entire day may get much more of a social experience than he needs.

For this reason, I think it is especially important to have the environment set up with places where children can be alone at times or alone with a best friend or adult so that they can feel secure that they are not going to be intruded upon. In child care, it is important for children to know there are times when they do not have to share and can use equipment without interruption and can have some individual adult attention.

High Mobility/Low Mobility. This aspect looks at the freedom a child has to move around. High mobility activities permit the child to use his whole body — running, climbing, or trike riding. Other activities, such as story time and puzzles, by their very nature require children to sit still. There are also activities that are in between — playing in the housekeeping area or the block corner.

One thing I've observed in cognitively oriented child care centers is that children are sometimes sitting for long periods of time. I remember observing in a center once where children sat for a matching game at tables, then moved to a story time on a nearby rug, then back

to a sitting down activity at the tables. In all, the children had to sit still for nearly two hours, which was very difficult for them. The teacher, who was moving about the entire time, apparently wasn't aware that she had provided three low-mobility activities in a row.

I've also noticed in centers where children are provided many choices there are a number of children who will never choose sitting down activities. One thing adults have to be more inventive about in such circumstances is in providing cognitive activities which permit high mobility. There are many counting games that you can do while you're running or trike riding. Also with trike riding, building in stop signs, a trike riding path, or inventing slalom games are all ways of making children pay attention to perceptual cues. In many centers, you only have to pay that kind of attention in sitting down activities.

Dealing with problems environmentally

Problem: Children not sharing. There are two spatial problems that are apt to be involved in sharing. One is that there often isn't enough to do. In our observations, we counted the number of things to do against the number of children in a center. We found that during a free choice period it actually takes about five things per child at any given time to make for a really well functioning program. If there were only two things, we would invariably see sharing problems.

The second spatial problem often associated with sharing is insufficient complexity. For example, if children are fighting over tricycles, often the answer is not to get more tricycles but to provide variety in the type of wheel toy and props to go with them.

If you have some tricycles with rear seats and some with wagons that hook on, if you have traffic signs and gasoline pumps, and perhaps some blocks that can be piled on the wagons, then this activity can absorb far more children without having them fight over the use of the trike itself. Some can be riding, some directing traffic, some hooking on wagons, and some piling on blocks. The resulting play will have a richness of theme seldom seen where only simple tricycles are provided.

Problem: Children not becoming involved. When children cannot find something to do or are bored with an activity, the problem often can be solved by increasing the complexity of play units, thus adding novelty and providing more focus. If you've had play dough out for a long time, bringing in buttons and toothpicks will add to its interest.

Non-involvement may also be the result of poor organization of the play space resulting in excessive intrusion. If activities are arranged around the edges of a rectangular room with empty space in the middle, it is likely that children will be drawn out of the activities and into the open empty middle to run. Also a problem will arise if you have an activity area which is not well protected so that children moving from one activity to another move through it. This traffic will disrupt and discourage the children playing in this area.

It is crucial, therefore, to provide activity areas which are well defined and well protected. I would recommend taking a look at your room and yard to determine if there are clear functional pathways between areas.
It may be helpful to get down at the children's height to view the area as they see it. This perspective may reveal visual obstacles which are not apparent from the adult's eye level.

Problem: A child keeps repeating one activity. If a child really seems to be stuck on an activity and is in clear need of having his activity level broadened, a look at the environment may suggest some alternatives which provide a secure way for the child to make a move.

First, you may want to introduce some novelty into the environment. If a child is stuck on puzzles at a certain table, it may help to simply move the puzzles away for a week and to experiment with placing a more open activity such as collage or drawing with felt pens on the table where puzzles have always been located.

Second, it may help to restructure the activity. If a child plays continually with play dough as a means of avoiding social contact, it may help to bring the social contact to the play dough and to protect the budding relationship from intrusions. This child is probably not ready for the complexity of social skills that comes with fast moving, high mobility dramatic play, but could handle a bit of interaction over a 'safe' activity.

Problem: Children coming unglued at the end of the morning. I've seen some interesting solutions to this problem. Usually the solutions provide for increasing softness. For example, having children take their shoes off before lunch time is a way of letting them wind down and of letting them know there is a different part of the day coming. I also remember a center where children were really at loose ends after the usual end of the morning cleaning up and washing up. Each adult then took her children into a quiet, enclosed area that had a rug and pillows. They had a nice intimate time together — talking and reading stories. The children lounged on the pillows and were relaxed and calm for lunch and nap time.

Problem: Adults coming unglued at the end of the day. One thing that really surprised me in our observations was that it is the adults more than the children who have a difficult time coping with the final hours of the day. We started out assuming it was the children who fell apart. But we found that after the children got up from their naps, they were raring to go again.

When we coded their behavior, they did quite well. In center after center, we found it was the adults who appeared fatigued and less effective.

Child care programs will go to a great deal of trouble and expense to provide activities and equipment they think are good for children. But it wouldn't occur to them to get a really comfortable easy chair for an adult who has been there for eight hours. Likewise, I know of centers where adults may not sit down when children are outside. To me, this is not a wise policy — a yard ought to be safe enough so that an adult can sit down. Just as with the easy chair inside, once the adult sits down, she really becomes accessible to children. When an adult is sitting, she can snuggle and converse in a close way, which is impossible when she is standing up.

If you want an adult to nurture children, she's got to feel that she's nurtured too. I think providing comfortable furniture and encouraging the adults to be comfortable is one way that you get good things to happen for children.

Another way of saying this is to propose that the dimensions which I have discussed can be applied to enhance the comfort and interest of the environment for adults in child care. They, too, need softness, complexity, variety, and freedom from too much intrusion.

Further readings

Jones, E., & Prescott, E. (Out of print). Dimensions of Teaching — Learning Environments — II. *Focus on Day Care.* Washington, DC: NAEYC.

Kritchevsky, S., & Prescott, E. (Out of print). *Planning Environments for Young Children: Physical Space.* Washington, DC: NAEYC.

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