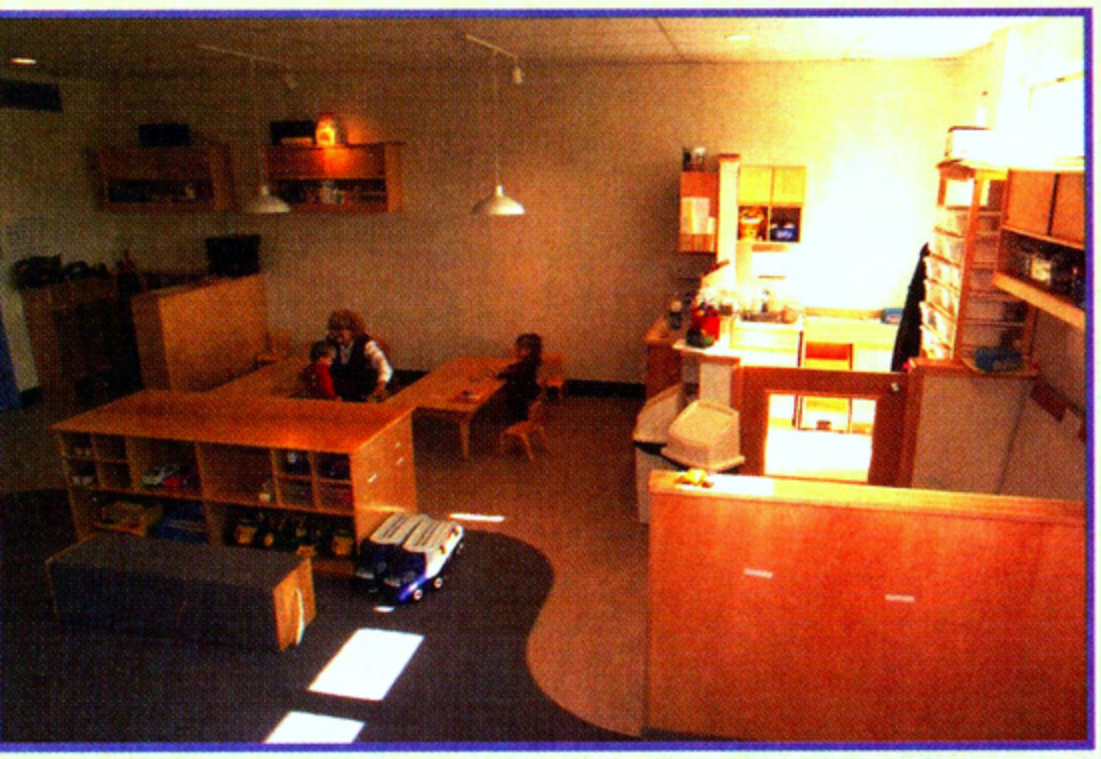
Enhancing Development through Classroom Design in Early Head Start

Meeting the Program Performance Standards and best practices



In 1979, I started my early childhood career as a teacher in a mixed-age infant and toddler classroom. After a very short time on the job, I realized that the way the classroom was set up had an effect on a great number of dynamics, including how the children interacted with each other, how teachers interacted with the children, and how staff members worked together. During my six years of teaching, I experimented with the layout of each of my classrooms, reconfiguring space and creating furniture based on my daily observations. It was from these first experiences as an infant and toddler teacher that I truly came to recognize and understand the impact of the physical environment.

Since 1985, I have worked with thousands of teachers and hundreds of early childhood centers, including numerous Early Head Start programs, and I have observed how inadequate facilities continue to be an obstacle to providing high-quality services.

In poorly designed environments, well-intentioned staff members experience ongoing frustration because they find themselves spending a great deal of time "managing" the children in order to avert problems, which leaves less time for building emotionally supportive relationships and providing optimal learning experiences. Inadequate classrooms force teachers to act as magicians, entertainers, and disciplinarians — not leaving them with enough time to be educators.

The classroom problem

Here's a typical scenario: A teacher picks up an 18-month-old who has run into and over a 4-month-old lying on a blanket in the middle of the room. The 18-month-old is then reprimanded when in fact it was the environment that actually caused the negative interaction. Without any boundaries to help direct the toddler's movements, there was no "safe space" for the infant to move about freely without the danger of being stepped on or bumped by a naturally active toddler.

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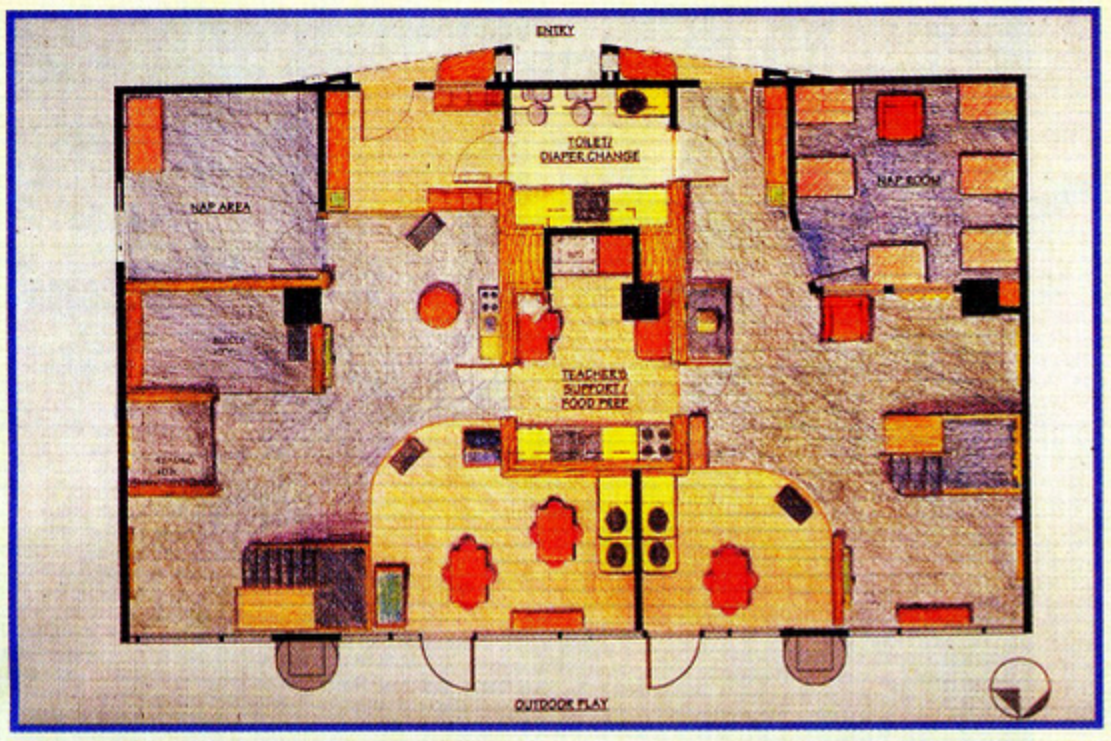

Design pitfalls

- Committing to a building/classroom without accurately assessing code, costs, and program goals.
- Inadequate space
- Dividing up a large space into multiple classrooms using only toy shelves or half walls and no acoustical separation.
- Lack of an adjacent outdoor play area.
- Floor to ceiling windows, which cause a classroom to lose wall space used for activity areas or storage.
- Excessive use of base cabinets around the classroom wall, which creates the same problem as floor to ceiling windows.
- Purchasing equipment without first developing a furniture layout.

Here's another common situation: Once an infant can crawl and pull-up, climbing becomes a major focus of her day. Even if there is nothing safe in the classroom to climb on, she will find a way to climb — onto tables and shelves, rocking chairs, high chairs, or anything else within reach. Because these activities are dangerous, the teacher redirects the child off the piece of equipment, telling her "No, don't do that."

Infants and toddlers who are in poorly designed group settings hear their caregivers saying no to them much too often. The message these children receive is that what they are interested in doing is not acceptable; this ends up inhibiting instead of promoting self-initiated exploration, a primary focus for healthy development. And when you consider the fact that many infants spend as much as 10 hours a day in group care — at a time when development is so critical and occurring so rapidly — the long term impact of this continual "no" experience can have a dramatically stifling effect. The environment becomes almost completely teacher-directed as opposed to a child-directed one that encourages movement, exploration, and pro-social interaction.

If your Early Head Start program is experiencing similar challenges, the good news is it's possible to redesign your classrooms to support high-quality care. I've worked with and spoken to many program directors and teachers who are now proud of their facilities, having created spaces that stimulate optimal child development. These directors and teachers recognized how their poorly designed facilities were affecting the quality of care they were providing, so they developed a vision of what type of environment they wanted to create and then worked on a master plan, secured initial funding, and eventually phased-in the renovations.

The relationship between well-designed facilities and high-quality programs

The physical environment affects children's learning and development in many ways. Well-designed environments support exploration, give young children a sense of control, and enable children to engage in focused, self-directed play. Poorly designed environments, on the other hand, discourage these activities. And because well-designed environments are engaging, they minimize problematic behaviors such as aggressiveness and aimless wandering.

The physical environment also affects relationships. Well-designed spaces evoke a sense of security, which is a prerequisite in the formation of a healthy identity. And in appropriately designed classrooms, the children are given an opportunity to play both independently and in small groups and the teachers are supported in their role as observers and facilitators of children's learning and development.

The physical environment affects a program's ability to promote best practice. It can become a tool for both staff and program development. An appropriately designed environment helps teachers to experience more appropriate interactions with children.

Developing a vision: Creating a master plan

The Head Start Program Performance Standards mandate that every Head Start program engage in an annual self-assessment that includes the development of a program plan with short- and long-term goals. In order to support quality care and best practice, facility and classroom design improvements should be included in this assessment and subsequent plan. The plan should be based on a vision — to create an optimal facility design that supports children's development.

Even if your program doesn't have the money required to make immediate changes to your infant and toddler classrooms, you can still develop a master plan. This master plan will keep you from wasting money on short-term, ➥

Tip: To prevent serious bumps, cuts, and other injuries, make sure that all windowsills, protruding walls, shelves, and cabinets that are approximately the same height as the children have a minimum of 1/4-inch rounded corner.

temporary fixes that will need to be re-addressed later and it will give you an idea of how much money your program will need to raise in order to make changes.

To start your plan, make a list of changes that need to be made or design elements you'd like to see in new classrooms. Once you have your list, prioritize it by making the distinction between what your center *needs* and what your center *wants*. As always, you'll need to focus on health and safety issues first, such as adding new toilets and additional sinks. Perhaps one of your classrooms lacks natural light. If so, include in your master plan an estimate from a contractor for the cost of knocking out a wall and adding windows. Don't try to do everything at once. Instead allow enough time to do everything right the first time! This applies to all types of changes, including all improvements to the facility and the outdoor play area. It's much better to make changes in stages than to compromise quality by trying to take too much on at once.

Budgeting

In order to develop a realistic master plan and budget when designing a new facility or renovating an existing one, you should enlist the services of a design professional before you develop your plan and budget. If you don't, you may find out that the funding you secured is not sufficient, which means that you'll either have to delay your project or settle for lesser quality.

If, for example, you have identified a building to remodel or expand into if you receive an Early Head Start grant, you should concurrently find an architect to provide a feasibility study with a cost estimate. This will give you an accurate assessment of the cost of completing the remodeling or expansion. The feasibility study will probably address the following:

1. The appropriateness of the site in relation to the center's goals, and building and planning code.
2. How your facility or classroom will need to comply with the Americans with Disabilities Act requirements.
3. If there is sufficient parking and utilities.
4. Whether the building is structurally sound, and if it isn't, what types of modifications need to be made.
5. If and what kind of soil tests will be required.
6. Whether there are any toxins or hazardous materials that need to be dealt with.
7. How other site considerations, such as sound levels and traffic, will affect the project.

You'll need to identify for the architect the program requirements that will influence your square footage and plumbing needs. For example, if your goal is to serve 40 Early Head Start children in a full-day program, you'll need five classrooms. Give the architect as much specific information as possible. Be clear about age groupings, since the square footage and plumbing requirements will differ with an infant, toddler, or mixed-age group. Also be sure to discuss outdoor access, additional square footage for nap rooms, classroom storage, lighting requirements, and administrative space needs. In order to create a high-quality program that supports best practices you should plan on meeting and exceeding minimum standards.

Not all projects will require an architect. A classroom remodel may or may not require one depending on the extent of the desired improvements. But it is always helpful to get the advice of a design consultant or Early Head Start specialist in your region — even when the extent of your remodeling project involves replacing classroom furniture, painting, adding new carpeting, adding a sink, or improving lighting.

Developing a landscape for learning

The classroom in an Early Head Start setting becomes a child's home for as many as 10 hours a day. Therefore to make the environment developmentally appropriate, infant and toddler classrooms should have a comfortable, home-like atmosphere. The classroom should provide various places to explore, supporting all the functional areas such as gross-motor activity, early literacy development, symbolic or dramatic play, manipulative play, and sensory play. And the classroom must be flexible enough to support children's varying developmental abilities, including children's special needs.

Through the use of platforms, lofts, recessed areas, low walls, canopies, risers, climbers, and toy shelves placed along the periphery of the classroom, the room

Tip: Adding appropriately designed lofts and platform areas help to comfortably break up the space in the classroom, creating the feeling of separate rooms within the one space. Lofts and platforms also support motor exploration and social play.

can be sculpted to provide a variety of age-appropriate activities. The walls should be used to frame the activity areas, while the center of the classroom should remain fairly open, allowing for the circulation of children and adults and providing flexible space that can change depending on the teachers' observations of the children's interests. Placing activity areas on the periphery will create boundaries that support individual and small-group play as well as provide teachers with the ability to closely supervise the entire group. For example, children who are building with blocks on a platform and those who are looking at books under a canopied area are all still in close proximity to the teacher and the other children.

The placement of each activity area is as important as the specific furnishings and materials in those areas. A well-thought-out space plan can actually make a classroom feel and function as one 25 to 30 percent larger than one with a poorly laid out plan. For this reason, it is essential that programs approach the furnishing of each classroom by creating a space plan on paper first, before making any purchases. Your goal should be to create a dynamic, age-appropriate environment. If you order your furniture without first mapping out exactly where it will be placed and how it will fit into that space, you run the risk of over-equipping the space and making the room look and feel more like a furniture showroom (or warehouse!) than a comfortable, flexible, and rich learning environment.

Every classroom presents its own unique challenges. It may be an odd shape or have a structural column in the middle of the room that cannot be moved. Or perhaps there is just a lack of space or money. And the specifics of each classroom layout will also vary depending on whether you are serving infants, toddlers, a mixed-age, or socialization group. You may find that you need to make compromises, but by developing a comprehensive design plan you'll be able come up with a plan that makes the best use of your space, phasing-in your changes as your budget permits.

Classroom furnishings

A well-designed classroom includes a combination of high-quality commercial and home furnishings. Sturdy, natural wood furniture is usually more desirable than plastic furniture because wood creates a sense of home and warmth, is easy to clean, and is more durable than plastic. Furnishings of better quality might cost slightly more initially, but will typically be less expensive in the long run because they'll last longer and provide more play value. In addition to commercial furniture, Early Head Start programs should also turn to home and import stores to "cozy-up" the room. Some examples of good items to add to an infant and toddler room are quilts, pillow shams, upholstered chairs (with slipcovers), cloth hammocks, gliders, woven baskets, an armoire for additional storage, and cotton fabric to create canopied areas.

An area rug placed on top of installed carpeting can provide additional color and warmth to the housekeeping or reading area. And because carpeting is great for noise reduction, it is useful when it is placed in high-activity play areas.

Windows

Children (and adults) need to feel connected with the natural environment. Natural light from windows and doors with windows in them are fundamental elements of a well-designed classroom. While some windows may be close to ground level, it is recommended that most windows be placed at a height of 26 inches. This height allows infants who are able to pull to standing and older children to see outside, but it also provides the ability to create activity areas against the wall. Since most infant and toddler equipment is approximately 24 inches high, windows of this height make the best use of the space in a play environment. To provide the classroom with fresh air, windows should be operable, but they must always have safety locks.

Lighting

The type of lighting fixtures used in the classroom will affect how a space feels and functions. A ceiling filled with four-foot long fluorescent tubes will make the room feel cold and institutional. Instead, ➥

consider using a varied lighting plan that has a combination of pendant, track, and recessed lighting; this will not only provide good overall lighting but will also help give the individual spaces and activity areas their own distinctive atmosphere rather than making your classroom feel like one big room.

Other elements

Besides the elements above, you'll want to think about and select other classroom elements such as wall storage (which should be placed adjacent to each activity area) flooring, and paint. I recommend using low pile, muted-colored carpeting throughout the classroom, except in entry, eating, diapering, and other "messy" areas. In these messy areas, use flooring that is easy to clean, such as linoleum or vinyl flooring. I also recommend not adding "alphabet" rugs or other types of "teaching rugs," because these rugs make spaces look and feel cluttered. By selecting neutral colors for the walls and the flooring and using natural wood furnishings, the bright colors of toys and manipulatives will stand out better, which will help the children focus and visually discriminate play items.

A paint's finish can also add to the atmosphere of a room. Instead of glossy paint, which also has a tendency to create an institutional feel, use paint with an eggshell or satin finish in warm white tones such as linen or light pastel colors on the walls and a semi-gloss finish for the woodwork.

Key elements in promoting best practice

1. Group size. The Head Start Program Performance Standards mandate that "no more than eight infants and toddlers are cared for in any one group." (See 45CFR 1304.52[g][4].) Small groups are necessary to meet individual needs, provide consistent caregiving, and promote supportive interactions between adults and children. Each group of eight young children should operate in its own self-contained classroom. This requires that all activity areas, learning centers, napping, and eating area not be shared. Dividing a large room into two, three, or more rooms using toy shelves or low walls will not provide the environment necessary to meet children's individual needs in an intimate and relaxed manner. If, for example, you try to divide a large room into two or three rooms using shelves, each room will sound like there are 16 to 24 children in it! The noise level alone will prohibit quality care from occurring.

It is possible, however, to divide a large room into two classrooms if it is designed thoughtfully. This type of room design, known as a *pod*, is created with a combination of full-height and half walls. Each classroom is self-contained and fully furnished to meet the individual needs of eight infants and toddlers while the middle of the pod (42-inch-high walls) is a shared teacher space used for diapering, preparing food, and doing general work. The 42-inch walls allow teachers to visually supervise children in the classroom while they are diapering a child or preparing food. Pods should also have good acoustical ceiling tiles that will absorb sound. (A pod plan would not work well for socialization classrooms used by home-based programs due to the larger number of adults in each space.)

2. Room size. The size of each classroom must be large enough to meet individual children's needs and the group's needs. In crowded spaces there is more conflict, aggressiveness, and unfocused play. Environments that support best practice provide enough space to accommodate all the functional areas in a classroom and are comfortable for all users. With this in mind, a mixed-age group option must be designed with safe, intimate spaces for young infants as well as the more active and expanded play of older toddlers.

Older toddler groups will require more space than infant groups due to their expanded interests and abilities. Socialization groups must provide for the child development needs of infants and toddlers as well as comfort needs of 10 or more adults.

3. Sinks and toilets. The right number of appropriately placed plumbing fixtures are a necessary requirement for all Early Head Start programs, as stipulated in the following Head Start Program Performance Standards:

1304.21(a)(1)(v): Allow and enable children to independently use toilet facilities when it is developmentally appropriate and when efforts to encourage toilet training are supported by parent. ➥

Tip: Whenever possible, doors should swing away from the children's play area. This increases the amount of functional space and prevents injuries. It is also useful to have doors with windows at adult and child height, which increases the amount of light into the classroom.

1304.21 (a)(3)(i)(B): Grantee must support social and emotional development by fostering independence.

1304.52(g)(4): Agencies must ensure that each teacher working exclusively with infants and toddlers has responsibility for no more than four infants and toddlers and that no more than eight infants and toddlers are placed in any one group.

1304.53(a)(10)(xiv): Toilets and hand-washing facilities are adequate, clean, in good repair, and easily reached by children. Toilets and diapering areas must be separated from areas used for cooking, eating, or child activities.

These standards support the need for sinks and toilets (for toddler and mixed-age groups) in each classroom. Sinks and toilets should be considered a learning center, but in order for the children to independently wash their hands or use the toilets, the sinks and toilets must be at a comfortable height that allows the children to reach them on their own. You should also keep in mind that if the toilets and sinks are not located in the classroom and one teacher leaves the room to take one or two children to use the bathroom, the remaining teacher could be left supervising six or seven children and, therefore, the classroom would be out of compliance. It would also be out of compliance (with regard to both child-teacher ratio in one class and group size in the other) if children in one classroom had to walk through an adjacent classroom to get to a shared bathroom.

Classroom plumbing recommendations

- One adult sink adjacent to diapering table.
- One adult sink adjacent to food prep area. (There should also be outlets for the refrigerator and food/bottle warmer.)
- One adult sink for non-food activities, such as art and general hand-washing.
- One children's toilet and one children's hand-washing sink in the toilet/diapering area. (Although it is preferable to add two toilets in order to promote peer learning and increase efficiency for caregivers.)
- One children's hand-washing sink in classroom.

Recommended children's sink heights

- 0 to 18 months: 16 inches.
- 18 to 36 months: 21 inches.
- 0 to 36 months: 18 inches

Age groupings and square footage recommendations*

- 0 to 24 months: 400 to 450 square feet of child-usable-space.
- 18 to 36 months: 550 to 650 square feet of child-usable-space.
- 0 to 36 months: 600 to 650 square feet of child-usable-space.
- Socialization: 600 to 750 square feet of child-usable-space.

Keep in mind that child-usable-space does not include space used for diapering/toileting, food preparation, and general work, or occupied by base cabinets, floor storage, and cribs.

To meet standards, you'll need 200 square feet of space to fit eight cribs spaced three feet apart. In facilities that have less than optimal square footage available, consider moving the cribs together when they are not occupied by infants (as long as state guidelines allow this).

4. Direct access from classroom to outdoor play area. Whenever possible, every classroom should have direct access to the playground. An appropriately designed playground for infants and toddlers should include many natural elements such as gentle hills, grass, sand, dirt, shade trees, and so on. With a thoughtful design, the natural landscape will itself provide opportunities for gross motor play, which can be supplemented with carefully selected equipment. Every indoor activity area or learning center has the potential of having an outdoor counterpart. For example, in addition to the lunch/activity table, quiet book area, and gross-motor area inside, you can have a small table and chairs for eating and other table activities such as knob puzzles and art, hammocks for relaxing, and equipment for the children to climb on outside. The outside play area should be an extension of the classroom. Also, outdoor areas can help compensate for indoor environments with less than optimal square footage. ➥

Tip: Well-designed classrooms have an adequate amount of easily accessible storage. In addition to separate storage rooms and some base cabinets in the classroom, wall storage should be placed adjacent to each activity area. This gives teachers access to materials without leaving the children unsupervised.

In having the opportunity to present at many Early Head Start training workshops, I've also had the good fortune to have listened to Helen Taylor, former associate commissioner of the Head Start Bureau, who spoke at many of the training sessions. Helen Taylor was a woman of great vision, and the one message that she included in every speech she made was that first and foremost Head Start is a child development program. In order to support and promote healthy development, children in Early Head Start need the attentive and nurturing care of early childhood professionals, and they also need developmentally appropriate environments that safely encourage them to explore, learn, and grow. This is why every program should assess how their classrooms and outdoor play areas are affecting behavior and development. The bottom line is that high-quality programs require high-quality facilities. C&F

This article includes excerpts from Landscapes for Learning: Designing Group Care Environments for Infants, Toddlers and Two-Year-Olds, *by Louis Torelli and Charles Durrett. For more information about Landscapes for Learning, call Torelli/Durrett Children's Furniture at (800) 895-3121. For more information on child care facility design, including design articles, photos, and floor plans, visit www.spaceforchildren.net.*

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