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The Development of a Handbook for Teachers to Help Them Improve the Physical Environment of Their Classrooms

Sharon C. Steedley
University of North Florida

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Introduction

Many educators argue that the environment to which a child is exposed every day of his school career can and will have a lasting effect on that child. The physical environment of a classroom setting encompasses many areas, according to this point of view. If this physical environment is inviting, colorful, and gives off a "positive" feeling, then the student will begin to develop more positive feelings toward school and, potentially, more positive attitudes about himself.

In the teaching-learning setting, student and teacher attitude are assumed to work closely together. When both are pleased and happy with their own physical surroundings, it can be argued that they will be better adjusted mentally. With a better mental adjustment, the student will be able to have a better attitude about himself and his work, and thus will be more likely to prosper and succeed. Due to these physical surroundings, and better attitudes it is assumed that the teacher likewise will prosper and succeed.

As educators we need to supply a physical environment that will produce all these conditions. Studies show that an environment that creates a stimulus for learning is possible in any classroom setting, either large or small. Basic changes can be made to improve the physical environment of any classroom which can turn a nonstimulating environment into one that is inviting

and positive and can stimulate learning.

Many teachers often do not know how to create a stimulating physical environment. Due to the lack of resources and materials and, most important, the lack of time and money, teachers feel as if they can not accomplish this task.

Therefore, a guide will be designed to illustrate to teachers how an inviting, positive, environment can be formed within a typical classroom arrangement. With basic tools and supplies, instructions will be provided to teachers to help them design an environment that will stimulate their students and themselves.

Specifically, a handbook, "Improving the Physical Environment of Your Classroom," will be designed for voluntary use by teachers in Clay County Elementary Schools with limited funding. This guide, which will focus on modification of wall furnishings, furniture, and floor coverings, will be used and tested mainly in open-concept classrooms, but may also be applicable in self contained classroom settings.

Definition of Terms

1. cooperative learning environment-the environmental setting that accomodates the child for any learning activity or task.

2. graphics-the art of decoration and writing or printing on flat surfaces that represents a visual idea.

3. multisensory learning environment-an environment in which a child uses the five senses to learn.

4. physical environment-part of the human environment that includes purely physical factors.

Review of Related Literature

Until recently, the quality of existence in the classroom has been correlated only with school achievement. We as educators need to provide a more humanistic learning climate to not only strive for student achievement but also for personal success of the students.

According to Purkey (1978, pp.84), the physical environment affects students' self-concept and success indicates that the aesthetics of a room or building does influence the feelings of the people who work inside. "This is particularly true where conditions are extremely inviting or disinviting."

The physical environment of the classroom and the entire school plant need to say, "Welcome, we're glad you're here." Classrooms can send various messages of invitation, such as familiar-strange; friendly-hostile; formal-informal. A hallway, for example, cannot send a specific invitation but can show inviting features or disinviting ones.

"The physical setting of the learning environment does make a difference in, and, directly contributes to a child's behavior and learning." (Taylor & Valstos, 1975, pp.25).

Recent studies of Taylor and Vlastos show that children learn through all their senses, thus the learning environments must be multisensory so as to enrich the child for more involvement. Only

if the child is physically and actively involved with his learning environment will this sensory learning occur.

Studies (Purkey, 1978) indicate that students function better when interacting with a cooperative learning environment. This research also indicates that those students who do interact with a cooperative learning environment tend to like and support each other.

Involvement in changing a classroom environment comes from people's energies, not from school budgeting. It is the motivation of those who care and are ready for this change that make it occur. (Taylor & Vlastos, 1975).

Whatever is done to change and improve the physical setting of the classroom, the instructor should keep in mind the following questions:

> 1. What is there of real quality in this environment which the children will absorb and perhaps unconsciously contribute to aesthetic standards?
> 2. Does the room provide as visually and emotionally satisfying an environment as one can achieve with what materials are available?
> 3. What is in the environment which will stimulate children to learn?
> 4. What is in the environment which will give children pleasure? (Dean, 1974, pp.25)

By surveying and asking oneself these questions, the instructor can begin to create a physical environment for the classroom.

There are various approaches to shaping a learning environment. The child's multisensory approach to learning, in conjunction with the school curriculum, can be used as guidelines for classroom

design.

The author feels that walls and furnishings appear to be the easiest place to start when modifying the environment. From this area one can continue to make more drastic changes in the classroom setting at a later time.

Students' own artwork can be used to enhance the room and interest other students. These should be placed within a child's vision range and not placed at heights where they could go unnoticed.

Paint is another means of revitilizing a dull wall surface. Paint can be thought of as a membrane, and it can be changed often because it is an inexpensive commodity.

The use of graphics, that is, a picture illustrating an idea, on wall surfaces can also be used to enhance learning. Graphics can be used to teach, and the possibility of constant visual change can increase student interest because the environment becomes dynamic, rather than static. (Taylor & Vlastos, 1975).

Taylor and Vlastos have indicated that mirrored surfaces in the classroom tend to teach children about space and increase their self-awareness. "Children who trace their images on a mirror can become more adept to drawing the human figure than those who have no access to their own images." (Taylor & Vlastos, 1975, pp. 60).

With the aid of fabric, color can be added to any room. This is also an inexpensive way to change the color quality of

any space. Bold patterns on well designed fabrics can catch a child's attention and develop his aesthetic sense. Strechable fabric can be pulled and fastened into forms which not only can be used to teach mathematical concepts, such as giving the child some knowledge of various shapes, but also can easily divide the room into smaller areas.

In addition to decorative walls, the use of appropriate furniture can assist people in adapting to a new classroom environment. Furniture needs to have a multitude of functions. If it is well designed, it can be transformed easily, and can be moved about freely for any activity.

Stools provide easily movable seats with many uses. They can be pushed under tables when not needed. Stools can be easily created by removing backs from older chairs and upholstering the seats.

Tables with formica or vinyl tops provide a more suitable surface for various types of activities than traditional wooden top tables. Tables can also be used to divide one space from another. Desks can be arranged to make island units with screens to be used for defining areas for individual work with audio-visual equipment.

If spaces are to be used for a particular activity, room dividers will be needed. Corregated cardboard can be used without supports to make these dividers. (Dean, 1974)

Carpet is an important factor needed to improve furnishings.

Carpet will provide space where children can work on a floor with small equipment or apparatus. Carpet adhesive squares are inexpensive to use and can be added as the budget permits. Another way to provide carpet is to collect a number of carpet samples which blend well together and can be joined together to form a larger section of carpet.

When an overhaul of the environment is not totally feasible, simple learning centers can be a dynamic way to improve the physical environment of the classroom. One needs to keep in mind the following guidelines for setting up centers.:

> 1. Materials should be versatile for use in a variety of ways.
> 2. Materials should be self-explanatory and require a minimal number of instructions for use.
> 3. They should provide corrective feedback to children.
> 4. Material is useful if it helps the student to discover new and unfamiliar concepts.
> 5. Materials help young children to understand concepts on concrete manipulative levels rather than through words or pictures.
> 6. Materials should be multisensory.
> 7. Open-ended items should be provided so that a child can use his own maturity to work through them to higher forms of self-expression.
> 8. Materials should produce an unexpected and incongruous result that intrigues children and motivates them to resolve discrepancies. [Taylor & Vlastos, 1975, pp.115]

One can assume that these guidelines are extremely helpful for designing and operating learning centers. They can also be used in the total development and design of an entire physical classroom environment.

Summary

The review of the literature seems to reveal that there is a strong relationship between a positive and stimulating physical environment and the learning of a child. An environment that is positive, colorful and inviting does enhance the learning of the students.

Through the modification and design of wall furnishings, furniture, floor coverings, and dividers this type of physical environment can be created. Through the reading of the literature, we have found that even if budgeting is limited, the above mentioned modifications can occur.

By focusing on these areas, a change in the physical environment can occur which can aid in stimulating both teacher and child to develop a better attitude about themselves and their surroundings, and eventually develop a better attitude about learning.

Procedures

The review of the related literature has shown a need for improving the physical environment of the classroom setting. Teachers can do a great deal themselves to satisfy this need.

Therefore, a handbook for classroom teachers will be written to guide them in economically redesigning the classroom environment. Suggestions and ideas will be given in the handbook to redesign their classroom setting.

The handbook will be distributed to an elementary school in Clay County. Comments and ideas concerning usefulness of the handbook will be collected and utilized.

This chapter contains a handbook for teachers to use as a guide for improving their classroom environment. Ideas have been categorized into four areas: wall furnishings, furniture, floor coverings and dividers.

Additional ideas from teachers are demarked in an appropriate manner following each handbook section.

Permission is granted to any educator who would like to duplicate any of the materials for use.

A Handbook for Improving

the

Physical Environment of Your Classroom

This handbook is to help you, the teacher, to improve the physical surroundings of your classroom. Hopefully, the ideas given to you will be of use in making your environment a better place to learn and enjoy.

After each section in the handbook, space has been provided for you to contribute your own ideas on ways the physical environment of the classroom setting can be improved.

Wall Furnishings:

I. Graphics:

Classroom walls can be painted to create the graphic
effect.

1. Picture Graphics:

    A. Choose a solid wall surface or if necessary
one with a doorway.

    B. Select a design, such as a rainbow, sun or
geometric shapes which can be found easily
in coloring books, magazines, or textbooks.

    C. Use a pencil and outline design on wall,
tracing the drawing from the opaque pro-
jector.

    D. Place masking tape along the pencil to outline
and make ready for painting.

    E. Allow the children to paint inside the tape
with tempora paint and remove the masking
tape when dry.

II. Fabric:

1. Select colorful fabric and cut to desired size.

2. Stretch fabric over an old wood frame and staple
with a heavy-duty staple gun.

3. Hang in an appropriate place.

III. <u>Sheets:</u>

      1.   Select a sheet and cut to desired size. Staple to a wooden frame to form a picture.

      2.   A sheet may be suspended from ceiling to give a parachute effect.

IV. <u>Plants:</u>

      1.   Hang plants from walls using hangers. Use them in one area or spread throughout the classroom and allow children to nurture.

V. <u>Paint:</u>

      1.   Paint window frames each a different color. Limit your colors to primary pure colors-white, red, blue, yellow, green.

      2.   Paint a tall sunflower or any other tall variety plant on one wall with measuring units marked on the stem. Class can keep track of their heights by standing by the measuring plant.

      3.   Paint letters with gloss enamel using the clockcase as the letter O to spell the work c-l-o-c-k. Make sure to paint the clockcase the same color as the other letters.

      4.   Paint a mural in the reading area.

          A.   Find pictures in books or magazines that will meet the desired effect.

B. Paint wall with semigloss enamel to match the desired background effect.

C. Create overlays for use on the overhead that illustrate the mural them.

D. Enlarge pictures and trace with water soluble marker and the areas to be painted with commercial paint should also be traced.

E. To give finished mural an attractive appearance, outline with a permanent marker. To insure a good take, wash water soluble marker off before outlining with the permanent marker.

5. Paint a "giant" to hold a bulletin board.

A. Draw or trace anything that appears to be holding something.

B. Enlarge the picture using the opaque projector so that he appears to hold the bulletin board.

C. Paint with a sturdy high gloss enamel.

6. Allow students to paint murals on shelves, walls, cabinets, and/or doors. Involve students in landscaping around the classroom buidling. This could be part of a unit in: math-making graphs and budgets; reading-research on kinds of plants to be purchased and planted; social studies-resource people from nurseries and garden clubs; science analysing soil and climate conditions; physical edu-

cation-doing the actual gardening.

Paint inside door with a phrase.

Use carpet squares to make bulletin boards such
as big bird or cookie monster.

Furniture:

I. <u>Desks and Tables:</u>

    1. Cover two or more desks with a large board covered with a smooth surface such as vinyl to create a larger work space.

    2. Place desks together with carrels to form individual listening centers.

    3. Old desks tops can be placed together to form shelf areas.

    4. Old tables and desks can be covered with vinyl to from smoother tops when original surface has been damaged.

    5. Wheels can be added to large tables to make easier movibility to form larger work areas.

    6. A storage bin can be made from an old table. Add casters to the table top to make movable. Turn the table upside down, and attach boards to sides of legs. You now have a storage bin.

II. <u>Chairs and Stools:</u>

    1. Make stools from old chairs by taking the back off and adding cushioned seats. Place foam rubber on top of seat and cover with fabric to create the cushioned seats. Paint with enamel.

    2. Three or more stools may be pushed together to form benches. A large cushion may be placed on top to

make it more comfortable.

3. Overstuffed chairs or ordinary chairs when painted and
    cushioned create a very comfortable area.

4. Small spools from the electric company can be made into
    toad stools. Paint the bottom green and the hub white.
    Place foam rubber on top and cover with material. Pre-
    ferably white to give the toad stool effect.

III. Cupboards:

1. Cupboards can be given unity by painting them the same
    color.

2. Cupboard doors can be removed and shelves can be covered
    with contact paper to create attractive storage space.

3. Tall cupboards can be turned on their side with the doors
    and shelves removed. To create long storage shelves use
    the doors and old shelves and attach them between the
    two cupboards.

4. Seedboxes can be stacked together for storage and an
    instant cupboard is made.

5. Cupboard doors may be stacked on bricks to create a paper
    storage area.

IV. Doors:

1. Doors can be removed from cupboards to create more open
    areas.

2. Doors can make working surfaces of various kinds. They
    can be stacked on concrete bricks or sides may be added

to the doors to create large tables.

V. Study Carrels:

1. A study carrel can be made by taking a cable spool from the phone or electric company and turning it on its side.

2. Place two boards under each wheel to prevent it from rolling.

3. Form a desk top by fastening a board across the center of the spool at the right height for your group. You may place a board in the center of the spool which reaches the top to divide the spool and make two study areas across from each other.

4. Study carrels can easily be made by pushing tables together and dividing with a three-sided board with hinges for flexibility.

Reader ideas and comments on furniture:

Parents can be contacted to donate good used furniture. Large sturdy cardboard boxes covered with contact paper can be used for kindergarten"house-keeping" kitchen equipment. Such items as sofas, rockers, coffee tables, and occasional chairs can be used to make "cozy areas" for reading.

Floor Covering:

Carpet:

1. When finding carpet squares try to get squares in
   two contrasting colors. Lay in a checkerboard fashion
   to create a giant playing board. For checkers collect
   foil pie pans of heavy cardboard circles-pizza wheels.
   Paint in two colors.

2. Remnant squares of carpet should be fixed down with
   metal strips so the edges do not become curled. Remnant
   squares are readily found at carpet departments of
   stores.

3. Large rugs can be used in certain areas of the room
   for listening and reading areas.

4. Cut alphabet letters from carpet remnants and place
   messages along the floor using epoxy glue.

5. CAUTION: Never place any electrical wire under the
   carpet at any time.

Reader ideas and comments on floor covering:
   Individual carpet squares can be used by primary children
   to designate individual space.
   Individual carpet squares may be used under large potted
   plants to protect floors when watering.

Dividers:

1. Old doors can be a useful room divider. It can be held in place by bookshelves.

2. A trellis or a board can be fixed between tables to provide divisions of spaces.

3. Table tops can be used to divide one space from another. These can be painted or covered with contact paper to make more attractive.

4. Large sheets of corregated cardboard can be used without supports to make display areas. These can be found at most furniture stores and can be painted to add color.

5. Old blackboards can be fixed between bookshelves to make room dividers.

6. Open space shelving can be placed in the center of the room to create dividers and can be used from both sides by different children at the same time.

7. Cardboard boxes can be stacked and arranged to form room dividers and light storage areas. They can be painted with semi-gloss enamel to become more attractive.

Reader ideas and comments on dividers:

Students art work can be hung on an "above-the-head" line to make area dividers.

Attractive "patterned" sheets can be draped over a

pole attached to the wall by a hinge. This makes an
attractive room divider.

Large cardboard boxes can be covered with contact paper
and cut to form dividers.

Measurement

The previous mentioned handbook was distributed to
teachers at S. Bryan Jennings Elementary in Clay County.
The faculty reviewed the material and added ideas of their
own.

Most members of the faculty felt the handbook was
practical and applicable in the classroom setting. They
did feel that most ideas and improvements could be done readily
with materials that could be found on hand or in nearby areas.

Due to the school year about to close, the faculty did not
have the opportunity to test the handbook in the open-class-
room setting. This did tend to hamper the true reliability of
the handbook because of not being able to test the various
ideas in the classroom and put them to use.

Evaluation

The handbook was found to be quite successful in the open-concept classroom setting. Many teachers did feel that a majority of the ideas were feasible and easy to adapt to their own classroom setting.

A strong point discovered by the instructors was the fact that many of the ideas could easily be adapted economically in the classroom setting. They could be completed in a short amount of time and the finished product could be enjoyed by all.

One area of weakness was the lack of student participation in improving the classroom environment. The instructors felt that the students could help to paint the graphics and room dividers to become more involved and feel that it is a part of their own design.

Another area of weakness is the fact that some administrators of various schools may not approve of these renovations being made. Depending on the county, the individual school and the principal can tend to determine how far one can go with improving the physical environment of the classroom setting.

Suggestions for Future Development

This study was conducted to find a basic need for the improvement of the classroom setting and then ideas were to be correlated together to aid in making these improvements. This task has been accomplished but only on a small scale.

Future development of the handbook could be readily continued going into various areas such as ecology, play areas, outside classroom environments, and lighting. These areas could be researched and methods for improvement could be assessed and correlated to form another guide for improving the environment of the classroom setting.

The areas for future development are varied and an open field. These areas need to be developed to make the classroom setting one that can be enjoyed by all those who enter.

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