

CONCLUSION

The aim of the Montessori Method is the development of the child's potential as a preparation for life. Learning is a dynamic process in which the whole personality of the child is actively engaged. In order to educate the whole child, the child must have the freedom to develop physically, intellectually, and spiritually in a prepared environment.

The prepared environment is described by Montessori with the smallest of details, such as color of the table tops, and with vague and abstract terms, such as freedom, order, etc. It has been this writer's intent to provide in this document an analysis of the prepared environment and design guidelines that may help create and sustain this prepared environment. Hopefully, designers and teachers alike can use these guidelines for the design of Montessori schools, and for the understanding of the Montessori philosophy that supports it.

REFERENCES

- American Academy of Pediatrics. Recommendations for Day Care Centers. Committee on Infant and Preschool Child. Evanston, Illinois, 1973.
- Baird, J. C. & Lutkus, A. P. Mind Child Architecture. University Press of New England. Hanover & London, 1982.
- Bengtsson, A. Environmental Planning for Children's Play. New York: Praeger, 1970.
- Brolin, B. C. & Zeisel, J. Social Research & Design: Applications to Mass Housing. In G. T. Moore (Ed.) Emerging Methods in Environmental Design & Planning. Proceedings of the Design Methods Group. First International Conference, 1968. M.I.T Press, Cambridge, Massachusetts, London, England, 1970.
- Child Welfare League of America. Child Welfare League of America Standards for Day Care Service. (Rev. Ed.). New York, 1973.
- Cohen, D.H., Stern V., & Balaban, N. Observing and Recording the Behavior of Young Children. Teacher's College Press, New York, 1983.
- Cohen, U., Mc Ginty, T., Armstrong, B. T., & Moore, G. T. The Spatial Organization of an Early Childhood Development Center: Modified Open Space, Zoning, and Circulation. Day Care Journal, 1982, 1(2), 35-38.
- Cohen, U. & Moore, G. T. The Organization and Communication of Environment-Behavior Research Information in Architectural Programming. In L. van Ryzi (Ed.) Behavior-Environment Research Methods: Proceedings of the Wisconsin Conference on Research Methods in Behavior-Environment Studies. Madison: University of Wisconsin-Madison, Institute for Environmental Studies, 1977.
- Cohen, U., Moore, G. T., & Mc Ginty, T. Case Studies of Child Play Areas and Child Support Facilities. Research Forms. The School of Architecture and Urban Planning, University of Wisconsin, Milwaukee, 1978.

- College of Architecture & Environmental Design. Environmental Criteria MR Preschool Day Care Facilities, Texas A&M University, 1969.
- Deasy, C. M. Design for Human Affairs. Cambridge, MA. Schenkman Pub. Co., 1974.
- Edelson, K. & Orem, R. C. The Children's House Parent-Teacher Guide to Montessori. G.P. Putnam's. New York, 1970.
- Fisher Canfield, D. Montessori for Parents. Robert Bentley Inc., 1965.
- Gebhardt-Steele, P. G. The Computer & the Child. A Montessori Approach. Computer Science Press, 1985.
- Irwin, D. M., Bushnell, M.M. Observational Strategies for Child Study. Holt, Rinehart, & Winston, 1980.
- Kocher, M. B. The Montessori Manual of Cultural Subjects. A Guide for Teachers. T. S. Denism & Co. Inc. Minneapolis, 1973.
- Lillard P. P. Montessori. A Modern Approach. Schocken Books. New York, 1972.
- Mattick, I. & Perkins, F. Guidelines for Observation & Assessment: An Approach to Evaluating the Learning Environment of a Day Care Center. Pub. by The Day Care & Child Development Council of America, 1972.
- Moleski, W. H. Behavioral Analysis and Environmental Programming for Offices. In J. Lang, et. al. (Ed.) Designing for Human Behavior: Architecture and the Behavior Sciences. Hutchinson & Ross, Stroudsburb, PA., 1974.
- Montessori, M. Spontaneous Activity in Education. Robert Bentley Inc., 1964 (a).
- Montessori, M. The Discovery of the Child. Fides Publishers, Inc. Notre Dame, IN, 1967.
- Montessori, M. The Montessori Method. New Editions. Pub. by Robert Bentley, Massachusetts, 1964 (b).

- Moore, G. T. Early Childhood Environmental Scales. Center for Architecture and Urban Planning Research. University of Wisconsin-Milwaukee, 1982.
- Moore, G. T. The Physical Environment & Cognitive Development in Child Care Centers. To appear in C. S. Weinstein & T. G. David. Spaces for Children: The Built Environment and Child Development. N.Y. Plenum Press, in press.
- Moore, G. T., Lane, C. L., Hill, A. B., & Cohen, U. Recommendations for Child Care Centers. Publications in Architecture & Urban Planning. University of Wisconsin, Milwaukee, 1979.
- National Association for the Education of Young Children. Montessori in Perspective. Edited by the Publishing Committee of the National Asso. for the Education of Young Children, 1974.
- Orem, R. C. A Montessori Handbook. Dr. Montessori's Own Handbook. Capricorn Books. New York, 1966.
- Orem, R. C. Montessori Today. Capricorn Books. New York, 1971.
- Orem, R. C. & Coburn, M. F. Montessori: Prescription for Children with Learning Disabilities. Capricorn Books. G. P. Putnam's & Sons New York, 1978.
- Osmon, F. L. Patterns for Designing Children's Centers. Educational Facilities Laboratories, 1971.
- Packard, R. T. Architectural Graphic Standards. Seventh Ed., John Wiley & Sons, New York, 1981.
- Rambusch - Mc Cormick, N. Learning How to Learn. An American Approach to Montessori. Helicon Press, Baltimore, 1962.
- Raper, T. A conceptual framework for architectural programming. In W. Preiser (Ed.) Environmental Design Perspectives. ASMER, 1972.
- Ross, R., & Gump, P.V. Measurement of designed and modified openness in elementary school buildings. In S. Weideman & J. R. Anderson (Eds.), Priorities for Environmental Design

Research.Washington, D.C.: Environmental Design Research Association, Inc., 1978.

Standing, E. M. Maria Montessori. Her Life & Work. Hollins & Carter Limited, 1957.

Standing, E. M. The Montessori Revolution in Education. Schocken Books. New York, 1962.

Steele, F. Physical Settings & Organization Development. Reading, MA. Addison Wesley, 1973.

Zeisel, J. Social Science Frontiers. Sociology & Architectural Design. Occasional Publications Reviewing New Fields for Social Science Development. Russel Sage Foundation, 1975.

APPENDIX A

INTERVIEW FORMS

Name of school: _____
 Address: _____
 Director/Contact: _____
 Observation date: _____ Telephone: _____
 No. of children: _____ Ages: _____ No. of staff: _____
 Level/type of training: _____

QUESTIONS:

1. Do you provide for day care? Y N

2. What are the day care time hours and where do they occur?

Time-	/	Where
_____	/	_____
_____	/	_____
_____	/	_____

3. Is there a separate day care room? If no, do you see the need for one? Why/Why not? How do you accomodate for the day care materials in the context of Montessori Schools?

4. How often is the furniture rearranged?

5. How are the children divided among teachers and between rooms?

MONTESORI PHILOSOPHY:

1. How strict are you with the Montessori Philosophy/ the Didactic Materials?

Why? _____

2. What modifications has the Montessori philosophy/school undergone to accept new technology (T.V., computers, etc.) If you accept this new technology, where are they located and are the children free to use them at any time, or is there a restricted time usage?

PREPARED ENVIRONMENT:

1. How many-sets of the Didactic Materials are in the room? How are the Didactic Materials laid out in the room or rooms? Any thing in particular you might like or dislike about the present D.M. arrangement/location? Do you wish to have these materials in the same/different rooms?

2. "The Line" : What are its purposes? Any particular shape Montessori wants it to be, or do you place it where you want? Dimensions?

TEACHER'S LOUNGE/PARENTS:

1. Does the school have a particular room/space the teacher can retire to? If no, is there a need for one?

2. Are parents actively involved? How?

3. Do you have a parent-teacher conference room? Is there a need for one? Why/ Why not? _____

GARDEN/PLAYGROUND:

1. In the Montessori Method, Montessori describes in much detail the "gymnasia". How do you accomodate for these requirements?

2. Montessori describes extensively the "Botanical Garden". Do you have one? How do you accomodate for this? Will you like one?

3. Montessori talks about the freedom of the child to visit the garden/playground? Are you able to do this? Do you wish for this? Why/why not? _____

INVENTORIES:

Location: _____

No. of children _____ Ages: _____ Teacher _____

Day care time: _____ Montessoti time: _____

Observe each major space: Draw floor plan or area.

For each facility/play area observed, draw and annotate significant patterns of activity, participants, environmental features involved, and location/dimensions of the Didactic Materials.

Assessment of the organization of the physical environment:

*Degree of visual connection between spaces:
connection_____lack of connection*

*Degree of closure of spaces:
closure_____lack of closure*

*Degree of spatial separation of one space of another:
separation_____lack of separation*

*Degree of connection between indoor and outdoor activity spaces
connection_____lack of connection*

*Degree of softness of the activity centers:
softness_____lack of softness*

*Variety of seating and working positions in the activity areas:
variety_____lack of variety*

*Degree of appropriateness of the amount of storage, work
surfaces in the activity areas that pertain to the activity.
appropriateness_____lack of appropriate*

<i>Presence of natural light</i>	<i>Y</i>	<i>N</i>
<i>Low windows</i>	<i>Y</i>	<i>N</i>
<i>Presence of teacher's desk/chair</i>	<i>Y</i>	<i>N</i>

APPENDIX B

APPENDIX B

MUSCULAR EDUCATION (From The Montessori Method, pp. 140-144)

A. Little Fence:

Purpose:

- Move the limbs without throwing upon them the weight of the body.
- Will enable them to fulfill the need which they feel of throwing themselves on the floor and kicking their legs in the air.

Construction:

- Parallel bars supported by upright poles firmly fixed on a heavy base.

B: Trampolino:

Purpose:

- Development of the lower limbs.
- Strengthens the articulation of the knee.

Construction:

-Swing with wide seat that supports front limbs. The swing is hung from strong cords and is left swinging. In front of it there is a small wall reinforced by a strong smooth board against which the children press their feet against the board each time that the child swings toward the wall.

-Board against the child swings may be erected at some distance from the wall; low enough so that the child can see above it.

C. The Pendulum:

Purpose:

- for the arms and spinal column.
- Exercise in which the eye gauges the distance of bodies in motion.

Construction:

- Rubber balls hung on a cord.

-Children seated in their little armchairs strike the balls, sending it from one to another.

D. The Cord:

Purpose:

-Children walk along the line, helping them to order and direct their movements in a given direction.

Construction:

-Line drawn with chalk on the earth.

E. Little Round Stair:

Purpose:

-Habituates children to climb and descend stairs without holding onto the railing.
-Teaches them to move up and down with poised and self-controlled movements.

Construction:

-Little spiral, wooden stair, which is enclosed on one side by a railing on which the children can rest their hands, and the other side is open and circular.
-Steps must be very low and very shallow.

F. Broad -Jump Apparatus:

Purpose:

-Practice the high jump.

Construction:

- Low wooden platform painted with various lines, in order to measure the distance jumped.
-Small flight of stairs may be used in connection with the plane, making it possible to practice and measure the high-jump.

G. Rope-Ladders:

Purpose:

-Helps to perfect a variety of movements: kneeling, rising, bending forward and backward, etc.
-Helps to acquire equilibrium and the coordination of muscular movements.
-Increases chest expansion/Reinforces the hand.