



Instrument for assessing day care play equipment as an indicator of program quality
by Sheryl Marie Ries Anderson

A thesis submitted in partial fulfillment of the requirements for the degree of MASTER OF SCIENCE
in Home Economics

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Abstract:

A questionnaire was mailed to child development professionals in 114 land-grant colleges and state universities to determine if a play equipment list could "be designed for use as an evaluation tool of child care centers. A response of 77.1% was received with 50.8% professionals qualifying to complete the questionnaire by teaching a class(es) in early childhood education and directing a preschool program.

An overall mean indicated that play equipment was recommended.

The variance of .91 suggested a high level of confidence in the mean. Ratings of equipment were most stable in the blockbuilding, housekeeping, manipulative task, and library areas. No substantial regional preference was indicated by means, variances or coefficients of variation. The Mountain region showed the greatest stability of ratings.

Data were representative of all states excepting California, Alaska, and Hawaii. It was concluded that an evaluation instrument could be designed. The representative distribution of responses justified the construction of an instrument. Instrument construction was further justified by the high means and low coefficients of variation, making it possible to identify specific play areas and equipment necessary for day care centers.

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by

SHERYL MARIE ANDERSON

A thesis submitted in partial fulfillment
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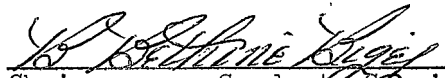
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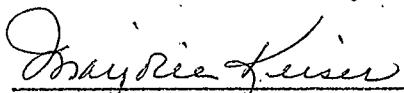
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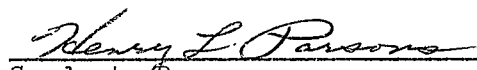
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ABSTRACT

A questionnaire was mailed to child development professionals in 114 land-grant colleges and state universities to determine if a play equipment list could be designed for use as an evaluation tool of child care centers. A response of 77.1% was received with 50.8% professionals qualifying to complete the questionnaire by teaching a class(es) in early childhood education and directing a preschool program.

An overall mean indicated that play equipment was recommended. The variance of .91 suggested a high level of confidence in the mean. Ratings of equipment were most stable in the blockbuilding, house-keeping, manipulative task, and library areas. No substantial regional preference was indicated by means, variances or coefficients of variation. The Mountain region showed the greatest stability of ratings.

Data were representative of all states excepting California, Alaska, and Hawaii. It was concluded that an evaluation instrument could be designed. The representative distribution of responses justified the construction of an instrument. Instrument construction was further justified by the high means and low coefficients of variation, making it possible to identify specific play areas and equipment necessary for day care centers.

CHAPTER I

INTRODUCTION

Importance of the Study

Ambivalent attitudes toward the support of day care persist in contemporary American society. Day care has been, and still is, considered a necessary evil for working mothers.¹ Traditionally, the care of children from needy families has been accepted and seen as a way of preventing social problems such as delinquency and malnutrition. The term 'day care', however, generally implies care for the children of working mothers, and this definition has not been easily accepted by the public.² Regardless of why women work - to supplement family income, to get off welfare or to seek fulfillment - many are made to feel guilty for depriving their child of "an essential mother-child relationship".³ It has been the popular opinion that young children should not be separated from their parents thus "making child care

¹Belle E. Evans, Beth Shub, and Marlene Weinstein, Day Care - How to Plan, Develop and Operate a Day Care Center (Toronto: Saunders of Toronto, Ltd., 1971), pp. x.

²Howard Schneider, Future Trends Affecting Day Care and Preschool Education. Final Report: VIII (Washington, D.C.: ERIC Document Reproduction Service, ED 068 196, 1971), pp. 19.

³Evans et al., p. x.

seem as an undesirable child-rearing practice" and causing day care to be minimally developed.⁴

Although the first day care center in the United States was opened in 1838, only during wars has day care been given top priority by society and the government due to women having to join the work force.⁵ Generally, when care was needed by working mothers it was provided for by relatives, neighbors, and sometimes by maids or governesses.⁶ The change in attitude, within the last ten years, toward working mothers, and women in general, has called national attention to the woefully inadequate state of day care.

Many contingent factors affect day care's status. Persons involved in child care research, planning, and operation are not easily able to find helpful information.⁷ Day care goals are not oriented toward the needs of children, with no national goals for care of

⁴Ronald K. Parker and Jane Knitzer, Day Care and Preschool Services: Trends and Issues (Atlanta: Avatar Press, 1972), p. 19.

⁵Evans, p. x.

⁶Dorothy Beers Goguslawski, Guide for Establishing and Operating Day Care Centers (New York: Child Welfare League of America, Inc. 1968), p. 3.

⁷U.S., Congress, Senate, Committee on Finance, Child Care Data and Materials, 2d ed., 93rd Cong., 2d sess., Committee Print (Washington, D.C.: Government Printing Office, 1974), p. iii.

children or guidelines for children's character development.⁸ All centers receiving federal funds for providing day care must abide by The Federal Interagency Day Care Requirements.⁹ Testimony to the Senate Committee on Finance in 1974, however, indicated that centers receiving funds are so poorly monitored that it cannot be assumed that these requirements are enforced or followed.¹⁰

Data summarizing state standards for day care are equally discouraging. Only twenty-eight states require the director of a child care center to have training beyond high school that is specifically related to children. Twenty-one of the twenty-eight states have like qualifications for the other staff in a child care center.¹¹ Only twelve states require centers to have a "written, posted program or evidence of such", and five states have no specific requirements at all

⁸Edith H. Grotberg, ed., Day Care: Resources for Decisions (Washington, D.C.: U.S. Department of Health, Education, and Welfare, 1971), p. 77.

⁹The Federal Interagency Day Care Requirements have as their purpose to coordinate programs providing day care so as to "obtain, if possible, a common set of program standards and regulations and to establish mechanisms for coordination at state and local levels". Acceptance of federal funds is an agreement to abide by the requirements. Requirements cover types of facilities, groups of children, educational, social, health and nutrition services to be provided, training of staff, parent involvement, administration and coordination, and evaluation. U.S. Congress, Child Care Data, p. 251-252.

¹⁰U.S. Congress, Child Care Data, p. 23.

¹¹*Ibid.*, p. 125.

for day care center programs.¹²

The people working in day care centers nationwide are, for the most part, neither well-educated nor well-paid. Most directors and teachers do not have college degrees and very few have had special training for day care work, e.g. courses in early childhood development. The median reported salary for both directors and teachers is less than \$360 a month. Nearly one-fourth of all staff members has less than a year's experience in group child care and 51 percent of all staff have been working in day care less than three years.¹³

As for the centers themselves, the 90 percent that are licensed do not always comply with state and local regulations, and it would be a mistake to assume that possession of a license assures that the day care program is developmentally sound for children. Apparently, the Senate committee has made a reasonable conclusion in stating that day care in America is an "unorganized, largely unregulated and unlicensed service, provided in ways that range from excellent to shockingly poor."¹⁴

Despite day care's dilemma, the need for day care continues to grow. Nearly six million children under the age of six have mothers in the work force. Working mothers, with children under the age of six,

¹²U.S., Department of Health, Education, and Welfare, Office of Child Development, Bureau of Child Development Services, Day Care Licensing Study; Summary Report on Phase I: State and Local Day Care Licensing Requirements DHEW Pubn. No.(OCD) 73 - 1066 (1973), n.p..

¹³U.S. Congress, Child Care Data, p. 161. ¹⁴Ibid., p. 167.

increased from 25 percent in 1964 to 34 percent in 1973.¹⁵ Licensed facilities, either day care centers or family homes, can accomodate only one-sixth of these children. The others are tended by neighbors, relatives, inadequate day care operations, or saddest of all, left to shift for themselves.¹⁶ It appears that the need for day care will continue to increase. The number of working mothers is predicted to grow due to economic need and smaller families. Also, influencing the increased day care need is the more positive attitude of young adults toward day care.¹⁷ The rising employment of mothers despite the absence of adequate day care substantiates the belief that lack of adequate day care does not necessarily induce mothers to stay at home. "The presence or absence of adequate facilities affects principally the child."¹⁸

As more and more the importance of the first years of life becomes recognized, concern must be given to the effect of day care on children. A number of research centers carrying on longitudinal studies of child development have shown that the major development of personality takes place in the early years. Certain trends are already evident by the age of two years in such matters as intellectual

¹⁵U.S. Congress, Child Care Data, p. 2.

¹⁶*Ibid.*; p. 9.

¹⁷Schneider, p. 2.

¹⁸Research Service for Americana Encyclopedia, "Day Care Centers", New York, 1975. (Typewritten.)

interest, dependency and aggressivity in adolescence. ". it is very likely that the greatest receptivity for one's innate potential exists in the first few years of life."¹⁹ Thus, the experience received by a preschooler in a day care center will be of vital significance to the child's future growth and success.

Beneficial day care provides the preschool child with an opportunity to learn through play with other children and with appropriate materials and toys. A day care center should be a place where the child's mental, emotional, and physical growth is fostered.²⁰ It is through play that the child learns about himself, others, and the world. Many theorists recognize that important learning takes place through play.²¹ During play the child will have the opportunity to develop mentally, emotionally, physically, and socially, all at the same time.²²

¹⁹U.S., Department of Health, Education, and Welfare, Welfare Administration, Children's Bureau, National Conference on Day Care Services, Spotlight on Day Care: Proceedings, 13 - 15 May, 1965 p. 143.

²⁰Boguslawski, p. 4.

²¹See Frank and Theresa Caplan, The Power of Play (New York: Anchor Press, 1973); R.E. Herron et al., eds., Child's Play (New York: John Wiley and Sons, Inc., 1971); Margaret Lowenfeld, Play in Childhood (New York: John Wiley and Sons, Inc., 1967); Susanna Millar, The Psychology of Play (New York: Jason Aronson, 1974).

²²Boguslawski, p. 60.

Justification for Study

There have been a "paucity of attempts" to develop evaluation instruments for day care and preschool programs.²³ Presently, there is no objective, short answer tool which assesses a day care center program or any one part of it. Assessment tools currently in use, either check only health and safety standards or are too lengthy with no means of summarizing observations. Thus, there is no practical method for determining if a day care or preschool program is excellent, good, mediocre, or poor.

The purpose of evaluating day care centers is to gather information about the many things which determine the quality of the day care center as a learning environment. Parents, instructors, and students of child development, day care directors, and evaluators should be interested in such an evaluation and could find use for a quality assessment tool. This tool would aid parents in determining if a day care center is the one in which they would like to enroll their child(ren). Those more directly involved in the day care center could use the assessment information to determine what the program is doing for

²³Roslyn Green et al., The Pennsylvania Day Care Study: Survey Questionnaire and Observation Reports (Pennsylvania State University: ERIC Document Reproduction Service, ED 089 867, 1972), p. 2.

the children and how the program could be improved.²⁴

A day care program consists of many components. These components include the children, the staff, the physical facility and the equipment.²⁵ Equipment has been chosen as the criteria for evaluating a day care center because it is easy to identify and its use would be easy to observe. Evaluation of equipment could serve as an indicator of a day care center's quality as "too many toys available at one time can prove over-stimulating and too few may lead to a program that is unnecessarily narrow and monotonous".²⁶

By giving the child access to many different kinds of materials and freedom to explore them in his own way, we make possible the first cognitive layer -- his ability to recognize objects and actions, to distinguish them from each other, to become aware of similarities and differences, and finally to abstract, to classify and to symbolize.²⁷

In order for a day care center to offer successful play experiences and thus a good atmosphere for learning, it must provide an adequate supply of equipment and materials. It is through the use of

²⁴Ilse Mattick and Frances J. Perkins, Guidelines for Observation and Assessment: An Approach to Evaluating the Learning Environment of a Day Care Center, 3d ed. (Washington, D.C.: The Day Care and Child Development Council of America, 1974), pp. iv.

²⁵Evans, p. 10.

²⁶U.S., Department of Health, Education, and Welfare, Office of Economic Opportunity, Project Head Start - Equipment and Supplies #9, Pubn. No. 0 - 247 - 831 (1967), p. 2.

²⁷Ruth E. Hartley, "Play the Essential Ingredient," Childhood Education 48(November 1971): 81.

creative materials that children can be encouraged and stimulated to be individuals and to share their ideas with others.²⁸ Children cannot be encouraged and challenged to grow in a tenuous atmosphere. Boguslawski maintained that even when a center must watch its budget, economies should not be made in the essential equipment for children. She further stated that the same basic equipment is needed in all centers--no matter what auspices they are under or by what name they are called, if they are to have a program that contributes to children's all-round development, growth and happiness.²⁹ It follows that "the quality of materials and equipment is one of the vital keys to how useful the program is for the children."³⁰

.....particular settings invite children to involve themselves in particular activities, and the extent of children's constructive participation in the activity will depend in large part on how well certain concrete, measurable aspects of the surrounding physical space meet their 'hunger, attitudes, and interests'.³¹

²⁸U.S., Department of Health, Education, and Welfare, Office of Child Development, Day Care - 1 A Statement of Principles, DHEW Pubn. No. (OCD) 72 - 10 (1971), p. 21.

²⁹Boguslawski, p. 40. ³⁰Dept. of HEW, Statement, p. 2.

³¹Sybil Kritchevsky, Elizabeth Prescott, and Lee Walling, Planning Environments for Young Children (Washington, D.C.: National Association for the Education of Young Children, 1973), p. 4.

If the quality of day care is to be improved, ways must be developed to evaluate day care programs. Through evaluation, information is gathered that allows a program to be assessed as a learning environment. Evaluation provides information for making decisions and either provides a sense of satisfaction when compared with others or presents a challenge to do better.³² By having professional workers in child development rate equipment and play areas, it is hoped an objective instrument can be developed which could be used as an indicator of a day care program's quality. Such an instrument would have value for parents, instructors in the field of child development, students of child development, day care directors, and day care program evaluators.

Statement of the Problem

The problem of this study is to develop an objective instrument, using the evaluation of play equipment by professional workers in child development as the basis for evaluation, which could be used as an indicator of a day care program's quality.

³²Nelson C. Price, Program Evaluation (Redwood City, California: ERIC Document Reproduction Service, ED 093 063, 1974), p. 2.

Questions to be Answered

Questions to be answered by this study are:

1. What play equipment do professional workers in child development think is a necessity for day care programs?
2. What play equipment is recommended by professional workers in child development for day care programs?
3. What play equipment is thought to have no negative or positive value in day care programs by professional workers in child development?
4. What play equipment do workers in child development think has occasional use in day care programs?
5. What play equipment do workers in child development think has little or no value in day care programs?
6. How are the areas likely to be found in a day care center rated in importance by professional workers in child development? The play areas under consideration are housekeeping, science, library, creative arts, music, blockbuilding, manipulative toy and table tasks, and outdoor/large muscle.
7. Is there a regional pattern in equipment ratings by professional workers in land-grant colleges and state universities?

Assumptions

The following assumptions are made:

1. Day care center and preschool programs have the same educational goals for the children they are serving and thus would have the same kinds of equipment in their centers.

2. The educational program is the basis upon which space and facilities are planned.

3. An evaluation of equipment can serve as an indicator of a day care program's quality.

4. Professional workers in child development can be located in most land-grant colleges and state universities. Professional child development workers are the best sources available for determining the value of various pieces of equipment and play area importance.

5. Professional workers in child development in land-grant colleges and state universities are qualified to rate play equipment because they are working in their field and are therefore knowledgeable and well read in child development.

Limitations

Limiting this study is the fact that not all types of populations are included as evaluators. A second limitation is the minimum development of evaluation tools for day care and there is little information upon which to build this study.

Terminology

For the purpose of this study, every time the words listed below are used they will mean:

day care center - a substitute for maternal care to serve the emotional, physical, social, and intellectual needs of children whose parents are not at home or are unable to care for them³³

preschool program - a supplement to home experiences with the essential function and purpose of the program based on the training, education, and development of the child

professional worker in child development at a land-grant college or state university - a person who is employed at a land-grant college or state university as director of the child development program and whose duties include teaching early childhood classes and directing the school's child development, nursery school, and/or day care center

³³Jean Stephens Baringer, "Opportunities for Preschool Children in Montana", Bozeman, Montana, February, 1971. (Mimeographed.)

CHAPTER II

REVIEW OF LITERATURE

The purpose of this study is to develop an objective instrument, using the evaluation of play equipment by professional workers as the criteria to indicate the quality of a day care program. This literature review discusses three areas related to the purpose of the study: evaluation instruments for day care that are currently used or developed, a summary of studies related to day care and/or preschool equipment, and a brief synopsis of current equipment lists for preschools.

Evaluation Instruments

One form of evaluation for day care centers is licensing standards set by state licensing agencies. Licensing personnel in Montana use a short checklist covering the physical properties of the facility (sanitation, ventilation, telephone, adequate lighting), food service, number of children receiving care, health care, and supervision. No mention is made of equipment supply, use, or of program requirements.¹

Thirteen states have licensing standards that evaluate equipment in day care programs in the general terms of equipment that includes experiences with music, nature, discussion and art, or equipment which

¹Montana State Board of Health, "Inspection Form for Day Care Centers," Helena, Montana, n.d.. (Mimeographed.)

encourages self-expression, creativeness, physical, social, and emotional development.² Less specific terms used by ten other states to describe equipment required in day care programs include equipment which meets children's developmental needs, equipment which provides activities appropriate to the age range, or equipment which provides educational play experiences. Utah is the only state that has a detailed list of equipment required for the licensing of day care centers. Items on the list include animals, crayons, paper, dolls, telephones, wagons, easel and paints, swings, and blocks. Twenty-five states list one to fifteen specific indoor items for play such as books, puzzles, scissors, unit blocks, and clay. Twenty states list one to fifteen items for outdoor play which include boxes and crates, climbing ropes, sandbox with sand toys, and low pedal toys.³

An evaluation instrument for day care and preschool programs has been developed by the Child Development Association.⁴ This tool

²U.S., Department of Health, Education, and Welfare, Office of Child Development and Office of Economic Opportunity, Abstracts of State Day Care Licensing Requirements - Part 2: Day Care Centers, DHEW Pubn. No. (OCD) 73 - 22 (1971), p. 2.

³Ibid..

⁴".....the Child Development Association program is a national effort to improve the quality and effectiveness of care provided for young children in Head Start, day care, nursery schools, and other preschool programs." U.S., Department of Health, Education, and Welfare, Office of Human Development and Office of Child Development, The Child Development Associate Training Information Series - No. I (Washington, D.C.: Government Printing Office, n.d.).

assesses the competencies of teachers trained to work in child care centers. A supervisor observes the teacher forty to eighty hours, then rates each competency on a scale of one to five; one meaning most inappropriate, very poor, and not acceptable, and five meaning excellent, outstanding, thorough, complete, and most appropriate. There are approximately four hundred competencies the observer must rate.⁵ It becomes a time-consuming task and has little value for determining the quality of a day care center, especially when used by a parent.

Mattick and Perkins' tool for assessing day care centers has questions based on the physical setting, interactional setting (relationships), and program of the day care center. Examples of their questions are 1) What specific materials are there in activity areas that indicate intended use of the area? 2) Do most materials inspire children to thoughtful experimentation or do they merely lend themselves to perfunctory performance? and 3) List classroom equipment and materials that pertain to the children's home life. The extensive eighteen page instrument includes ninety questions of this type, which when completed has no means of summation. The observer is expected to make his own judgment as to whether or not the program is meeting the goals as described by the authors. The authors' rationale for such an

⁵U.S., Department of Health, Education, and Welfare, Office of Human Development and Office of Child Development, "Child Development Association Assessment Tool used in Competency Based Training" (Washington, D.C.: Government Printing Office, n.d.).

extensive questionnaire is that the issues are too complex and interdependent to allow evaluation of one or a few areas if one hopes to have a valid assessment of the day care center.⁶

The Pennsylvania State Day Care Study designed a battery of survey instruments for evaluating day care centers and family homes. The state needed a means of storing and gathering information on day care to aid in the planning and management of the day care system. Questions pertained to eleven areas - administration, staff, staff training, children, services, family, community outreach, physical plant, program and equipment, evaluation, and funding. All of the information sought could not be provided by one person making completion of the questionnaire less likely. It was concluded that the length of the instrument was threatening to mothers and time-consuming to teachers and directors. They believed the group's effort to design an evaluation instrument was hampered because the task was a major undertaking and there were few models to follow. The only models available to them were the "Preschool Environment Inventory" and the "ABT Day Care Survey Instrument". The former provides a means of characterizing preschool environments while the latter describes and evaluates the characteristics of quality day care programs through in-depth

⁶Mattick and Perkins, pp. 6 - 8.

examination.⁷ Most of their help in developing an instrument came from reviewing the research of Kritchevsky, Prescott and Walling.⁸

Studies Related to Equipment

All of the studies discussed indicate that equipment, materials, and supplies play a major role in day care programs. Children use equipment in certain defineable ways with predictable learning taking place. The studies reinforce the belief that a need does exist for an evaluation tool which assesses physical space.

Kritchevsky, Prescott, Walling and Jones did a series of studies related to physical space in day care centers. In the first, space quality in day care centers was appraised by evaluating play units and potential units according to their complexity, e.g. simple, complex, and super. Play units were defined as 1) space containing something with which to play, 2) space which may or may not have visible boundaries, 3) space that needs open area for proper use, and 4) space that is generally not free for other uses. Potential units were defined as empty space, most often surrounded by visible or tangible

⁷V. Stern and A. Gordon, Development of Observation Procedures for Assessing Preschool Classroom Environments, Document 4 (New York: Bank Street Evaluation and Research Center, 1967); and ABT Associates, Inc., A Study in Child Care, 5 vols. (Cambridge: ABT Associates, Inc., 1971) as quoted in Green et al., pp. 2 - 15.

⁸See below.

boundaries, e.g. empty table, empty corner. The researchers contended that high quality of space indicated teachers that were sensitive and friendly in their manner toward children, teachers that encouraged children in self-chosen activities, and teachers who taught consideration for rights and feelings of self and others. Low spatial quality showed children to be less involved and interested and showed teachers to be neutral or insensitive and more restrictive.⁹

Having made these assumptions, Prescott, Jones, and Kritchevsky proceeded to evaluate fifty Los Angeles, California, public and private day care centers. Their evaluation consisted of observing teacher behavior, physical space, and children's responses. The data indicated that good programs have a rich and varied physical environment with age-appropriate materials. Once again, they found that high quality of space positively affects children's and teachers' behavior. The researchers reasoned that high spatial quality offers more diversity and more opportunities for experiences. They concluded that the nature of space strongly influences day care centers.¹⁰

These researchers' next step was to devise a method calculating indoor and outdoor space quality. Space quality was rated on a

⁹Kritchevsky et al., pp. 5 - 10.

¹⁰Elizabeth Prescott, Elizabeth Jones, and Sybil Kritchevsky, Day Care as a Child-Rearing Environment (Washington, D.C.: National Association for the Education of Young Children, 1972), pp. 4 - 41.

seven-point continuum ranging from high to low. Space was evaluated for organization, complexity, and variety. The rating was used as a predictor of children's behavior. The method was found to work well as a predictor of outside behavior, but was not as workable for predicting inside behavior. Inside behavior was more difficult to predict because use of space indoors is apt to be regulated by staff policies, whereas outdoor space is used by children in a relatively self-regulating manner.¹¹

As part of a total evaluation of early childhood education programs in Kansas City, Missouri, Griffith also assessed materials, equipment, and supplies. Categories rated were 1) classroom furniture and fixtures, 2) classroom equipment (projectors, tapes, record players), 3) instructional materials (books, puzzles, maps, games), 4) consumable supplies (paper, crayons, soap, clay), 5) temporarily durable materials (films, records, pets, plants), 6) playground equipment, and 7) other. Teachers in the schools rated each of the categories as to quality, quantity, and means of acquisition. Results showed that respondents rated materials, supplies, and equipment "excellent to

¹¹Elizabeth Prescott, Sybil Kritchevsky, and Elizabeth Jones, The Day Care Environmental Inventory. Assessment of Child-Rearing Environments: An Ecological Approach. Part I of Final Report (Pasadena, California: ERIC Document Reproduction Service, ED 103 473, 1971) pp. 42 - 43.

adequate in quality, adequate in quantity, and adequate to limited in means for acquisition".¹²

In trying to discover the role of manipulative materials in play situations, Phinney observed fifty-six preschoolers, ages two to five, play with simple blocks (able to be classified in only one way) and complex blocks (able to be classified in multiple ways). The older the child, the greater the tendency to create patterns and to arrange elements in an organized manner. There was no significant difference in terms of activities between age groups.¹³ According to Phinney "Mendel showed that young children (three and one-half to five and one-half years old) in a free choice situation reliably preferred novel toys over toys with which they had previously had a chance to familiarize themselves".¹⁴ Hutt noted the time spent in play by children with various objects that elicited various feedback. In Hutt's final analysis, the toy that sustained interest longest was not always the complex, highly structured one, but simpler toys, such as blocks which

¹²Lynda W. Griffith et al., Evaluation of Early Childhood Education: A Model Cities-Supported Preschool Program (Kansas City, Missouri: ERIC Document Reproduction Service, ED 103 473, 1971), pp. v, 117 - 118.

¹³Jean Swift Phinney, The Influence of Age and Materials on Young Children's Play Activities and Classification Learning (Los Angeles, California: ERIC Document Reproduction Service, ED 082 822, 1973), pp. 92 - 93.

¹⁴G. Mendel, "Children's Preferences for Differing Degrees of Novelty," Child Development 36 (1965): 453 - 465 as quoted in Phinney, pp. 11, 94.

allow the child to do a variety of things with them.¹⁵ These studies can aid day care centers in choosing equipment that is best suited for children's developmental needs.

Busse "began with the hypothesis long assumed, that the mere provision of a quantity of quality equipment would assure the development of self-reliance and initiative, and be supportive to sound physical and mental development".¹⁶ He concluded that enrichment significantly altered the classroom, but that the teachers in the enriched classrooms interacted less with the children as the teachers expected the equipment to do the teaching.¹⁷

Equipment Lists

There are numerous lists of play equipment for day care and preschool programs. Sources classify equipment according to the skills it helps develop, the age for which it is appropriate, or according to the area in which it can be found. Such lists can be helpful in equipping a day care center and/or preschool program. In the case of this study,

¹⁵Corrine Hutt, "Exploration and Play in Children," Symposium of the Zoological Society of London 18 (1966) as quoted in Phinney, pp. 12 - 13.

¹⁶Thomas Busse et al., Environmentally Enriched Classrooms and the Development of Disadvantaged Preschool Children (Washington, D.C.: ERIC Maloney Markun, ed., Play: Children's Business and a Guide to Play Materials (Washington, D.C.: ERIC Document Reproduction Service, ED 101 848, 1974), p. 46.

¹⁷Ibid., p. 47.

these lists were used to help develop the equipment list for assessing the quality of day care programs. (Table 1)

Several of the lists included unique features. Pre-School Equipment for a Multi-Use Center listed only equipment that was "portable, inexpensive to make, provides its own storage, adds color to the room and is extremely durable".¹⁸ Included were the blueprints for an easel, water table, puppet theatre, blocks, washer and dryer, and rocking boat.¹⁹ Low budget suggestions for equipment were included in Day Care - How to Plan, Develop and Operate a Day Care Center and Project Head Start - Equipment and Supplies #9.²⁰ A method for determining whether or not a center should have a piece of equipment was part of Equipment and Supplies.²¹ Its drawback was the thirty-six questions required to obtain information about each piece of equipment. Developmental Learning Materials had a unique "Cross Reference Skills Chart". Each product was listed and classified according to the skill(s) it helps develop. Some of the eighteen skills that a toy

¹⁸Pre-School Equipment for a Multi-Use Center (Conway, Massachusetts: Stone Mountain Educational Project, Inc., 1972), p. 2.

¹⁹*Ibid.*, pp. 2 - 32.

²⁰Evans et al., p. 239 - 250; and Department of HEW, Project Head Start.

²¹Evelyn Weber and Lucy Prete Martin, eds., Equipment and Supplies, rev. ed. (Washington, D.C.: Association for Childhood Education International, 1964), p. 4 - 8.

TABLE 1
EQUIPMENT LISTS AND MEANS OF CLASSIFICATION

Source	Classified as to Area Used in	Classified as to Appropriate Age Level	Classified as to Skill Developed by Use
THE NURSERY SCHOOL	X		
PRE-SCHOOL EQUIPMENT FOR A MULTI-USE CENTER	X		
A GUIDE TO PLAY MATERIALS		X	X
SELECTING EDUCATIONAL EQUIPMENT AND MATERIALS	X	X	
DAY CARE--HOW TO PLAN, DEVELOP AND OPERATE A DAY CARE CENTER	X		
PROJECT HEAD START--EQUIPMENT AND SUPPLIES #9	X		
AS THE TWIG IS BENT	X		
GUIDE FOR ESTABLISHING AND OPER- ATING DAY CARE CENTERS FOR YOUNG CHILDREN	X		
COMMUNITY COORDINATED CHILD CARE PAMPHLET--MONTANA	X		
EQUIPMENT AND SUPPLIES		X	
CHILDCRAFT	X		
COMMUNITY PLAYTHINGS	X		
DEVELOPMENTAL LEARNING MATERIALS			X
EDUCATIONAL TEACHING AIDS			X

NOTE: Refer to selected bibliography for complete references of sources.

could be classified under were gross motor, body concept, visual-auditory integration, memory, social awareness, and career awareness.²²

²²Developmental Learning Materials (Niles, Illinois: n.p., [1967]), pp. 2 - 5.

CHAPTER III

METHODS AND PROCEDURES

Research Design

The purpose of this study was to develop an objective instrument which could be used as an indicator of the quality of a day care program, using the evaluations of play equipment by professional workers in child development as the evaluative criteria.

Sampling Procedure

This study was based on responses from professionals in the field of child development. Professional workers in child development were defined as directors of a child development center, nursery school, and/or day care center, and teachers of a class(es) in early childhood education in a college or university. Participants were required to meet these qualifications to insure that respondents would be a relatively homogeneous group with near-like knowledge and job responsibilities. This group was considered to have the expertise to rate equipment because of their educational background, teaching experience, and pre-school directing responsibilities.

Questionnaires were sent to all land-grant colleges and state universities. Thus, these institutions represent the total population. Those workers that responded represent the sample from which

conclusions were drawn concerning the reliability of the questionnaire.

One hundred and fourteen land-grant colleges and state universities were contacted. A list of the schools and their addresses was obtained from the membership list of the National Association of State Universities and Land-Grant Colleges.¹ It was assumed that the professionals could be contacted through the mail by sending the questionnaire equipment rating scale to the home economics department or school of each institution. Professionals in home economics departments in land-grant and state institutions were chosen as the target group because of their accessibility, their regional distribution throughout the United States, and their known reputation for being a high-response group.²

¹Christian K. Arnold, ed., Proceedings of the National Association of State Universities and Land-Grant Colleges (Washington, D.C.: National Association for State Universities and Land-Grant Colleges, 1972), pp. 138 - 150.

²This group was used once by Brown who took a survey of schools having laboratory nursery schools. Brown had a 90.1% response. Brown's response group was used by Sievert who surveyed the trends relating to the teaching of Child Development. Sievert obtained a 92% response. Mary Stewart Brown, "A Survey of Trends and Practices in Child Development Centers Among Land-Grant and State Universities", (Unpublished Master's Thesis) Montana State University, 1971, p. 35; and Naida Korslund Sievert, "A Survey of Trends and Practices in Teaching Child Development Among Land-Grant and State Institutions", (Unpublished Master's Thesis) Montana State University, 1976, p. 38.

Method of Obtaining Information

A mail questionnaire was chosen as the means for obtaining the information needed to develop an equipment rating scale. Personal interviews and/or telephone calls were deemed to be inefficient because of the large sample size, distance of the schools, and the length of the rating scale.

Equipment Rating Scale

A rating scale was developed by the researcher as there were no models available. The scale consisted of lists of pieces of equipment likely to be found in the housekeeping, science, creative arts, music, blockbuilding, library, manipulative toy and table tasks, and large muscle/outdoor areas of a day care center. These areas of the day care program were chosen because "almost all the educational objectives of a day care center can be met through them--they address the physical, social, emotional, and intellectual needs of adequate growth and development more thoroughly than any other combination."³ Included in the rating scale was a rating of the importance of each separate play area. By rating play areas the minimum number of areas needed in a day care center could be estimated.

³Evans et al., p. 157

Equipment items listed under each area of play were arrived at by consulting established equipment lists for preschools and/or day care centers. These lists were compiled and printed as guidelines for equipping day care and preschool centers. Many sources were used to have as complete an equipment list as possible. (Refer to Table 1)

Each piece of equipment was to be rated by the participant on a multidimensional scale having a five-point equal interval scaling system.⁴ Descriptive terms for each point were defined so participants could rate equipment knowing what the points meant, thus making the results more valid by controlling the meanings for each point. Definitions for each point were: 1) a piece of equipment not needed at all in a day care program (N.N.); 2) a piece of equipment which has occasional use in a day care program (Occ.); 3) a piece of equipment which has neither negative nor positive value in a day care program (Neut.); 4) a piece of equipment recommended for a day care program (Rec.); and 5) a piece of equipment that is a necessity for a day care program (Ness.). The areas were to be rated on this same scale with the word "area" substituted for the word "equipment". A space was left under each area of equipment for respondents to write in items they felt were necessary or recommended. The complete rating scale was covered in seven double-spaced typewritten pages. (Appendix A)

⁴Paul E. Green and Vithola R. Rao, Applied Multidimensional Scaling (New York: Holt, Rinehart and Winston, Inc., 1972), p. 188 - 192.

Attached to the equipment rating scale was a cover information page. This page aided the subject in determining if he/she met the criteria of a professional worker in child development and thus should fill out the rating form, identified the respondents' schools, requested information about the respondents' educational and professional status, collected information from the schools and respondents who did not qualify as professionals in child development, and offered the sample group a summary of the results of the study. Respondents were asked to return the information sheet along with the rating scale if they qualified as a professional worker and to return only the information page if they did not qualify. (Appendix A)

Questionnaire Design

The questionnaire rating scale was designed after the principles of Berdie and Anderson.⁵ Pages were numbered to enable the respondent to reassemble it easily if necessary. The name and address of the researcher was included at the beginning and at the end of the questionnaire to insure that the participant knew who sent the questionnaire and where to return it. The study title was typed in boldface type on the first page of the rating scale to remind

⁵Douglas R. Berdie and John F. Anderson, Questionnaires: Design and Use (Metuchen, New Jersey: The Scarecrow Press, Inc., 1974), pp. 48 - 68.

participants of the purpose. A note was included to inform participants of the availability of help and a copy of the results was offered for participation.

Other steps taken to aid in a high return of questionnaires were:
To encourage completion - 1) Every effort was made to have brief and clear directions and to group items into logically coherent sections. 2) An addressed, stamped envelope was included. 3) Items were double-spaced. 4) Abbreviations for descriptive terms of rating points were repeated at the top of each page.

To give questionnaire a professional appearance - 1) Photo off-set printing and high quality paper were used. 2) The terms scale and instrument were emphasized. 3) The name of the sponsoring school was used on all correspondence. 4) An approximate time for completion was stated.

To give the questionnaire a personal touch - 1) All envelopes were addressed by hand. 2) The title of the person and their address were typed in at the beginning of each letter.

Validation of Techniques

Before the rating scale was sent to the sample group it was tested and reviewed by selected juniors and seniors majoring in child development, teaching faculty of the child development center at Montana State University, and members of the researcher's graduate committee at Montana State University. Eighteen juniors and seniors completed

the questionnaire as if they were professional workers in child development. When they had completed the task, they were asked to answer the following questions: 1) Did you understand the directions? 2) How did you feel about the number of pages? 3) Was the rating form easy to fill out? 4) Which type of spacing was preferred, single-spaced or double-spaced? 5) If you were an administrator would you be interested in the results of this study? 6) Was there anything about the complete package that was confusing?

The following changes were made:

On the cover letter - 1) Wording was clarified to improve directions and understanding of the purpose of the study.

On the questionnaire - 1) A section related to quality was deleted. It became evident that various qualities could affect each piece of equipment. To differentiate quality was beyond the limit of this study. 2) An average completion time was determined. This could be included in the information given to participants so that completing the survey would not seem too time-consuming. 3) Equipment items were double-spaced. This made it easier to read and complete, and completion had priority over number of pages.

Cover Letter

A short cover letter accompanied the rating scale. The letter, like the rating scale, was designed to attract interest and to encourage participation. It was not attached to the rating scale. It was assumed that the letter would be read by the director of the home economics department while the rating form might be passed to a professional child development worker.

Data Collection

The cover letter, cover sheet, and rating form were sent to the home economics departments of the 114 members of the National Association of State Universities and Land-Grant Colleges on January 21, 1976. A follow-up was sent February 21, 1976, four and one-half weeks after the initial mailing. (Appendix B)

Each return was dated and classified according to: 1) whether it had a completed rating form enclosed, and 2) if it contained only the information sheet. Completed rating forms were further classified by region and state. (Appendix C)

Data Interpretation

The data were analyzed internally, only, following Green and Rao.⁶ It was assumed that all of the participants had the same basic

⁶Green and Rao, pp. 188 - 192.

knowledge, of child growth and development and of equipment to promote development, forming an homogeneous group and thus, deleting any need for external analysis. Statistical analysis was confined to estimating means, variances, and coefficients of variation in various nested patterns of:

- | | |
|---------------------------|------------------------------|
| 1) schools overall | 4) play areas overall |
| 2) schools within regions | 5) play areas within regions |
| 3) each region | 6) play equipment overall |

Definition of Statistical Terms

Statistical terms used were defined as:⁷

y = single score value

n = number of scores totaled

mean = $\sum y/n$; represents the center of observations

variation = $[\sum (y - \bar{y})^2]/n - 1$; a measure of dispersion around the mean

coefficient of variation(CV) = $S \times 100/\bar{y}$; the standard deviation expressed as a percentage of the mean, compares the amount of variation in populations with different means

S = standard deviation

⁷Definitions taken from Robert R. Sokal and F. James Rohlf, Introduction to Biostatistics (San Francisco: W.H. Freeman and Co., 1969), pp. 30 - 47.

CHAPTER IV

RESULTS AND DISCUSSION

The purpose of this study was to develop an objective instrument which could be used as an indicator of the quality of a day care program. Evaluation ratings of play equipment by professional workers in child development were to be used as the criteria for developing the instrument.

Description of the Sample

Of the 114 questionnaires distributed, responses were received from 88 (77.17%) land-grant colleges and state universities located in 45 (90%) states. (Table 2) Fifty-eight (50.8%) of these 88 respondents qualified to rate equipment as professional workers in child development by teaching a class(es) in early childhood education and directing the preschool program at their institution. Rating forms were completed by professional workers from 38 (76%) states. (See Appendix D)

Characteristics of Qualifying Respondents

Sixty per cent of the professional workers in child development had a masters degree, taught a course(s) in early childhood education, and directed the institution's day care center, nursery school and/or child development center. Only two professional workers held bachelor

TABLE 2
DISTRIBUTION OF RESPONSES

Region	Completed	Returned Uncompleted	No Answer	Total Sent
New England	4	3	2	9
Middle Atlantic	6	5	5	16
Southern	23	8	7	38
North Central	14	7	3	24
Mountain	9	1	3	13
Pacific	2	6	6	14
TOTALS	58	60	26	114

degrees represented by the majority of the sample. (Fig. 1) (Perhaps the bachelor level respondents were requested to fill in the rating form for a supervisor.)

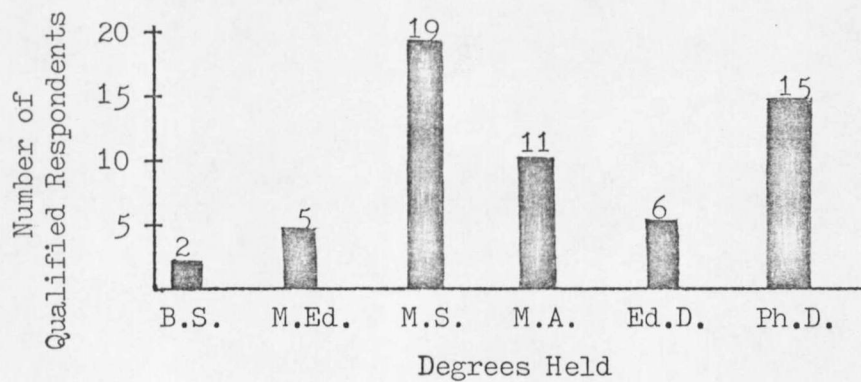


Fig. 1. Degree Distribution of Qualified Respondents

A majority (53%) of the qualifying respondents were involved only in teaching and directing. Others (47%), holding doctorate degrees, had responsibilities which included teaching, directing, research, and in some cases, administration. (Fig. 2)

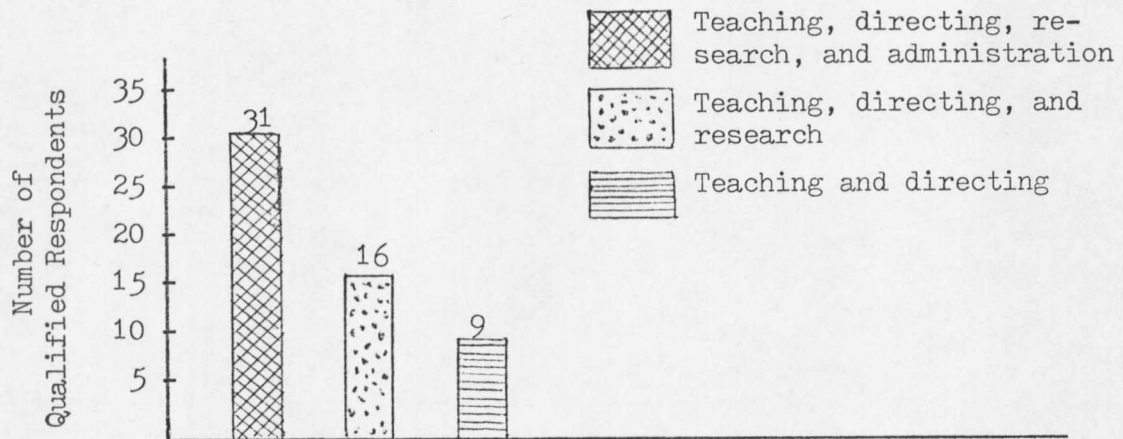


Fig. 2. Professional Responsibilities of Qualified Respondents

Disqualified Respondents and Non-Respondents

Thirty of the respondents were disqualified to rate equipment because there was no department or an option of early childhood education in the school, there was no nursery school, day care center, and/or child development center used as a laboratory on the campus, they were not teaching a class(es) in early childhood education, and/or they did not direct the school's nursery school, day care center and/or child development center. In most cases, when the subject was unable to meet one criteria, they were unable to meet several others.

(Table 3)

TABLE 3

THIRTY RESPONDENTS' EXPLANATIONS FOR NOT QUALIFYING
AS PROFESSIONAL WORKERS IN CHILD DEVELOPMENT

Number of Respondents	Explanation for not Qualifying
5	No option of early childhood education
5	No preschool program
6	Individual not teaching a class(es) in early childhood education
7	Individual not directing preschool program
6	No unit of home economics at institution
5	Early childhood education in department other than home economics
1	Position of preschool director vacant

Some disqualified respondents further explained that their institution had no unit of home economics, the preschool program was in a department other than home economics, (most often, the education department), or they did not have an early childhood education program that applied to pre-kindergarten children. (Table 3)

These reasons offer possible explanations for the 22.9% non-responding group. Another explanation is that in some cases the questionnaire reached a person who partially qualified as a professional worker in child development, but was not the one who directed the institution's preschool program. This misdirection could have been due to poor directions on the cover letter, inability to follow directions, or the institution may not have had a qualifying professional worker in child development. In a few cases, there seemed to be confusion with regard to the terms early childhood education and child development. Apparently, in some institutions early childhood education refers to kindergarten through third grade, while child development refers to the preschool years. A definition of terms may have prevented this situation.

Completed rating forms were not received from the states of Vermont, Massachusetts, Pennsylvania, West Virginia, Florida, Minnesota, Wisconsin, Nevada, California, Alaska, Hawaii and the Republic of Puerto Rico so they are not represented. Half of these non-represented states were from Region 6--the Pacific States. States making

up Region 6 were Washington, Oregon, Alaska, Hawaii, California, and the Republic of Puerto Rico. Fourteen questionnaires were sent to the region--only two were returned, one from Washington and one from Oregon. The two returns could not be considered a representative sample concluding regional bias. All other regions were well represented and considered adequate for estimating regional bias. (See Appendix D for return distribution.)

Play Equipment

Rating System

The mean for all equipment ratings by all professional workers in all responding schools was $4.25 \pm .95$. The variance .91 suggests there is a high level of confidence in the mean which is interpreted that the general feeling for all equipment on the questionnaire is recommended.

A coefficient of variation (C.V.) was calculated for each play area and for each piece of equipment. Small C.V.'s were interpreted to indicate a high degree of stability in the mean. Large C.V.'s were interpreted to indicate large variation, thus instability around the mean. A master data sheet for each piece of equipment is in Appendix E.

Play Areas and Regional Analysis

Play areas were rated in two ways; a direct rating of each area's importance by professional workers (See Appendix A, page) and an

overall mean of the equipment which made up each separate area. The range of means by direct rating was from 4.5 to 4.9. Although music rated lowest and the large muscle/outdoor area rated highest, the difference in means was not considered great enough to show any type of preference. Because of their high direct ratings, close to 5, all areas listed on the rating scale were considered necessary in a day care center by all regions. (Table 4, Column 1)

By averaging the actual equipment ratings of the equipment likely to be found in each play area a means ranging from 4.10 to 4.50 was produced. In this instance, science rated lowest and housekeeping rated highest. These means were more frequently closer to 4, or considered recommended, by the professionals. Again there was no strong regional preference indicated. (Table 4, Column 2) The New England region, however, consistently rated each area lower than other regions. This could be indicative of a general feeling by professional child development workers in the New England region that equipment is related to the influence of teachers and the program in a day care center. It also could be an indicator that day care centers and preschool centers may not have the same educational goals for children in the New England region.

The two different means of 4 and 5 point out a discrepancy in what professionals say is a necessary play area for a day care center and in how they actually rated the pieces of equipment that made up

TABLE 4
DIRECT MEANS (DM), AVERAGE EQUIPMENT MEANS (EQM), AND COEFFICIENTS OF VARIATION (C.V.)
OF PLAY AREAS AND REGIONS

Regions	Blocks			Creative			House			Large Miscle/ Outdoor			Library			Manipulative			Music			Science			REGION TOTALS		
	Numbers		C.V.	Numbers		C.V.	Numbers		C.V.	Numbers		C.V.	Numbers		C.V.	Numbers		C.V.	Numbers		C.V.	Numbers		C.V.	Numbers		C.V.
	DM	EQM		DM	EQM		DM	EQM		DM	EQM		DM	EQM		DM	EQM		DM	EQM		DM	EQM		DM	EQM	
New England	4.3	3.9	26%	4.5	3.9	37%	4.5	4.0	21%	4.5	3.5	32%	4.3	4.0	29%	4.3	3.7	28%	3.5	3.5	41%	4.3	3.4	45%	4.3	3.8	180%
Middle Atlantic	5.0	4.2	30%	5.0	4.4	25%	5.0	4.3	18%	5.0	3.9	40%	5.0	4.4	25%	5.0	4.2	30%	5.0	4.1	37%	5.0	4.0	36%	5.0	4.2	136%
Southern	4.9	4.4	38%	4.9	4.1	50%	4.9	4.6	35%	4.9	4.2	49%	4.9	4.6	25%	4.9	4.3	39%	4.8	4.2	55%	4.9	4.1	60%	4.9	4.3	113%
North Central	5.0	4.3	41%	4.9	4.3	46%	5.0	4.5	22%	5.0	4.2	41%	5.0	4.5	24%	5.0	4.3	32%	4.9	4.4	41%	4.7	4.2	48%	4.9	4.3	171%
Mountain	5.0	4.1	41%	5.0	4.2	39%	5.0	4.5	29%	5.0	4.1	34%	4.9	4.5	25%	5.0	4.3	25%	4.8	4.4	26%	4.9	4.2	39%	4.9	4.3	60%
Pacific	5.0	4.4	13%	5.0	3.7	38%	5.0	4.6	13%	5.0	3.9	34%	5.0	4.2	24%	5.0	4.0	31%	4.5	4.1	22%	4.5	4.1	19%	4.9	4.1	136%
AREA TOTALS	4.9	4.3		4.9	4.2		4.9	4.5		4.9	4.1		4.8	4.5		4.9	4.3		4.5	4.2		4.7	4.0				

each play area. The direct rating probably shows the necessity of having every play area present in a day care center, while the averaged rating indicates that a range of choices exists in the selection of equipment within each area.

Coefficients of variation (C.V.) were also calculated for the play areas. (Table 4, Column 3) The C.V. is a unit free estimator that relates means and variances and allows meaningful comparisons among unrelated studies or questions. In the case of this study, the C.V. was used as a method of comparing variances with the same unit, percentages. The blocks were rated much the same by all regions except Regions 1 and 6. (Region 6 cannot be considered due to poor representation.) The C.V.'s for the block area were stable across all regions, indicating that the blockbuilding area means the same thing to all regions. The creative arts area had highly variable C.V.'s-- indicating that different regions probably think different equipment should be in this area. The New England region's 25% C.V. could mean that this region considers the creative arts area very important and the professionals in this area have a high degree of agreement as to what pieces of equipment are part of a creative arts area. The house-keeping and the library areas received the most stable ratings indicating that these two areas are uniformly important in all regions. The large muscle/outdoor area was highly variable with no region stable in their ratings of large muscle/outdoor equipment. C.V.'s in the

manipulative area were fairly stable with no major regional pattern. Both music and science areas were highly variable with the Southern states having the highest C.V. (60%). In the south there must be many ambivalent attitudes toward equipment likely to be in the music and science areas.

Means, variances, and C.V.'s showed there was no substantial regional preference towards areas. A comparison of means revealed that the New England region consistently rated all of the areas lower than did other regions as was discussed earlier. Variance comparison showed all regions to be fairly unstable in their ratings except for the Mountain region. The Mountain region, which included the state of Montana, had a very low variance of .6. Since this is an indication of consistency, it indicates that Mountain region professional workers consistently gave individual pieces of equipment the same rating. A variance of .6 could suggest that a regional bias exists because the survey was initiated in this region and may be the result of the professionals having similar educational backgrounds, similar experiences with day care programs and/or a greater familiarity with the equipment listed and its use. The high percentages (180% to 60%) of the overall regional C.V.'s further indicate the ratings of equipment to be highly unstable among the schools within each region.

Necessary Equipment

Of 191 pieces of equipment listed on the rating scale, 61 had an overall mean rating of 4.51 to 5.00. Forty-eight of these piece also had a low coefficient of variation ($\leq 15\%$). (Table 5) A high mean along with a low C.V. indicates that a piece of equipment is quite necessary for a day care center in all regions. The creative arts and house-keeping areas had the most equipment rated as necessary. This could have been caused by several factors--the areas had more equipment listed in them than others, and in order for the areas to be successful they must have many small items, such as scissors, glue, crayons, dolls, cooking set, and assorted hats. Other pieces of equipment that were rated as necessary were unit blocks, tempera paint, dress-up clothes, story books, puzzles with very large pieces, and a large basin and accessories for water play. (Appendix F) Because this equipment was rated at this level it must offer much to children's opportunity for development.

Some of the same equipment rated as necessary by professional workers in child development at the college level were also rated necessary by Wegners' sample of high school teachers training students to work in child care.¹ These were blocks, small cars and trucks,

¹Pasty Merritt Wenger, "Equipment for Consumer Homemaking and Occupational Training in Child Development and Food Areas", (Un published Master's Thesis) Montana State University, 1975, pp. 145 - 146.

TABLE 5 - Mean numbers (averaged mean) and coefficients of variation (C.V.) determining play equipment as necessary (***), recommended (+), or neutral (--) value for a day care center.

Play Area Equipment	Mean (Ave.)	C.V.
	Number	%
BLOCKBUILDING AREA		
*** unit blocks	4.9 (5)	7%
*** hollow blocks	4.6 (5)	12%
large cardboard blocks	3.6 (4)	31%
*** storage shelves for blocks and accessories	4.8 (5)	15%
steering wheel on block	3.6 (4)	32%
*** set of people	4.6 (5)	15%
*** set of animals	4.6 (5)	14%
set of signs	4.0 (4)	23%
*** set of small wheeled vehicles (cars, trucks, trains, etc.)	4.7 (5)	12%
oversized large wheeled vehicles children can ride on	4.2 (4)	27%
wagon	4.2 (4)	27%
wheelbarrow	3.7 (4)	31%
ramps	4.0 (4)	22%
large piece of canvas or blanket	3.9 (4)	31%
CREATIVE ARTS AREA		
+ table	4.6 (5)	19%
chairs	4.4 (4)	20%

TABLE 5 - Continued.

	Mean	C.V.
CREATIVE ARTS AREA (con't.)		
*** blunt scissors	4.8 (5)	11%
stapler	3.8 (4)	29%
tapes	4.2 (4)	23%
wire	3.6 (4)	31%
*** collage material (macaroni, rocks, buttons)	4.7 (5)	10%
*** glue	4.6 (5)	13%
+ paste	4.6 (5)	18%
-- thumbtacks	3.3 (3)	43%
tongue depressors	3.8 (4)	29%
*** sponges	4.7 (5)	12%
pipe cleaners	3.9 (4)	24%
popsicle sticks	3.8 (4)	32%
*** aprons or old shirts	4.8 (5)	11%
chalk	4.3 (4)	22%
*** crayons	4.7 (5)	14%
magic markers	4.0 (4)	28%
felt	3.9 (4)	26%
*** assorted colors of construction paper	4.7 (5)	12%
*** newsprint	4.7 (5)	7%
finger paint paper	4.1 (4)	26%
-- tag board	3.4 (3)	34%
tissue	3.9 (4)	28%
brown or white wrapping paper	4.1 (4)	25%
*** tempera paint	4.9 (5)	6%
+ finger paint	4.6 (5)	20%
-- water paints	3.4 (3)	43%

TABLE 5 - Continued.

	Mean	C.V.
CREATIVE ARTS AREA (con't.)		
*** paint brushes	4.9 (5)	8%
*** easel	4.7 (5)	10%
modeling clay	4.3 (4)	24%
-- plasticine clay	3.2 (3)	42%
*** play dough	4.7 (5)	12%
+ carpentry table	4.4 (4)	12%
+ vise	4.2 (4)	12%
*** hammer	4.6 (5)	11%
saw	4.4 (4)	18%
+ assorted nails	4.4 (4)	13%
*** lumber	4.6 (5)	11%
sandpaper	4.1 (4)	23%
drill	3.7 (4)	28%
screwdriver	3.9 (4)	26%
assorted screws	3.8 (4)	29%
-- wire	3.4 (3)	33%
spools	3.8 (4)	25%
pliers	3.8 (4)	29%
HOUSEKEEPING AREA		
*** stove	4.7 (5)	11%
*** sink or dish pan	4.9 (5)	7%
*** refrigerator	4.6 (5)	12%
*** cabinet	4.6 (5)	15%
+ small kitchen table	4.7 (5)	16%
*** chairs	4.8 (5)	9%
*** cooking set	4.8 (5)	7%

TABLE 5 - Continued.

	Mean	C.V.
HOUSEKEEPING AREA (con't.)		
*** dish and utensil set	4.7 (5)	14%
dish towel and cloth	4.3 (4)	20%
sponge	4.4 (4)	20%
soap	4.1 (4)	25%
+ cleaning set (broom, mop, dustpan)	4.4 (4)	15%
*** full-length mirror	4.7 (5)	10%
rocking chair	4.2 (4)	17%
*** toy telephone	4.7 (5)	12%
wooden ironing board and iron	4.0 (4)	24%
*** dolls	4.9 (5)	7%
doll high chair	3.8 (4)	25%
doll carriage	3.9 (4)	29%
doll clothes	4.7 (5)	12%
doll bed (large enough for children)	4.4 (4)	17%
+ blankets	4.4 (4)	15%
chest of drawers	4.2 (4)	17%
clothesline and clothespins	3.8 (4)	30%
*** dress-up clothes	4.9 (5)	6%
*** assorted hats	4.6 (5)	13%
costume jewelry	4.1 (4)	24%
handbags	4.4 (4)	22%
cash register	3.9 (4)	31%
LARGE MUSCLE/OUTDOOR AREA		
+ large climbing structure	4.6 (5)	22%
rocking boat	3.9 (4)	24%
small indoor slide	3.8 (4)	29%
large slide	3.9 (4)	34%

TABLE 5 - Continued.

	Mern	C.V.
LARGE MUSCLE/OUTDOOR AREA (con't.)		
climbing rope	3.9 (4)	26%
swings	3.8 (4)	40%
-- seesaw	3.4 (3)	42%
+ wagon	4.4 (4)	15%
tumbling mat	4.2 (4)	21%
punching bag on stand	3.9 (4)	27%
*** balls (7" to 13" diameter)	4.7 (5)	10%
+ tricycles	4.6 (5)	20%
*** ladder	4.6 (5)	17%
keg, for rolling	3.9 (4)	26%
+ balance beam or boards	4.6 (5)	16%
jumping boards	4.2 (4)	23%
bean bags	4.3 (4)	19%
-- jump ropes	3.3 (3)	44%
-- ringtoss game and rings	3.1 (3)	34%
LIBRARY AREA		
*** story books	4.9 (5)	14%
*** picture reference books	4.8 (5)	11%
*** bookshelves	4.7 (5)	13%
table	4.1 (4)	29%
*** chair or cushions	4.7 (5)	11%
carpet	4.2 (4)	24%
+ flannel board	4.6 (5)	18%
story characters for flannel boards	4.4 (4)	22%
hand puppets	4.4 (4)	18%
posters and pictures	4.4 (4)	22%
tape recorder	4.0 (4)	24%

TABLE 5 - Continued.

	Mean	C.V.
MANIPULATIVE TOY AND TABLE TASKS AREA		
*** puzzles with very large pieces	4.8 (5)	15%
+ puzzles with small pieces	4.6 (5)	26%
+ pegboard	4.6 (5)	21%
attribute block set	3.8 (4)	38%
+ lotto games	4.6 (5)	21%
+ construction toys	4.6 (5)	18%
abacus	3.6 (4)	31%
pounding games	4.0 (4)	32%
threading set	4.0 (4)	33%
shape-sorting games	4.4 (4)	25%
stack puzzles	4.0 (4)	34%
clothing set for zipping, lacing, snapping, and buttoning	3.9 (4)	35%
push and pull toys	3.9 (4)	35%
color cones	3.8 (4)	36%
nested blocks or barrel sets	4.1 (4)	26%
large dominoes	4.0 (4)	31%
beads, shoestrings	4.3 (4)	25%
classification set	4.2 (4)	29%
sequence cards	4.2 (4)	28%
-- alphabet wall chart	3.2 (3)	45%
opposite concepts	4.0 (4)	34%
MUSIC AREA		
+ assorted bells	4.4 (4)	14%
*** assorted drums	4.6 (5)	11%
cymbals	4.3 (4)	24%
rattles	4.4 (4)	18%
+ rhythm sticks	4.4 (4)	15%

TABLE 5 - Continued.

	Mean	C.V.
MUSIC AREA (con't.)		
+ tambourine	4.4 (4)	14%
tone block	4.1 (4)	23%
triangle	4.3 (4)	21%
xylophone	3.8 (4)	29%
sandblocks	4.3 (4)	17%
scarves for dancing	4.4 (4)	19%
autoharp	4.0 (4)	26%
-- guitar	3.4 (3)	32%
-- piano	3.4 (3)	34%
*** record player	4.9 (5)	7%
*** records	4.8 (5)	7%
-- chromatic pitch pipe	3.2 (3)	39%
SCIENCE AREA		
*** large basin for water play	4.9 (5)	7%
*** pails, tubes, sponges, eggbeaters, soap for water play	4.9 (5)	6%
*** sand	4.8 (5)	8%
*** pails, shovels for sand play	4.7 (5)	10%
-- globe	3.2 (3)	44%
+ magnet	4.4 (4)	15%
iron filings	4.2 (4)	25%
+ magnifying glass	4.6 (5)	30%
-- binocular microscope	3.1 (3)	40%
stethoscope	4.1 (4)	19%
prism	4.1 (4)	19%
-- skelton bones	3.1 (3)	40%
-- concave mirror	3.4 (3)	35%
-- convex mirror	3.4 (3)	35%

TABLE 5 - Continued.

	Mean	C.V.
SCIENCE AREA (con't.)		
hand mirror	4.4 (4)	19%
scale	4.3 (4)	24%
balances and weights with seesaw	4.2 (4)	25%
-- egg incubator	3.2 (3)	35%
-- ant farm	3.1 (3)	42%
aquarium	4.0 (4)	27%
terrarium	4.1 (4)	24%
transparent color paddles	3.9 (4)	28%
flashlight and batteries	4.0 (4)	26%
live animals (gerbils, mice, rabbits)	4.3 (4)	19%
+ fish	4.3 (4)	15%
outdoor thermometer	4.2 (4)	20%
indoor thermometer	4.3 (4)	20%
*** plants	4.6 (5)	11%
pulley	3.9 (4)	23%
rope	4.1 (4)	20%
seeds	4.4 (4)	17%
bulbs	4.1 (4)	24%
bottles	4.0 (4)	30%
cork	4.0 (4)	29%

dish set, table, full length mirror, telephones, blunt scissors, paint brushes, easels, record player, records, story books, and puzzles. The overlapping of ratings by these two groups of professionals give strength to the assumption that definite pieces of equipment must be in a day care center.

Recommended Equipment

A substantial amount (111 pieces) of the equipment rated had means of 3.51 to 4.49 causing them to be categorized as recommended. The creative arts and science areas had the most pieces of equipment rated as recommended. This could be due to the need for more items to make the areas useful, thus making these areas more visible. Only the carpentry table, vise, assorted nails, cleaning set, blankets, wagon, assorted bells, rhythm sticks, and tambourine had means of 4 along with a low C.V. ($\leq 15\%$). These pieces of equipment can be assumed to be recommended for a day care center in all regions. The remainder of the equipment had high C.V.'s ($> 15\%$ to 40%) which indicates that the schools within regions were inconsistent in rating this equipment. (Table 5) Examples of recommended equipment were wagons, tongue depressors, magic markers, pliers, swings, hand puppets, stethoscope, and a terrarium. (Appendix G)

Equipment With Neither Positive Nor Negative Value

Equipment with overall means of 2.51 to 3.49 were classified as having neither positive nor negative value in a day care program. Thumbtacks, tag board, water paints, wire, plasticine clay, seesaw, jump ropes, ringtoss game and rings, alphabet wall chart, guitar, piano, chromatic pitch pipe, globe, binocular microscope, skelton bones, concave mirror, convex mirror, ant farm, and egg incubator comprised this group of neutral equipment. All of these items also had high C.V.'s indicating strongly inconsistent ratings of the equipment. (Table 5)

Inconsistent ratings and low means were probably due to many variables affecting the use of this equipment. For example, a piano and guitar are only useful if someone knows how to play them; and skelton bones, ant farms, and egg incubators have occasional value but no year-around value in a day care center--besides demanding much teacher supervision.

Equipment Having Occasional Use and Little or No Value

No piece of equipment had a mean rating of 1.00 to 2.50. This could indicate that the equipment list was a quality list--90% of the equipment was considered beneficial for preschoolers. Support is further given to the belief that equipment does play a major role in day care programs.

Additional Suggested Equipment and Areas

A space was left for the respondents to add any equipment that should have been included on the equipment rating scale. Forty-eight percent of the qualifying group submitted suggestions. It seemed that those who added suggestions had many. A frequent occurrence was for the respondent to suggest a piece of equipment that was listed on the rating scale, but in a different play area. This could be an explanation for the large variance in ratings--professionals may have rated a piece of equipment low because they thought it was more useful in a different area. Suggestions which were not on the scale and occurred more frequently were planks, boots and clothing for men and boys, occupationally identifiable apparel, beauty shop props, grocery store props, jumping tire or trampoline, cookstove or hot plate, and utensils and food for simple cooking and baking. (Table 6)

Another space was left for respondents to add any area that should have been included on the rating form. Mentioned by six respondents was the need for a quiet area to "get away from it all". It is believed this area would have value in a day care center but is overlooked due to lack of space and an unawareness of children's need for quiet activity and the opportunity to be alone. Other areas suggested by a number of respondents were cooking (2), woodworking (2), indoor/large muscle (2), rest and eating (2), isolation (2), and learning

TABLE 6

RESPONDENTS' SUGGESTED PLAY EQUIPMENT

Play Area	Type of Equipment	No.	Play Area	Type of Equipment	No.
BLOCKBUILDING	planks	3	LIBRARY	radio	1
	*rocking boat	1		closed circuit T.V.	1
	*climber	1		filmstrips & projector	1
	*large wheeled vehicles	1		listening posts	1
CREATIVE ARTS				camera	1
	*beads	1		calendar	1
	*sawhorse	1		record player	1
	water hose	1		television	1
	wading pool	1		numbers & letters for flannelboard	1
	stripped car	1	MANIPULATIVE		
	goggles for safety	1		*manipulative letters	3
	art drying rack or clothes-line	1		play tiles	1
	C-clamps	1		*water table	1
	waste baskets	1		*small color cube sets	1
	place for displaying art work	1		containers for conservation sets	1
	scraps of paper	1		parquetry sets	1
HOUSEKEEPING				digging area	1
	boots, clothing for men and boys	12		clothespins & tongue depressors for counting	1
	occupationally identifiable apparel	2	MUSIC		
	grocery store props	2		homemade instruments (e.g. salt box shakers, coffee can drums, pop cap tambourines)	1
	beauty shop props	2	SCIENCE		
	plastic food	1		cookstove or hot plate	3
	real typewriter	1		utensils for simple cooking & baking	3
	suitcase	1		rocks, flour, salt, oil, sugar, soap, foods	3
	doctor equipment	1		calendars, seasonal charts	1
LARGE MUSCLE/ OUTDOOR				cans & boxes for playing store	1
	*boards, long & short	6		funnels & medicine droppers	1
	*sawhorses	4		metric measures	1
	jumping tire or trampoline	2		maps	1
	*sandpile	2		tape measures	1
	*climbing bars	2		water can	1
	digging area	2		food coloring	1
	big packing boxes	1			
	concrete blocks	1			
	*water area	1			
	treehouse	1			
	equipment promoting small muscle development	1			

*This equipment was listed on the rating scale, but suggested to be added in a different area.

centers for academic learning (2). One respondent suggested that a warm, responsive teacher with academic preparation in early childhood education is an area that should be included in every day care center. No suggestion occurred frequently or consistently enough to conclude regional preference.

CHAPTER V

SUMMARY, CONCLUSIONS, RECOMMENDATIONS

Summary

Day care in America is minimally developed. Regulations for day care operation are poorly enforced. Day care directors and teachers are generally underpaid. Often they are untrained and undereducated for working with children. Despite day care's inadequate state the need for day care continues to grow. The importance of the first years of life require that day care centers provide programs that encourage mental, emotional, and physical growth of children. Parents need an evaluation instrument to determine if a day care center offers a developmentally sound program for their children. Those more involved with day care centers--teachers, students, and directors--could use the instrument to periodically evaluate the program and thus improve it. Presently, there is no objective, short answer tool which assesses a day care center program. Equipment was chosen as the basis for developing such an instrument because it enriches the atmosphere for learning. Through its use the child is provided with the opportunity to develop mentally, socially, and physically, all at the same time.

A review of literature showed that there are very few studies upon which to base an instrument. Instruments, currently in use, include licensing standards set by state licensing agencies and competency based evaluation of day care teachers. Some were multi-page tools calling for many observations and subjective evaluation of teachers, program, and equipment. They did show that equipment, materials, and supplies do play an important role in day care centers. Numerous lists of play equipment exist for the use of preschool and day care directors to aid in equipping a center for children.

To determine if an equipment list could be designed for evaluation of child care centers, a questionnaire was mailed to 114 professional workers in land-grant colleges and state universities. Equipment was listed according to the play area in which it was most likely to be used. Each piece could be rated as not needed at all in a day care program, has occasional use in a day care program, has no negative or positive value in a day care program, recommended for a day care program, or a necessity for a day care program. In addition, each play area was rated. To insure as many returns as possible were received, a follow-up post card was sent. Statistical analysis was confined to determining means, variances, and coefficients of variation of professionals' ratings, regions, play areas, and equipment.

Responses were received from 77.1% of the colleges and universities. Fifty and eight-tenths percent professionals in child

development qualified to fill in the rating form by teaching a class(es) in early childhood education and by directing the institution's pre-school program. An overall mean (4.25) indicated that equipment was recommended and the variance (.91) suggested a high level of confidence in the mean.

All play areas were rated directly as necessary, but rated as recommended when equipment means were used to calculate an area means.

The coefficients of variation (C.V.'s) in the blockbuilding, housekeeping, manipulative tasks, and library areas had comparatively low variances indicating stable ratings by most regions. The creative arts, music, large muscle/outdoor, and science areas had highly variable C.V.'s with most regions not stable in their ratings of equipment in these areas.

No substantial regional preference was indicated by means, variances, or C.V.'s. The New England region consistently rated all areas lower than did other regions. The Mountain region showed the highest stability in their ratings. High C.V.'s for all regions, except the Mountain region, indicated an instability of ratings among schools of each region. All play areas contained both necessary and recommended equipment for day care centers. Very few pieces of equipment on the rating scale were considered to be of neutral value and none were rated as having occasional or no value. The creative arts and housekeeping areas contained most of the necessary equipment. Although

recommended equipment was found in all play areas, the greatest number was in the science and creative arts areas. Most of the necessary equipment had low coefficients of variation indicating high stability of ratings of the necessary equipment. The high number of necessary and recommended equipment was construed to indicate that some areas need more pieces of equipment than others to be effective, but that all areas are a necessity and must have certain pieces of equipment to function effectively.

Many suggestions were made by the professionals in space provided for additional equipment and areas. Clothing for men and boys, boards, and a cookstove were the most frequent suggestions, as was the suggestion that day care centers should have a quiet area.

Conclusions

The high response rate, 77.1%, and the qualified group, 50.8%, are interpreted to be representative of the United States, with the exceptions of the states of California, Alaska, and Hawaii. Thus, the conclusions apply to all regions in the United States except part of region six. The overall mean rating of 4.25 and the small variance of .91 supports the validity of the equipment rating scale. Most equipment being rated as necessary or recommended supports the conclusion that equipment is an important part of a day care center, as does the lack of a regional bias. It is concluded that the beginnings

of an objective evaluation instrument for indicating the quality of day care centers can be compiled from the results of this study.

The Day Care Evaluation Instrument

Based on the high means and low C.V.'s of various pieces of equipment it can be concluded that a day care center should have certain types of equipment. It can also be concluded that equipment with low means and high or low C.V.'s should not be used as criteria for determining the quality of a day care center.

Furthermore, because of the high means of area importance it can be concluded that a day care center should have each of the areas listed on the rating scale. Using this criteria, equipment and areas with high means and low C.V.'s would make this instrument useful for all regions, excepting region six. It is assumed that day care centers with visible play areas of housekeeping, blockbuilding, creative arts, music, science, large muscle/outdoor, manipulative table tasks, and library centers are reflective of the program director's goals and objectives for children. (See Table 7 for instrument)

Further construction of an evaluation tool cannot be attempted based on data obtained from this study. Variances and C.V.'s indicate high variables which are so confounded they cannot be separated. It appears that in some regions certain areas are more or less important. This is shown by the instability of equipment ratings. It cannot be

 Suggested Play Area
 Suggested Play Equip-
ment

TABLE 7 - Continued. Outline of Suggested Evaluation Instrument for
Indicating the Quality of a Day Care Center.

____ Suggested Play Area	____ Suggested Play Area
____ Suggested Play Equipment	____ Suggested Play Equip- ment
____	____
____	____
____	____
____	____
____	____
____	____
____	____
____	____
____	____

The complete instrument is not included in this thesis to protect the rights of the researcher. Plans are being made to publish the evaluation tool. The major professor or the researcher will have to be contacted for more information.

determined which specific equipment is causing the instability; nor, more importantly, can it be determined why. It is not known if variability is due to schools, characteristics of respondents, play areas, regions, or equipment.

There are other conclusions which preclude more complete development of the instrument. Although it can be assumed that equipment rated as necessary must be in a day care center, if that center is to be of high quality, the researcher has no means of determining what recommended equipment or occasional use equipment should be in a day care center of high quality. Most C.V.'s of recommended and neutral equipment were highly variable indicating unstable rating. There is no means of determining the causes for the instability. Nor can it be determined what equipment would or would not be in mediocre or poor quality centers. It can be concluded that a center having very little equipment would not be of high quality due to the great amount of equipment on the rating scale considered necessary (61 pieces) or recommended (111 pieces) and the consistency of this feeling for the necessary equipment.

Data does lead to the possibility of an instrument having to be developed for each region. It was indicated that the equipment rating scale was highly stable for the Mountain region.

Recommendations

To Improve This Study.

More information should have been obtained about the background of the professional workers surveyed. Questions related to what they taught; if they were involved in research, what was the topic; who funded their research or were they working on their own; what were their administration responsibilities; their sex; years of directing the nursery school, child development center, and/or day care center; and years involved in teaching classes in early childhood education. Such questions would have enabled correlations to be made between the equipment considered necessary or recommended and the various characteristics of the sample.

Results on the questionnaire may have improved if the directions had included an explanation as to what age range the equipment was serving. Some respondents felt certain equipment was useful only for ages 3 to 5, while different equipment would be needed if infants and toddlers were part of the day care center enrollment.

To increase the return of completed rating forms a specific request should have been made to pass the questionnaire on to another department if the child development option was not within the home economics department. Defining early childhood education might also have increased the number of returns,

The housekeeping area should have been expanded to include items which allowed for dramatic play beyond housekeeping. Items to be included would have been grocery store props, beauty shop props, and occupationally identifiable apparel.

For Other Studies

The researcher believes a good start has been made toward developing an objective instrument which would indicate the quality of a day care center. This study has clarified that definite pieces of equipment are necessary, recommended, or of neutral value for a day care center. The study supports the assumption that equipment could be used as the indicator of a day care program's quality but it does not prove it. More studies need to occur in order to draw correlations between equipment and the quality of day care centers. Following are suggestions for further development of an objective evaluation tool:

- 1) A study needs to be done to prove the validity of the assumption that the visible presence of play areas (housekeeping, block-building, creative arts, music, science, library, outdoor/large muscle, and a manipulative table task) in a day care center positively correlate with the educational and program goals of the center's director.

- 2) This study could be replicated in the Mountain region using a fixed model and controlling as many variables as possible to

determine if an objective instrument could be developed from the rating scale for the Mountain region.

3) The study could be replicated in any of the other regions to determine the reasons of variability among ratings and thus be one step further toward developing an objective rating instrument for indicating day care quality.

4) The instrument suggested needs to be tested for validity--does it really measure the quality of a day care center?

5) The necessary and recommended equipment for this equipment rating scale could be tested for desirable quality characteristics. Examples of characteristics would be accessibility, adaptability, safety, quantity, mobility, and ability to encourage cooperative play, exploration, and independence.

6) Once it is determined how accessible, adaptable, safe, how many, and how useful a piece of equipment is, correlations can be drawn between the possession of equipment, its use, and its effect on a day care program.

7) With data gained from this study and those suggested above, a sample of day care centers needs to be observed and correlations made between excellent, good, mediocre, and poor centers with equipment owned and its use.

APPENDICES

APPENDIX A - COVER LETTER, COVER SHEET, AND EQUIPMENT RATING SCALE

—Montana State University—

Bozeman, Montana 59715

Tel. 406-994-3241

School of Home Economics

January 21, 1976

Directors, parents and educators are having difficulty evaluating day care programs. Evaluation is necessary to assure that children's developmental needs are being met. An objective instrument would be an aid in determining the quality of various day care programs. As part of our continuing research at Montana State University we are trying to develop such an instrument.

Once again your time and cooperation is being sought. Your institution has been chosen to participate because of your known reputation and regional location.

Would you or a member of your staff who teaches a class(es) in early childhood education and directs the nursery school, day care center and/ or child development center complete the rating form? If you do not have such a person on your staff, please fill in the cover sheet and return it in the stamped self-addressed envelope as soon as possible.

The rating form will take no longer than 20 minutes to complete. If you have any questions or need another rating form please contact me at 406-587-4080 or Montana State University.

Sincerely,



Sheryl Anderson
Child Development Graduate Student

Miss B. Bethine Bigej
Graduate Advisor

FOR THE PROFESSIONAL WORKER IN CHILD DEVELOPMENT

Please complete this form by checking the appropriate blanks which apply to your situation.

ABOUT YOUR INSTITUTION

____ Name of Institution
(This information is sought only for the purpose of checking returns, all rating information will be kept anonymous.)

- ____ Yes ____ No 1. Do you have a department or an option in early childhood education in your school?
- ____ Yes ____ No 2. Is there a nursery school, day care center and/or a child development center used as a laboratory on your campus?

ABOUT YOU

- ____ Yes ____ No 3. Are you teaching a class or classes in early childhood education?
- ____ Yes ____ No 4. Do you direct the school's nursery school, day care center and/ or child development center?

If you have answered "no" to any of the above questions there is no need for you to fill in the rating form. Please return this sheet in the enclosed self-addressed envelope. If you have answered "yes" to all of the above questions please continue and fill in the rating form.

- _____ 5. What is your present educational status? (B.S., B.A., M.A., M.S., M.Ed., Ed.D., Ph.D.)
- ____ Teaching 6. What is your current professional status?
____ Research
____ Any combination
- ____ Yes ____ No 7. Would you like a summary of the findings of this study?

Participants in this study include all members of the National Association of State Universities and Land-Grant Colleges.

Sheryl Anderson
M.S.U. - Child Development
Bozeman, Montana 59715

Page 2
 Sheryl Anderson
 School of Home Economics
 Montana State University
 Bozeman, Montana 59715

INSTRUMENT FOR ASSESSING DAY CARE PLAY EQUIPMENT
 AS AN INDICATOR OF PROGRAM QUALITY

Following is a list of equipment likely to be found in a day care center or pre-school program. It is being assumed that this equipment is well-maintained and supervised. Rate each piece of equipment by checking the appropriate number space according to its need in a program. The scale from 1 - 5 is interpreted as

- 1 - a piece of equipment not needed at all in a day care program (N.N.)
- 2 - a piece of equipment which has occasional use in a day care program (Occ.)
- 3 - a piece of equipment which has no negative or positive value in a day care program (Neut.)
- 4 - a piece of equipment recommended for a day care program (Rec.)
- 5 - a piece of equipment that is a necessity for a day care program (Ness.)

In no way is this scale being used to evaluate a child development or day care program. There is no right or wrong rating.

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
BLOCKBUILDING AREA					
unit blocks					
hollow blocks					
large cardboard blocks					
storage shelves for blocks and accessories					
steering wheel on block					
set of people					
set of animals					
set of signs					
set of small wheeled vehicles (cars, trucks, trains, etc.)					
oversize large wheeled vehicles children can ride on					
wagon					
wheelbarrow					
ramps					
large piece of canvas or blanket					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
CREATIVE ARTS AREA					
table					
chairs					
blunt scissors					
stapler					
tapes					
wire					
collage material (macaroni, rocks, buttons)					
glue					
paste					
thumbtacks					
tongue depressors					
sponges					
pipe cleaners					
popsicle sticks					
aprons or old shirts					
chalk					
crayons					
magic markers					
felt					
assorted colors of construction paper					
newsprint					
finger paint paper					
tag board					
tissue					
brown or white wrapping paper					
tempera paint					
finger paint					
water paints					
paint brushes					
easel					
modeling clay					
plasticine clay					
play dough					
carpentry table					
vise					
hammer					
saw					

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
CREATIVE ARTS CONTINUED					
assorted nails					
lumber					
sandpaper					
drill					
screwdriver					
assorted screws					
wire					
spools					
pliers					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					
HOUSEKEEPING AREA					
stove					
sink or dish pan					
refrigerator					
cabinet					
small kitchen table					
chairs					
cooking set					
dish and utensil set					
dish towel and cloth					
sponge					
soap					
cleaning set (broom, mop, dustpan)					
full length mirror					
rocking chair					
toy telephone					
wooden ironing board and iron					
dolls					
doll high chair					
doll carriage					
doll clothes					
doll bed (large enough for children)					
blankets					
chest of drawers					
clothesline and clothespins					
dress-up clothes					

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
HOUSEKEEPING AREA CONTINUED					
assorted hats					
costume jewelry					
handbags					
cash register					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					
LARGE MUSCLE/OUTDOOR AREA					
large climbing structure					
rocking boat					
small indoor slide					
large slide					
climbing ropes					
swings					
seesaw					
wagon					
tumbling mat					
punching bag on stand					
balls (7 - 13" diameter)					
tricycles					
ladder					
kegs, for rolling					
balance beam or boards					
jumping boards					
bean bags					
jump ropes					
ringtoss game and rings					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					
LIBRARY AREA					
story books					
picture reference books					
bookshelves					
table					
chairs or cushions					
carpet					
flannel board					
story characters for flannel boards					

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
LIBRARY AREA CONTINUED					
hand puppets					
posters and pictures					
tape recorder					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					
MANIPULATIVE TOY AND TABLE TASKS AREA					
puzzles with very large pieces					
puzzles with small pieces					
pegboard					
attribute block set					
lotto games					
construction toys					
abacus					
pounding games					
threading set					
shape-sorting games					
stack puzzles					
clothing set for zipping, lacing, snapping and buttoning					
push and pull toys					
color cones					
nested blocks or barrel sets					
large dominoes					
beads, shoestrings					
classification set					
sequence cards					
alphabet wall chart					
opposite concepts					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					
MUSIC AREA					
assorted bells					
assorted drums					
cymbals					
rattles					
rhythm sticks					
tambourine					

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
MUSIC AREA CONTINUED					
tone block					
triangle					
xylophone					
sandblocks					
scarves for dancing					
autoharp					
guitar					
piano					
record player					
records					
chromatic pitch pipe					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					
SCIENCE AREA					
large basin for water play					
pails, tubes, sponges, eggbeaters, soap for water play					
sand					
pails, shovels for sand play					
globe					
magnet					
iron filings					
magnifying glass					
binocular microscope					
stethoscope					
prism					
skeleton bones					
concave mirror					
convex mirror					
hand mirror					
scale					
balances and weights with seesaw					
egg incubator					
ant farm					
aquarium					
terrarium					
transparent color paddles					

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
SCIENCE AREA CONTINUED					
flashlight and batteries					
live animals (gerbils, mice, rabbits)					
fish					
outdoor thermometer					
indoor thermometer					
plants					
pulley					
rope					
seeds					
bulbs					
bottles					
cork					
any necessary or recommended equipment not listed (indicate Ness. or Rec.)					

RATING OF AREAS

Following is a list of areas likely to be found in a day care program which should meet the children's physical, social, emotional and intellectual needs. Rate each area according to its importance in a day care center. The scale from 1 - 5 is interpreted as

- 1 - an area not needed at all in a day care center (N.N.)
- 2 - an area which has occasional use in a day care center (Occ.)
- 3 - an area which has no negative or positive value in a day care center (Neut.)
- 4 - an area recommended for a day care center (Rec.)
- 5 - an area which is a necessity for a day care program (Ness.)

	1 N.N.	2 Occ.	3 Neut.	4 Rec.	5 Ness.
blockbuilding area					
creative arts area					
housekeeping area					
large muscle/outdoor area					
library area					
manipulative toy and table task area					
music area					
science area					
any necessary or recommended areas not listed (indicate Ness. or Rec.)					

APPENDIX B
FOLLOW-UP POSTCARD

An equipment rating scale was sent to you on January 21, 1976. I would like to include your opinion in my study. If you have already completed the form please ignore this request for your cooperation.

Sincerely,

Sheryl Anderson
Child Development Graduate Student

Miss B. Bethine Bigej
Graduate Advisor
Montana State University
Bozeman, Montana 59715

APPENDIX C

DISTRIBUTION OF STATES INTO REGIONS¹

Region 1 - New England States

Vermont
New Hampshire
Maine
Massachusetts
Rhode Island
Connecticut

Region 2 - Middle Atlantic States

New York
Pennsylvania
Maryland
New Jersey
Delaware
West Virginia

Region 3 - Southern States

Texas
Oklahoma
Arkansas
Mississippi
Kentucky
Virginia
Tennessee
Alabama
Georgia
North Carolina
South Carolina
Florida
Louisiana

Region 4 - North Central States

North Dakota
South Dakota
Nebraska
Kansas
Minnesota
Iowa
Missouri
Wisconsin
Illinois
Michigan
Indiana
Ohio

Region 5 - Mountain States

Montana
Idaho
Wyoming
Utah
Colorado
New Mexico
Arizona
Nevada

Region 6 - Pacific States

Washington
Oregon
California
Alaska
Hawaii

¹Following Ralph C. Preston and John Tottle, Geography - United States and Canada (Boston: D.C. Heath and Company, 1966), pp. 103 - 283.

APPENDIX D - RETURN DISTRIBUTION OF QUESTIONNAIRES AMONG STATES

	Completed Rating Form	Replied, not Qualified To Complete	No Response	Not Represented At All In This Study	Totals
Region I (New England)					
Vermont			1	*	1
New Hampshire	1				1
Maine	1	1			2
Massachusetts		1	1	*	2
Rhode Island	1				1
Connecticut	1	1			2
Region II (Middle Atlantic)					
New York	3	1	3		7
Pennsylvania		2	1	*	3
Maryland	1				1
New Jersey	1				1
Delaware	1	1	1		3
West Virginia		1		*	1
Region III (Southern)					
Texas	4	1	1		6
Oklahoma	3				3
Arkansas	2				2
Louisiana	1		1		2
Mississippi	2	1			3
Kentucky	1		1		2
Virginia	2		1		3
Tennessee	1		1		2
Alabama	3				3
Georgia	2	1			3
North Carolina	1	1	1		3
South Carolina	1	1	1		3

	Completed Rating Form	Replied, not Qualified To Complete	No Response	Not Represented At All In This Study	Totals
Region III (con't.)					
Florida		3		*	3
Region IV (North Central)					
North Dakota	1	1			2
South Dakota	1		1		2
Nebraska	1				1
Kansas	2				2
Minnesota		1		*	1
Iowa	1	1			2
Missouri	1	1			2
Wisconsin			2	*	2
Illinois	2				2
Michigan	2	1			3
Indiana	1	1			2
Ohio	2	1			3
Region V (Mountain)					
Montana	2				2
Idaho	1				1
Wyoming	1				1
Utah	2				2
Colorado	1	1			2
New Mexico	1		1		2
Arizona	1		1		2
Nevada			1	*	1

	Completed Rating Form	Replied, not Qualified To Complete	No Response	Not Represented At All In This Study	Totals
Region VI (Pacific)					
Washington	1	1			2
Oregon	1	1			2
California		4	3	*	7
Alaska			1	*	1
Hawaii			1	*	1
Peurto Rico			1	*	1
TOTALS	58	30	26		114

MASTER DATA SHEET

	Regions							
	New England States	Mid Atlantic States	Southern States	North Central States	Mountain States	Pacific States	Overall Mean	C.V.
	1	2	3	4	5	6		
Play Area Equipment	Mean Value						Number	%
BLOCKBUILDING AREA								
unit blocks	4	5	5	5	5	5	5	7%
hollow blocks	4	5	5	5	5	4	5	12%
large cardboard blocks	4	3	4	3	3	4	4	31%
storage shelves for blocks and accessories	4	5	5	5	5	5	5	15%
steering wheel on block	3	4	4	4	4	4	4	32%
set of people	4	4	5	5	4	4	5	15%
set of animals	4	5	5	4	4	4	5	14%
set of signs	4	4	4	4	4	4	4	23%
set of small wheeled vehicles (cars, trucks, trains, etc.)	4	5	5	5	5	4	5	12%
oversize large wheeled vehicles children can ride on	4	4	4	4	4	5	4	27%
wagon	4	4	4	4	4	5	4	27%
wheelbarrow	3	4	4	4	4	4	4	31%
ramps	3	4	4	4	4	4	4	22%
large piece of canvas or blanket	3	4	4	4	4	4	4	31%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
	Mean Value							
CREATIVE ARTS AREA								
table	4	4	5	5	5	4	5	19%
chairs	4	4	5	4	5	4	4	20%
blunt scissors	4	5	5	5	5	5	5	11%
stapler	3	4	4	4	4	4	4	29%
tapes	4	4	4	4	4	4	4	23%
wire	3	4	4	4	4	2	4	31%
collage material (macaroni, rocks, buttons)	4	5	5	5	5	4	5	10%
glue	4	4	5	5	5	5	5	13%
paste	4	5	5	5	5	4	5	18%
thumbtacks	2	4	4	3	3	1	3	43%
tongue depressors	4	5	4	4	4	1	4	29%
sponges	4	5	5	5	5	4	5	12%
pipe cleaners	3	5	4	4	4	3	4	24%
popsicles sticks	3	4	4	4	3	1	4	32%
aprons or old shirts	4	5	5	5	5	5	5	11%
chalk	2	4	5	4	4	3	4	22%
crayons	3	5	5	5	5	5	5	14%
magic markers	2	4	4	4	4	4	4	28%
felt	3	4	4	4	4	1	4	26%
assorted colors of construction paper	4	5	5	5	5	4	5	12%
newsprint	4	5	5	5	5	5	5	7%
finger paint paper	4	4	4	4	4	2	4	26%
tag board	3	3	4	3	4	2	3	34%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
	Mean Value							
CREATIVE ARTS AREA (con't.)								
tissue	3	4	4	4	4	3	4	28%
brown or white wrapping paper	3	4	4	4	4	4	4	25%
tempera paint	5	5	5	5	5	5	5	6%
finger paint	5	4	5	5	5	2	5	20%
water paints	4	4	4	3	3	3	3	43%
paint brushes	5	5	5	5	5	4	5	8%
easel	4	5	5	5	5	4	5	10%
molding clay	4	4	5	4	4	4	4	24%
plasticine clay	3	3	3	3	3	3	3	42%
play dough	4	5	5	5	5	4	5	12%
carpentry table	4	4	5	4	4	4	4	12%
vise	4	4	4	4	4	4	4	12%
hammer	4	5	5	5	5	4	5	11%
saw	4	4	4	5	5	4	4	18%
assorted nails	4	4	4	5	5	4	4	13%
lumber	4	4	5	5	5	4	5	11%
sandpaper	4	4	4	4	4	4	4	23%
drill	4	4	4	4	4	4	4	28%
screwdriver	4	4	4	4	4	4	4	26%
assorted screws	3	4	4	4	4	4	4	29%
wire	3	4	4	4	3	2	3	33%
spools	3	4	4	4	4	4	4	25%
pliers	3	4	4	4	4	4	4	29%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
HOUSEKEEPING AREA	Mean Value							
stove	4	4	5	5	5	4	5	11%
sink or dish pan	4	5	5	5	5	4	5	7%
refrigerator	4	4	5	5	5	4	5	12%
cabinet	4	4	5	4	5	5	5	15%
small kitchen table	4	5	5	5	5	5	5	16%
chairs	4	5	5	5	5	5	5	9%
cooking set	4	5	5	5	5	5	5	7%
dish and utensil set	4	4	5	5	5	4	5	14%
dish towel and cloth	4	4	5	4	4	4	4	20%
sponge	3	4	5	4	4	4	4	20%
soap	3	4	4	4	4	4	4	25%
cleaning set (broom, mop, dust-pan)	4	4	5	4	4	5	4	15%
full length mirror	4	4	5	5	5	4	5	10%
rocking chair	4	4	4	4	4	4	4	17%
toy telephone	4	5	5	5	5	5	5	12%
wooden ironing board and iron	4	4	4	4	4	4	4	24%
dolls	4	5	5	5	5	5	5	7%
doll high chair	4	4	4	4	4	4	4	25%
doll carriage	4	4	4	4	4	5	4	29%
doll clothes	4	4	5	5	5	5	5	12%
doll bed (large enough for children)	4	4	5	5	4	5	4	17%
blankets	3	4	5	5	4	5	4	15%
chest of drawers	4	4	4	4	4	4	4	17%
clothes and clothespins	3	4	4	4	4	4	4	30%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
	Mean Value							
HOUSEKEEPING AREA (con't.)								
dress-up clothes	4	5	5	5	5	5	5	6%
assorted hats	4	5	5	5	5	5	5	13%
costume jewelry	3	4	4	4	4	4	4	24%
handbags	3	4	5	5	5	5	4	22%
cash register	4	4	4	4	4	4	4	31%
LARGE/MUSCLE/OUTDOOR AREA								
large climbing structure	4	5	5	5	5	4	5	22%
rocking boat	3	4	4	4	4	3	4	24%
small indoor slide	3	4	4	4	4	2	4	29%
large slide	4	4	4	4	4	2	4	34%
climbing ropes	4	3	4	4	4	4	4	26%
swings	4	3	4	4	4	2	4	40%
seesaw	3	4	4	4	4	2	3	42%
wagon	4	4	5	5	4	4	4	15%
tumbling mat	3	4	4	4	4	5	4	21%
punching bag on stand	3	3	4	4	4	3	4	27%
balls (7" to 13" diameter)	4	5	5	5	5	5	5	10%
tricycles	4	5	5	5	5	4	5	20%
ladder	4	5	4	5	5	4	5	17%
kegs, for rolling	4	3	4	4	4	4	4	26%
balance beam or boards	4	4	5	5	4	5	5	16%
jumping boards	3	4	4	4	4	4	4	23%
bean bags	3	4	4	4	4	5	4	19%
jump ropes	3	3	3	3	3	4	3	44%
ringtoss game and rings	2	3	3	4	3	3	3	34%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
	Mean Value							
LIBRARY AREA								
story books	5	5	5	5	5	5	5	14%
picture reference books	4	5	5	5	5	5	5	11%
bookshelves	4	5	5	5	5	4	5	13%
table	3	4	4	4	5	4	4	29%
chair or cushions	5	4	5	5	5	5	5	11%
carpet	4	4	4	4	4	2	4	24%
flannel board	4	4	5	4	5	4	5	18%
story characters for flannel boards	3	4	5	4	4	4	4	22%
hand puppets	3	4	5	4	4	4	4	18%
posters and pictures	4	5	5	4	4	4	4	22%
tape recorder	3	3	4	4	4	4	4	24%
MANIPULATIVE TOY AND TABLE TASKS AREA								
puzzles with very large pieces	5	5	5	5	5	5	5	15%
puzzles with small pieces	4	4	5	4	5	5	5	26%
pegboard	4	5	5	5	5	4	5	21%
attribute block set	3	4	4	4	4	4	4	38%
lotto games	3	5	5	5	5	4	5	21%
construction toys	4	5	5	5	5	4	5	18%
abacus	3	3	4	4	4	3	4	31%
pounding games	3	3	5	4	4	3	4	32%
threading set	3	4	4	4	4	4	4	33%
shape-sorting games	4	5	5	4	5	5	4	25%
stack puzzles	3	5	4	4	4	3	4	34%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
	Mean Value							
MANIPULATIVE TOY AND TABLE TASKS AREA (con't.)								
clothing set for zipping, lacing, snapping and buttoning	3	4	4	4	4	1	4	35%
push and pull toys	3	4	4	4	4	3	4	35%
color cones	4	4	4	4	4	3	4	36%
nested blocks or barrel sets	4	4	4	4	4	3	4	26%
large dominoes	4	4	4	4	4	4	4	31%
beads, shoestrings	4	4	4	5	4	5	4	25%
classification set	3	5	4	4	5	4	4	29%
sequence cards	3	5	4	4	4	4	4	28%
alphabet wall chart	2	3	3	3	4	4	3	45%
opposite concepts	3	4	4	4	5	4	4	34%
MUSIC AREA								
assorted bells	4	5	4	5	4	4	4	14%
assorted drums	4	4	5	5	5	4	5	11%
cymbals	4	4	4	5	4	4	4	24%
rattles	4	5	4	5	4	4	4	18%
rhythm sticks	4	4	5	5	5	4	4	15%
tambourine	4	5	4	4	5	4	4	14%
tone block	4	4	4	4	4	4	4	23%
triangle	3	4	4	4	4	4	4	21%
xylophone	3	4	4	4	4	3	4	29%
sandblocks	4	5	4	4	4	4	4	17%
scarves for dancing	4	4	4	5	5	4	4	19%
autoharp	2	3	4	4	4	3	4	26%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
	Mean Value							
MUSIC AREA (con't.)								
guitar	2	3	3	4	4	3	3	32%
piano	2	3	3	4	4	3	3	34%
record player	4	5	5	5	5	5	5	7%
records	4	5	5	5	5	5	5	7%
chromatic pitch pipe	2	2	3	3	4	3	3	39%
SCIENCE AREA								
large basin for water play	4	5	5	5	5	5	5	7%
pails, tubes, sponges, egg-beaters, soap for water play	4	5	5	5	5	5	5	6%
sand	4	4	5	5	5	5	5	8%
pails, shovels for sand play	4	4	5	5	5	5	5	10%
globe	2	3	4	3	3	2	3	44%
magnet	4	5	5	5	4	4	4	15%
iron filings	3	4	4	4	4	4	4	25%
magnifying glass	4	5	5	5	5	4	5	30%
binocular microscope	2	3	3	3	4	2	3	40%
stethoscope	3	4	4	4	4	4	4	19%
prism	4	4	4	4	4	4	4	19%
skeleton bones	2	3	3	3	3	3	3	40%
concave mirror	2	3	3	3	3	4	3	35%
convex mirror	2	3	3	3	3	4	3	35%
hand mirror	3	5	4	5	5	4	4	19%
scale	4	4	5	4	4	4	4	24%
balances and weights with seesaw	3	4	4	4	5	4	4	25%
egg incubator	2	3	3	3	3	4	3	35%
ant farm	2	3	3	4	3	4	3	42%

	Regions						Overall Mean Number	C.V.
	1	2	3	4	5	6		
	Mean Value							
SCIENCE AREA (con't.)								
aquarium	3	4	4	4	4	4	4	27%
terrarium	3	4	4	4	4	4	4	24%
transparent color paddles	3	4	4	4	4	4	4	28%
flashlight and batteries	3	4	4	4	4	4	4	26%
live animals (gerbils, mice, rabbits)	3	4	4	5	4	4	4	19%
fish	3	4	4	5	4	4	4	15%
outdoor thermometer	4	4	4	4	4	4	4	20%
indoor thermometer	4	4	4	4	5	4	4	20%
plants	4	5	5	5	4	4	5	11%
pulley	3	4	4	4	4	3	4	23%
rope	3	4	4	4	4	4	4	20%
seeds	4	4	5	4	4	4	4	17%
bulbs	4	4	4	4	4	4	4	24%
bottles	3	4	4	4	4	4	4	30%
cork	3	4	4	3	4	4	4	29%

APPENDIX F

EQUIPMENT CONSIDERED NECESSARY FOR A DAY CARE CENTER BY PROFESSIONAL WORKERS IN CHILD DEVELOPMENT

Blockbuilding Area

- unit blocks
- hollow blocks
- storage shelves for blocks
and accessories
- set of people
- set of animals
- set of small wheeled vehicles
(cars, trucks, trains)

Creative Arts Area

- table
- blunt scissors
- collage material
- glue
- paste
- sponges
- aprons or old shirts
- crayons
- assorted colors of construction paper
- newsprint
- tempera paint
- finger paint
- paint brushes
- easel
- play dough
- hammer
- lumber

Housekeeping Area

- stove
- sink or dish pan
- refrigerator
- cabinet
- small kitchen table
- chairs
- cooking set
- dish and utensil set
- full length mirror
- toy telephone

Housekeeping Area (continued)

- dolls
- doll clothes
- dress-up clothes
- assortment of hats

Large Muscle/Outdoor Area

- large climbing structure
- balls (7-13" diameter)
- tricycles
- ladder
- balance beam or boards

Library

- story books
- picture reference books
- bookshelves
- chair or cushions
- flannel board

Manipulative Toy and Table Task Area

- puzzles with very large pieces
- puzzles with small pieces
- pegboard
- lotto games
- construction toys

Music Area

- assorted drums
- record player
- records

Science Area

- large basin for water play
- pails, tubes, sponges, eggbeaters,
soap for water play
- sand
- pails and shovels for sand play
- magnifying glass
- plants

APPENDIX G

EQUIPMENT CONSIDERED RECOMMENDED FOR A DAY CARE CENTER BY PROFESSIONAL WORKERS IN CHILD DEVELOPMENT

Blockbuilding Area

- large cardboard boxes
- steering wheel on block
- set of signs
- oversized large wheeled vehicles
children can ride on
- wagon
- wheelbarrow
- ramps
- large piece of canvas or blanket

Creative Arts Area

- chairs
- stapler
- tapes
- wire
- tongue depressors
- pipe cleaners
- popsicle sticks
- chalk
- magic markers
- felt
- finger paint paper
- tissue
- brown or white wrapping paper
- modeling clay
- carpentry table
- vise
- saw
- assorted nails
- sandpaper
- drill
- screwdriver
- assorted screws
- spools
- pliers

Housekeeping Area

- dish towel and cloth
- sponge
- soap
- cleaning set (mop, broom, dustpan)

Housekeeping Area (continued)

- rocking chair
- wooden ironing board and iron
- doll high chair
- doll carriage
- doll bed (large enough for
children)
- blankets
- chest of drawers
- clothesline and clothespins
- costume jewelry
- handbags
- cash register

Large Muscle/Outdoor Area

- rocking boat
- small indoor slide- large slide
- climbing rope
- swings
- wagon
- tumbling mat
- punching bag
- keg, for rolling
- jumping boards
- bean bags

Library Area

- table
- carpet
- story characters for flannel
boards
- hand puppets
- posters and pictures
- tape recorder

Manipulative Toy and Table

Task Area

- attribute block set
- abacus
- pounding games
- threading set
- shape-sorting set

Manipulative Toy and Table Task Area (continued)

stack puzzles
 clothing set for zipping, lacing,
 snapping, and buttoning
 push and pull toys
 color cones
 nested blocks or barrel sets
 large dominoes
 beads, shoestrings
 classification set
 sequence cards
 opposite concepts

Music Area

assorted bells
 cymbals
 rattles
 rhythm sticks
 tambourine
 tone block
 triangle
 xylophone
 sandblocks
 scarves for dancing
 autoharp

Science Area

magnet
 iron filings
 stethoscope
 prism
 hand mirror
 scale
 balances and weights with seesaw
 aquarium
 terrarium
 transparent color paddles
 flashlight and batteries
 live animals (gerbils, mice, rabbits)
 fish
 outdoor thermometer

Science Area (continued)

indoor thermometer
 pulley
 rope
 seeds
 bulbs
 bottles
 cork

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