The Effect of Specialized Education and Job Experience on Early Childhood Teachers' Knowledge of Developmentally Appropriate Practice

by

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(ABSTRACT)

Early childhood teachers' (N=73) level of education, length of employment, number of content areas covered in child development courses taken, and supervised practical experience were examined as factors affecting their knowledge of developmentally appropriate practice. Background information concerning each teacher's education, employment, content areas covered in child development courses taken, and supervised practical experiences was gathered in the Teacher Information Report. Knowledge of developmentally appropriate practice was assessed by having each teacher listen to 12 audiotaped vignettes describing situations typical to teacher-child interactions in preschool classrooms. They were asked to determine if each vignette described appropriate or inappropriate practice.

A 3(level of education) x 3(length of employment)
factorial analysis of variance revealed a significant level of education effect on developmentally appropriate practice scores $F(2,2)=3.23$, $p < .05$. Post-hoc comparisons indicated that those teachers with formal degrees in the area of child development ($M=8.68$) scored significantly higher than those with other types of training ($M=7.62$). There was no significant length of employment effect on developmentally appropriate practice scores.

A $4 \times 3$ factorial analysis of variance yielded a significant effect for number of content areas covered $F(3,2)=6.18$, $p < .001$. Post-hoc comparisons indicated that participants who had covered 10 or more content areas ($M=8.91$) scored significantly higher than those who had covered fewer than 10 content areas ($M=7.10, 7.42, 7.75$).

A $4 \times 3$ factorial analysis of variance yielded a significant effect for number of content areas covered $F(3,2)=8.921$, $p < .01$, and an effect for supervised practical experience $F(3,2)=3.153$, $p < .05$. Tukey Multiple Comparisons Test indicated that of those
participants who had both student teaching and field work experience, those who had covered 10 or more content areas in child development scored significantly higher \( (M=9.00) \) than those who had covered fewer than 10 content areas. Of those participants who had covered 10 or more content areas, those with both student teaching and field work experience scored significantly higher on the assessment of developmentally appropriate practice \( (M=9.00) \) than did those who had no student teaching or field work experience \( (M=7.00) \). Implications for teacher training are discussed in the thesis.
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All the early childhood teachers' who participated in this study --- your willingness to help made this study possible.

"GREAT IS THY FAITHFULNESS, LORD UNTO ME."
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The rapid social and economic changes in this society in the last decades have led to changes in family structure and more women in the labor force than ever before. In 1955 only 18% of mothers with children under the age of 6 were employed outside the home (Office of the Assistant for Planning and Evaluation, HDEW, 1974). In 1977, 41% of mothers with children under six were employed outside the home (Hofferth, 1979). In 1980, 42% of women with children under the age of three were working (Waite, 1981). Currently, about half the women with children younger than the age of six are working and that number is expected to increase (National Association for the Education of Young Children, 1984b). Due to the steady increase in the number of dual career families, dual earner families and single parent families, the utilization and need for group care for young children has increased proportionally.

According to an extensive review of the day care literature by Belsky and Steinburg (1978), no
significant differences in cognitive, social, emotional and physical development have been found between children in day care and those cared for in the home. The findings of these studies must be interpreted with caution, however, because the majority of the day care programs under study were quality university based programs. Thus the findings cannot be generalized to be indicative of the effects of a lower quality day care environment on children's total development. Some studies have found that infants in a poor quality group care environment may form insecure attachment relationships with the teacher (Anderson, Nagle, Roberts & Smith, 1981). A study done by McCartney, Scarr, Phillips, Grajek & Schwarz in 1982 found that young children (36-60 months) in a poor quality group care environment have lower performance scores on adaptive language, intelligence, task orientation and sociability ratings than those in a high quality group care environment, as well as poor emotional adjustment.

Research on the effects of child care in group settings has focused on three basic aspects: the ingredients of care (Sheehan & Abbott, 1979); the
processes of care (Fagot, 1973; Howes, 1983; Vandell & Powers, 1983); and the outcome of care (Ruopp, Travers, Glantz & Coelen, 1979). The ingredients of care include factors related to the physical facilities, equipment, group-size and adult-child ratio. The processes of care include factors related to teacher/child interactions, teacher/parent interactions and child/child interactions. The outcomes of care are the overall effect group care has on the child (i.e., enhances children's self-respect, language development, social skills, or teaches cultural or religious values) and the family (i.e., improves the welfare of the family, enhances the parents sense of efficacy). Measurement of these outcomes requires assessment of change over time in the child and the family through repeated developmental testing, clinical observation and/or parental report (Ruopp, et al, 1979).

While equipment and facilities do enrich the physical environment, the teacher is the critical link between the child and the quality of care and education received by the child. "... A major determinant of program quality is the extent to which knowledge of
child development is applied in program practices -- the
degree to which the program is developmentally
appropriate" (Bredekamp, 1986, p.1). Developmentally
appropriate practice means that the teacher understands
the needs and interests of the child and prepares the
environment to enable the child to discover new
information and form new concepts through play and
exploration. The teacher supports but does not control
the child's play by allowing the child to assimilate new
information according to his/her own interest.

"The role of the Early Childhood staff
member is more complex than the role of the
traditional teacher. In addition to
instructing and facilitating learning, Early
Childhood personnel are expected to provide
child care, emotional support and guidance,
and to work with adults to a far greater
extent than teachers of older children."
(NAEYC, 1984b).

Thus, it is crucial that the individuals who teach and
care for young children be adequately trained for their
roles.
Early childhood teachers need a broad base of theoretical and practical knowledge of child development to prepare them to work with young children and their families. Two-, four- and five-year teacher education programs are designed to provide the "... time and resources necessary to provide an education leading to the development of knowledgeable, flexible, and creative people capable of meeting the present and anticipated needs of children and families" (NAEYC, 1982, p.xi).

The National Day Care Study (Ruopp, et al, 1979) cites teacher training as an important component in the quality of care given.

"Education/training in child-related fields such as developmental psychology, day care, early childhood education or special education is associated with distinctive patterns of caregiver and child behavior and with higher gains in test scores for children" (Ruopp, et al, 1979, p.98).

However, due to the lack of diversity in training and experience among the teachers surveyed, Ruopp, et al were unable to make definitive statements regarding
teacher effectiveness as related to training and experience.

The Guidelines for Early Childhood Teacher Education Programs (NAEYC, 1982) and Guidelines for Early Childhood Education Programs in Associate Degree Granting Institutions (NAEYC, 1985) have recommended that teacher training programs should provide theoretical knowledge and practical skills in child growth and development; early childhood professional courses; curriculum planning and evaluation; methods of child guidance and group management, knowledge about developmentally diverse children, parent/teacher relations and public policy issues, as well as supervised practical experience in working with young children.

Current child care and education literature recognizes the positive effects of formal teacher training and child-related job experience on teacher/child interactions. However, the backgrounds of teachers of young children differ greatly in the amount of formal education, in the amount of supervised practicum experience in working with young children and
in the amount of on-the-job experience they have received. Furthermore, types and levels of responsibilities the teachers have in the preschool classroom are not always dependent upon differences in training and experience. Thus, research is needed to examine the effects of specialized training and job experience on early childhood teachers' knowledge of developmentally appropriate practice. These data provide further information regarding the effects of different types of training and experience on teachers' understanding of developmentally appropriate practice and contributes to the promotion of quality care through teacher training.

The purpose of this study was to examine the relationship of early childhood teachers' training (i.e. education, supervised experience), and the amount of practical job experience in working with young children in group care settings on teachers' knowledge of appropriate and inappropriate classroom practices.

Research Questions

Are there any differences in teachers' knowledge of
developmentally appropriate practice as related to: (1) level of education, (2) type of academic degree, (3) content of early childhood teacher training, and (4) number of years of job experience in child-related positions?

Definition of Terms

For the purpose of this study, specific terms are defined as follows:

Young Children - children three-, four-, and five-years-of-age (36-71 months) in group care settings.

Child care center - "Any facility operated for the purpose of providing care, protection and guidance to a group of children separated from their parents or guardian during a part of the day only" (Chapter 10, Title 63.1 of the Code of Virginia).

Care - activities necessary to the provision of physical nurturance to young children, including the provision of meals, snacks, space and educational/play materials and minimum health and safety concerns.

Education - activities and experiences that are
necessary to stimulate young children to learn and develop physically, socially, emotionally and intellectually.

Teacher - an early childhood staff member who is employed to work with children in group settings serving three-, four- and five-year-old children (NAEYC, 1984b).

Early Childhood Teacher Assistant - a pre-professional with a high school diploma or equivalent but no specialized early childhood training who implements program activities under direct supervision of the early childhood teacher (NAEYC, 1984b).

Early Childhood Associate Teacher - a professional who has completed a system of competency evaluation such as the Child Development Association Credentialing Program or an associate degree in early childhood education or child development who independently implements program activities and may be responsible for the care and education of a group of children (NAEYC, 1984b).

Early Childhood Teacher - a professional who has completed a baccalaureate degree in early childhood
education or child development and is responsible for the care and education of a group of children (NAEYC, 1984b).

Early Childhood Specialist - a professional who has completed a baccalaureate degree in Early Childhood Education or Child Development and has at least three years full-time teaching experience with young children and/or advanced degree. Early Childhood Specialists supervise and train staff, design curriculum and/or administer programs (NAEYC, 1984b).

Appropriate practice - the concept of appropriate practice has two dimensions:

(1) age appropriateness - "... universal, predictable sequences of growth and change that occur in children during the first nine years of life. These predictable changes occur in all domains of development: physical, emotional, social, and cognitive. Knowledge of typical development of children within the age span served by the program provides a framework from which teachers prepare the learning environment and plan appropriate experiences" (Bredekamp, 1986, p.2).

(2) individual appropriateness - "Each child is a
unique person with an individual pattern and timing of
growth as well as individual personality, learning
style, and family background. Both the curriculum and
adults' interactions with children should be responsive
to individual differences" (Bredekamp, 1986, p.2).
Method

Subjects
Seventy-three teachers of three-, four-, and five-year-old children, who were employed in child care centers in Virginia, participated in this study. Some of these teachers were recruited while participating in an ongoing continuing education program for early childhood teachers in southwest Virginia. The remainder of the teachers were recruited from various licensed child care centers. The final sample and its description will be reported under the Results section.

Procedure

Instrumentation
An instrument consisting of two parts was developed for this study. The first part, Teacher Information Report, gathered data regarding the degree and content of the respondents' formal education/training and the child related job experience. The second part, a forced-choice questionnaire, Assessment of Developmentally Appropriate Practice, was used to assess the early childhood teachers' knowledge of developmentally
appropriate practice.

Teacher Information Report. The teachers reported their academic degrees, content of formal education/training, and child related job experience under the Teacher Information Report section of the questionnaire developed for the purpose of this study. The items included in this section were based on information adapted from the staff qualifications report described in Accreditation Criteria and Procedures for the National Academy of Early Childhood Programs (1984a), Guidelines for Early Childhood Education Programs in Associate Degree Granting Institutions (NAEYC, 1985) and Early Childhood Teacher Education Guidelines for Four- and Five-year Programs (NAEYC, 1982).

The Teacher Information Report was made up of four sections: types of job experience, level of formal education, content of formal education, and content of continuing education (See Appendix C). The first section of the Teacher Information Report requested information regarding the participants' present position and length of time in that position. Also requested were the
respondents' past positions of employment and length of time spent in each position.

The second section of the Teacher Information Report requested information on a teacher's formal education. Each participant was asked to check the highest level of education completed. The levels of education indicated were as follows: high school diploma, G. E. D., Child Development Associate Credential, Associate Degree in Early Childhood Education/Child Development, Baccalaureate Degree in Early Childhood Education, Baccalaureate Degree in Child Development, Masters degree in Early Childhood Education, Masters Degree in Child Development, and other (See Appendix C).

The third section of the Teacher Information Report requests information regarding the content of the participants' formal education. The participants were asked to check content areas covered in the courses they had taken. The academic areas and specific content were listed as follows: (1) General Education (English, math, science, social science, humanities); (2) Child Growth and Development/Early Childhood Profession
Content Areas (child growth and development, value issues, legal issues, advocacy, philosophy of early childhood education, psychological foundations, social foundations, ethical issues, staff relations, public policy, administration, family/community relations, state licensing requirements); (3) Curriculum Content Areas (planning, implementing, and evaluating appropriate content, selecting materials, creating learning environment, planning for special needs, curriculum models, observation and record taking, developmentally diverse children, child health, safety, and nutrition education); and (4) Supervised Practicum/Field Work (classroom observation, practicum/field work as a classroom assistant, student teaching or structured field work assuming the major responsibility for the full range of classroom duties). (See Appendix C)

The last section of the Teacher Information Report requested the teacher to report participation in continuing education and/or in-service training. The respondents were asked to indicate the content of continuing education and/or in-service training they had
received by checking the appropriate category. The content areas were listed as follows: child growth and development, assessment and evaluation of children, classroom management/discipline, play, curriculum methodology, and other. (See Appendix C)

**Assessment of knowledge of developmentally appropriate practice.** This part of the instrument was developed in the following manner. Fifteen hours of actual teacher-child interactions were videotaped at a university child development laboratory school. The videotapes included teacher-child interactions during various routine daily activities. The videotapes were viewed by the researcher and a panel of child development experts. Situations exemplifying preschool classroom interactions were selected as models used in the development of written vignettes to be used in assessing knowledge of developmentally appropriate practice.

Content validity was established by having a panel of five experts read the written vignettes and to determine whether each vignette represented appropriate or inappropriate practice. Twelve vignettes that
yielded a consensus of judgment among the experts became the measure for assessing teachers' knowledge of developmentally appropriate practice (See Appendix D).

The administration of this part of the instrument involved asking participants to listen to the 12 audiotaped vignettes one at a time, subjects were given them 10 seconds to respond to each episode. The teachers' response to each episode was the judgement of whether the interaction described demonstrated appropriate or inappropriate practice. Each correct response was given one (1) point while a score of zero was assigned to incorrect responses.

Collection of Data

Data were collected in two different types of settings: during a continuing education seminar for early childhood teachers, and in various child care centers. Child care and nursery school teachers who were attending a continuing education seminar on developmentally appropriate practices in early childhood programs were invited to participate in this study. Upon their arrival at the seminar, each participant was
given a copy of the instrument and asked to complete the Teacher Information Report. Upon completion of this part of the questionnaire the participants, under the instruction of the researcher, listened to each vignette and recorded their responses to each of the 12 vignette as indicative of whether the practice was appropriate or inappropriate. After they had listened to each vignette and recorded their responses the questionnaires were collected. The rest of the seminar was used to discuss developmentally appropriate practice as exemplified in the vignettes presented.

Additional subjects were recruited from direct contact with child care centers. Directors were asked either to allow the researcher to collect the data during a regular staff meeting, following the procedure described above; or to allow the staff to complete the questionnaire during one of their breaks from the classroom. For the latter option, a tape player with headphones, a cassette tape with complete instructions for completing the questionnaire, and copies of the questionnaire were left at centers for the staff to complete. The completed questionnaires were collected
by the researcher when all the staff had an opportunity to participate in the study.

Results

A description of the sample of 73 early childhood teachers by level of education; length of employment; number of content areas covered in child development courses taken; and supervised practical experience is presented in Table 1.

The distribution of teachers by level of education is as follows: High School/G. E. D. (n=21, 28.8%); Academic degree in Child Development/Early Childhood Education, including associate, bachelors and masters degrees (n=19, 26%); and other types of training, including nursing, business, sociology, graphics, etc. (n=33, 45.2%). The distribution of number of content areas covered in child development courses taken is as follows: no child development courses (n=10, 13.75); 1 to 3 content areas covered in child development courses taken (n=19, 26%); 4 to 9 content areas covered in child development courses taken (n=20, 27.4%); 10 to 12 content areas covered in child development courses taken.
(n=24, 32.9%). A description of participants supervised practical experiences is as follows: field work or student teaching (n=12, 16.4%); field work and student teaching (n=30, 41.1%); and no supervised experience (n=31, 42.5%). A description of participants by total length of employment is as follows: 0 to 2 years employment (n=27, 37.0%); 3 to 7 years employment (n=26, 35.6%); 8 to 20 years employment (n=20, 27.4%).

The possible range of scores on the Assessment of Developmentally Appropriate Practice was 0-12. The participants' total correct responses to the Assessment of Developmentally Appropriate Practice ranged from 5-11. Table 2 reports the frequencies of correct responses.
Means and standard deviations on level of education, length of employment, number of content areas covered in child development courses taken, and supervised experience are reported in Table 3.

A 3 (level of education) x 3 (length of employment) factorial analysis of variance revealed significant level of education effect on developmentally appropriate practice scores $F(2,2) = 3.23, p < .05$. Post-hoc comparisons indicated that those teachers with formal degrees in the area of child development/early childhood education ($\bar{X} = 8.68$) scored significantly higher than those with other types of training ($\bar{X} = 7.62$). No significant differences were found between those who had high school diplomas or GED ($\bar{X} = 7.81$) and those with formal degrees in the areas of child development/early childhood education ($\bar{X} = 8.68$). An independent $t$-test revealed significant differences, $t(19) = 2.04, p < .025$; between those participants with a high school diploma/G.E.D who had some form of vocational training in child development ($\bar{X} = 8.26$) and those participants with a high school diploma/G.E.D with no vocational training in child development ($\bar{X} = 6.83$). There was no significant
length of employment effect on developmentally appropriate practice scores.

A 4 (number of content areas covered in child development courses taken) x 3 (length of employment) factorial analysis of variance yielded a significant number of content areas covered in child development courses taken effect $F(3,2)=6.18$, $p < .001$ on developmentally appropriate practice scores. Post hoc comparisons indicated that participants who had covered 10 or more content areas in child development courses taken ($M=8.91$) scored significantly higher than those with no child development training ($M=7.10$), those who had covered 1–3 content areas in child development courses ($M=7.42$), and those who had covered 4–9 content areas in child development courses ($M=7.75$).

A 4 (number of content areas covered) x 3 (supervised practical experience) factorial analysis of variance yielded a significant interaction effect for supervised practical experience $F(3,2)=3.153$, $p < .05$; and an effect for number of content areas covered in child development courses taken $F(3,2)=8.921$, $p < .01$. The Tukey Multiple Comparisons Test indicated that those
participants who had both student teaching and field work experience and who had covered 10 or more content areas in child development courses taken scored significantly higher (M=9.00) on the assessment of developmentally appropriate practice than those who had student teaching and field work experience but had covered fewer than 10 content areas in child development courses taken (M=7.14, M=6.25); and than those who had covered 10 or more content areas in child development courses taken but had no field work or student teaching experience (M=7.00).

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**Discussion**

The results of this study indicate that the factors having the most effects on early childhood teachers' knowledge of developmentally appropriate practice are level of education and the number of content areas covered in child development courses
taken. Participants with degrees in child
development/early childhood education scored
significantly higher than those with academic degrees in
other fields of study. The results seem to indicate
that formal training and experience, associated with the
completion of a degree in child development/early
childhood education, provide the early childhood teacher
with the knowledge and skills necessary to recognize
what constitutes developmentally appropriate practice.
This finding supports the National Day Care Study
(Ruopp, et al., 1979) findings that an academic degree
in a child-related area of study is an important
component of quality care.

A lack of a significant difference in
developmentally appropriate practice scores between
participants with a high school diploma/G.R.D and those
with a formal degree in child development/early
childhood education caused some concern, and lead to
further examination of the data. According to the
information provided by the subjects 15 of the 21
participants in the high school/G.R.D group had
vocational training in child development while in high
school. Based on this information, an independent t-test was conducted to analyze the differences between the means of these two groups, the results indicated that those participants with vocational training in child development scored significantly higher on the assessment of developmentally appropriate practice than did those who did not have vocational child development training. This result further supports the findings that training and experience in child development/early childhood education have effects on teachers' knowledge of developmentally appropriate practice.

This result of this study also seems to indicate that formal education combined with supervised practical experience is more effective in helping teachers acquire knowledge regarding developmentally appropriate practice. Supervised practical experience gives the early childhood teacher the opportunity to apply child development principles in the classroom. Supervised practical experience also provides the structure for the teacher to be evaluated by a supervising child development professional on his/her performance, as well as getting feedback regarding developmentally
appropriate practice. Evaluations can provide the basis for the early childhood teacher to gain new skills in working appropriately with young children.

Supervised practical experience without formal child development training does not seem to have a significant effect on teachers' knowledge of developmentally appropriate practice. Furthermore, the results of this study show no significant effect for length of employment in the field of child care on teachers' knowledge of developmentally appropriate practice. These results seem to indicate that experience without formal training has little influence on teachers' knowledge of developmentally appropriate practice. This seems to suggest that experience without a knowledge base does not provide the framework for understanding what constitutes developmentally appropriate practice. This finding is contrary to Howes' (1982) finding that child related job experience is one condition of "high quality caregiving". There are three possible explanations for this conflict in findings. First, the instrument developed for this study measures teachers' knowledge of developmentally
appropriate practice; while Howes' used behavioral observations. The gap between knowledge and actual behaviors may explain the difference in findings. Secondly, Howes' study reported both experience and formal training as conditions of "high quality caregiving." However, the present study found an interaction between formal training and supervised experience. Thirdly, the differences in findings could be a function of the behaviors assessed.

The findings of this study have strong implications for making recommendations regarding staff qualifications required by minimum standards for licensing child care centers. Formal child development training and supervised practical experience are both critical to early childhood teachers' knowledge of developmentally appropriate practice. Therefore, it is imperative that early childhood teachers be required to combine child development training and supervised practical experience before taking on the responsibilities of a preschool classroom. If the purpose of minimum licensing standards is to insure the well-being of the children in child care centers, it is
necessary to promote the understanding and use of developmentally appropriate practice by requiring early childhood teachers to be adequately trained.

A list of content areas covered in child development/early childhood education courses with the number and percentages of teachers (grouped by developmentally appropriate practice scores) who had been exposed to each content area are presented in Table 4. In order to try to identify which content areas might be most critical in contributing to teachers' knowledge of developmentally appropriate practice, the number and percentages of participants who had covered each content area were examined. The data seem to show that the greatest discrepancies, between those in the high score and low score groups, lie in the number of people who had been exposed to the following content areas: planning and implementing content and methodology; creating, evaluating, and selecting materials; creating a learning environment; curriculum models; observing and recording behaviors. This seems to indicate that these content areas may be of crucial importance to be included in teacher training.
requirements. Plans have been made to continue data collection in order to recruit a sufficient number of subjects to better identify which content areas have statistically significant effects on teachers' knowledge of developmentally appropriate practice.

Further research is needed to determine whether teachers' knowledge of developmentally appropriate practice, as measured by this instrument, is reflected in their actual classroom interactions with young children. For example, observations of teachers' classroom behaviors could be done using the "Early Childhood Classroom Observation" used for center accreditation by the National Academy of Early Childhood Programs (NAEYC, 1984a).
Table 1
Description of the sample of early childhood teachers

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<tr>
<th>DESCRIPTION</th>
<th>n</th>
<th>%</th>
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<tr>
<td><strong>LEVEL OF EDUCATION:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School/GED</td>
<td>21</td>
<td>28.8</td>
</tr>
<tr>
<td>Formal Child Development Training</td>
<td>19</td>
<td>26.0</td>
</tr>
<tr>
<td>Other Training</td>
<td>33</td>
<td>45.2</td>
</tr>
<tr>
<td><strong>NUMBER OF CONTENT AREAS COVERED IN CHILD DEVELOPMENT COURSES TAKEN:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Content Areas Covered</td>
<td>10</td>
<td>13.7</td>
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<td>1-3 Content Areas Covered</td>
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<td>26.0</td>
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<td>20</td>
<td>27.4</td>
</tr>
<tr>
<td>10-12 Content Areas Covered</td>
<td>24</td>
<td>32.9</td>
</tr>
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<td><strong>SUPERVISED PRACTICAL EXPERIENCE:</strong></td>
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<tr>
<td>Field Work or Student Teaching</td>
<td>12</td>
<td>16.4</td>
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<td>Field Work and Student Teaching</td>
<td>30</td>
<td>41.1</td>
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<tr>
<td>No Supervised Experience</td>
<td>31</td>
<td>42.5</td>
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<td><strong>LENGTH OF EMPLOYMENT</strong></td>
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<td>0-2 Years Employment</td>
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<td>3-7 Years Employment</td>
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<td>35.6</td>
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<tr>
<td>8-20 Years Employment</td>
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<td>27.4</td>
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Table 2

Frequencies of Total Correct Responses

<table>
<thead>
<tr>
<th>NUMBER OF CORRECT RESPONSES</th>
<th>n</th>
<th>%</th>
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<tr>
<td>5</td>
<td>7</td>
<td>9.6</td>
</tr>
<tr>
<td>6</td>
<td>5</td>
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<td>17</td>
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Table 3

Means and standard deviations of developmentally appropriate practice scores by level of education, content areas covered in child development courses, length of employment, and supervised practical experience

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<td>Length of Employment:</td>
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<td>4-7 Years</td>
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<td>8-20 Years</td>
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<td>7.10</td>
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<tr>
<td>1-3 content areas covered</td>
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<tr>
<td>4-9 content areas covered</td>
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<tr>
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Content of child development training by total score

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<td>n</td>
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References


APPENDIX A

LITERATURE REVIEW
Effects of Day Care

Traditionally, child care researchers have concentrated their efforts in examining the developmental outcomes of children raised in day care situations. Day care is defined in the literature as "... care provided to a child by a person or persons outside the child's immediate family, either inside or outside the child's home." (Ruopp, Travers, Glantz & Coelen, 1979, p.xvi). Belsky and Steinburg (1978) in their review of the day care literature drew the following conclusions: (1) day care has neither positive or negative effect on the intellectual development (as measured by standardized tests) of most children, but appears to offset the typical decline in test scores over time of economically disadvantaged children; (2) day care appears to have no deleterious effects on the development of attachment relationships; and (3) day care children interact more with peers in both positive and negative ways than do home reared children. These conclusions were drawn with caution due to the methodological problems in most day care
research. Among the problems they cited were the restriction of studies to high-quality, center-based care; the confounding of differences in family background among children in various forms and qualities of day care; and the reliance on standardized tests of intellectual and social development as outcome measures. This body of research is basically confined to the comparison of high-quality, university based child care participants with children raised at home by one parent. (McCartney, Scarr, Phillips, Grajek & Schwarz, 1982).

Determinants of Quality Care

In order to look more closely at the different components of day care, research has typically focused on the ingredients of care (facilities, equipment, staff/child ratios, etc.) and the processes of care (teacher/child interactions, teacher/parent interactions and child/child interactions). Various studies indicate that differentiation of day care according to qualitative dimensions is important to the general consideration of the developmental outcomes in day care.

The development of attachment relationships in day care reared children was examined in a study by Anderson, et al (1981). It was hypothesized that the formation of bonds between child and caregiver as well as between child and parent is necessary for a child's subsequent emotional development, and that the physical quality of the center and the level of caregiver involvement would mediate the development of such bonds. The results of the study show that children do form attachment relationships with the teacher/caregiver. High level of caregiver involvement was most consistently associated with child behaviors indicative of attachment to substitute caregivers.

Vandell and Powers (1983) compared the free play behaviors of children in high, moderate and low quality centers. Significant differences were found in adult-child interactions. Children in high quality centers were more likely to interact with adults with respect to
positive behavior, positive vocalization, and total behavior than children in moderate or low quality centers. Children in low and moderate quality centers were significantly more likely to engage in solitary and unoccupied behavior than were children in high quality centers.

McCartney, et al (1982) examined the effects of the environmental differences among day care centers and found that many aspects of children's development are moderately to highly related to differences in their day care environments. Children at better quality centers score higher on measures of language development. Caregivers at higher quality centers rate their children as more sociable and considerate than do caregivers at lower quality centers. A critical measure of quality in this study was the amount and type of adult/child interaction, but the study failed to look at the influence of the caregivers' formal child-related training as a factor contributing to the quality of the caregiver/child interaction.

A study of caregiver behavior in center and home
day care found that caregivers with more experience were more likely to play with toddlers and less likely to ignore their requests. Center caregivers with more training were more likely to play, to mediate objects, express positive affect, and respond positively to toddlers' social bids; and were less likely to restrict toddlers' activity or to ignore toddlers' requests (Howes, 1983). Caregivers with higher levels of training and experience were more involved with the children in their care.

Components of Developmentally Appropriate Practice

The level of caregiver involvement with the children in his/her care consistently appears as an indicator of center quality and positive developmental outcomes in those children. "The developmental appropriateness of an early childhood program is most apparent in the interactions between adults and children." (Bredekamp, 1983, p. 9). According to the National Association for the Education of Young Children, a high quality early childhood program provides an environment that facilitates physical,
social, emotional and cognitive development of the child while responding to the needs of the family as well. An important determinant of program quality is the extent to which knowledge of child development is applied in the program (Bredekamp, 1983). Knowledge of child development can only be attained through formal child-related teacher training and child-related job experience. The literature continuously demonstrates that knowledge of child development is important to the quality of the teacher/child interaction. However, research continuously fails to examine the effects of varying levels of training and experience on teachers’ understanding of children’s basic socialization tasks, and utilizing developmentally appropriate practice in a preschool classroom.

Adult interactions with children are characterized by moving quietly among groups of children to communicate in a relaxed manner, sitting low or kneeling, and making eye contact with the children. Furthermore, with preschool children, the adult should respond immediately to their behavior in less physical
but more vocal manner. Adults' actions should always match their verbal messages (Bredekamp, 1983). Based on the knowledge of attachment theory and the children's need for contingent response on the part of the adult, a caregiver should be able to respond quickly and directly to children's needs, desires, and messages; by adapting their responses to the style and abilities of the individual child (Bell & Ainsworth, 1972; Greenspan & Greenspan, 1985).

According to the research literature on language development, caregivers should provide many varied opportunities for children to communicate (Cazden, 1981; Genishi, 1986). Children acquire language skills through hearing and using language; communication skills are developed from a desire to express needs, insights, and excitement; from a desire to solve problems; and through opportunities to engage in two way conversation with others (Bredekamp, 1983).

Recognizing that children learn from trial and error and that children's misconceptions reflect their developing thoughts, caregivers facilitate successful
completion of tasks by giving support, focused attention, physical proximity, and verbal encouragement (Elkind, 1986; Kamii, 1985; Piaget, 1950; Wellman, 1982). Adults can explore the problem with the child and when appropriate, encourage the child to try again or find alternative solutions to the problem.

All areas of the child care program are planned and conducted in a way that ensures that expectations of children are appropriate without any excessive demands being made on them. Caregivers need to be alert to the signs of stress in young children's behavior, and have a knowledge of stress-reducing activities and techniques. When children experience stress from other sources, caregivers may utilize developmentally appropriate techniques in helping children cope with stress. They may, for example, provide books, water play, body movement, music, and quiet times; and physically comfort and listen to the distressed child's concerns (Bredekamp, 1983.)

Caregivers facilitate the development of children's self-esteem. This can be done by responding to children
with respect, acceptance and comfort, regardless of the child's behavior (Coopersmith, 1975; Kuczynski, 1983; Musson & Eisenberg-bert, 1977; Rubin & Everett, 1982).

Caregivers are able to facilitate the development of self control by treating children with respect and using discipline techniques that are appropriate for young children (Kopp, 1982; Yarrow, Scott, & Waxler, 1973; Yarrow & Waxler, 1976). Appropriate discipline techniques include: setting clear, consistent, fair limits for classroom behavior; valuing mistakes as opportunities to learn, redirecting children's interests to activities that are more acceptable or appropriate; listening when children share their feelings and frustrations; guiding children to resolve conflicts, reminding children of rules and their rationale as needed (Bredekamp, 1983).

Studies examining caregiver interactions with preschool children consistently find that caregivers with more specialized training in child development, are more interactive, helpful, talkative, playful, positive, and affectionate with the children in their care and
those children are more involved, cooperative, and persistent (Clarke-Stewart, 1982; McCartney, et al, 1982; Vandell & Powers, 1983; Howes, 1983). The National Day Care Study (Ruopp, et al, 1979) found evidence to indicate that staff members' training in child-related fields was predictive of the following measures of caregiver competency: questioning children, engaging in instruction, responding to children's questions, praising children, comforting children. This study also indicated that children in classes led by caregivers with child related training were more cooperative, compliant, and showed less aimless wandering than did children in other classes and they showed larger gains on a measure of cognitive competency directly proportional to the percentage of staff in the classroom having child-related training.

Child-related training in general has been recognized in the literature as contributing positively to levels of caregiver involvement with children in the care setting. Further research is needed to specifically examine the relationship between levels
of caregiver training and child related job experience to the understanding and use of developmentally appropriate practice in the classroom. The purpose of this study will be to examine the effects of various levels of caregiver training and experience on the caregivers perceptions of appropriate practice for the preschool classroom. It is hypothesized that higher levels of child-related training and more child-related work experience will enable caregivers to differentiate appropriate/inappropriate classroom practices more efficiently than teachers with less child-related training and experience. It is also hypothesized that the effect of child-related job experience and child-related training interact to produce an overall perception of what is appropriate/inappropriate practice in the preschool classroom.
APPENDIX B

REFERENCES
References


Office of the Assistant for Planning and Evaluation.


APPENDIX C

QUESTIONNAIRE
TEACHER INFORMATION REPORT

What is your present position of employment?

- Early Childhood Teacher Assistant/Aid
- Early Childhood Teacher
- Early Childhood Teacher/Director
- Early Childhood Program Director
- Early Childhood Specialist

How long have you been employed at your present position?

Is your present place of employment licensed by the Virginia Department of Social Services?

List other Early Childhood positions you have held and length of time in each. (Please use the terminology designated above.)

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Check the highest level of education you have completed.

- High School Diploma
- G. E. D.
- Child Development Associate Credential
- Associate Degree in Early Childhood Education/Child Development
- Baccalaureate Degree in Early Childhood Education
- Baccalaureate Degree in Child Development
- Masters Degree in Early Childhood Education
- Masters Degree in Child Development
- Other (Specify): ________________________________

The following is a list of content areas. Put a check by each of the areas you have covered in the courses you have taken.

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<td>Understanding a variety of curriculum models.</td>
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<td>Observing and recording behaviors.</td>
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<td>Understanding developmentally diverse children.</td>
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<tr>
<td>Child Health, safety, and nutrition education.</td>
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SUPERVISED PRACTICUM AND FIELD WORK

- Classroom observation
- Field work or practicum experience as a classroom assistant
- Student teaching or structured field work experience assuming the major responsibility for the full range of teaching duties.

Check the additional continuing education or in-service training you completed in:

- Classroom Management/Discipline
- Child Growth and Development
- Assessment and evaluation of children
- Play
- Curriculum areas
- Other (Specify):

ASSessment of Developmentally Appropriate Practice

Circle "A" to indicate appropriate practice. Circle "I" to indicate inappropriate practice.

1. . . . 1 A
2. . . . 1 A
3. . . . 1 A
4. . . . 1 A
5. . . . 1 A
6. . . . 1 A
7. . . . 1 A
8. . . . 1 A
9. . . . 1 A
10. . . . 1 A
11. . . . 1 A
12. . . . 1 A
APPENDIX D

VIGNETTES
Vignette 1

INAPPROPRIATE

Beth, a four year old, attends a half-day preschool program. She is experimenting with squeeze paint for the first time. Her piece of paper is a puddle of blue paint.

The teacher comes to the paint table. She leans over Beth's shoulder and says, "Oh Beth, that's a lot of paint. Too much paint is hard to control. Let's throw this paper away. You could make another one."

Beth agrees and the teacher throws the paint soaked paper in the trash can. She returns to the table and gives Beth a clean piece of paper.
Vignette 2

INAPPROPRIATE

John and Amy are four years old. They both love to ride the tricycles at the preschool they attend. When it is time to go outside, they race to the tricycle shed. Only one tricycle is left. They argue over the tricycle. The argument quickly turns to pushing and shoving.

The teacher walks over to where John and Amy are fighting. She moves the tricycle away from the two children and states, "When you can decide how to share the tricycle, you may have it back."
Vignette 3

INAPPROPRIATE

The teacher of a group of three-year-olds has set pictures on a table for the children to look at and create stories. The teacher writes the stories down as the children tell them to her.

Tommy has just finished telling his story to the teacher. The teacher hands it to him so he can write his name on it.

Katie approaches the table. The teacher asks Katie if she would like to choose a picture and create a story. Katie nods and the teacher gets ready to write her story.

Katie says, "I want a pencil. I want to write my name on the paper."

The teacher responds, "You can write your name after you tell me the story."

Katie walks away from the table and the teacher turns back to see what Tommy is doing.
Vignette 4

APPROPRIATE

Several children are playing in the block corner of the classroom. The longer they play, the more active and the more destructive their play becomes.

The teacher enters the block corner and asks them all to sit down and talk with her.

"Look over there at the things in the corner. What happens when we run around inside?"

One of the children responds, "Everything gets knocked over."

The teacher agrees, "Everything does get knocked down. Since it is such a pretty day outside, I am sure we will have plenty of time to run around out there. Inside we need to play more gently so that things we build don't get torn down."
Vignette 5

INAPPROPRIATE

Carrie and Alice are both four years old. They are wrestling on the hill on the playground. Carrie pushes Alice down the hill. Alice rolls down the hill and laughs and laughs. She wants to roll down again.

The teacher speaks firmly to Carrie, "Carrie, pushing could hurt Alice. You need to find another way to play on the hill."
Vignette 6

APPROPRIATE

Andy is four years old. He is sitting on the floor playing with a xylophone. His teacher is sitting close by watching Andy and the other children.

Susan and Emily come over and try to get Andy to play jail with them. Andy ignores them and continues playing. The girls persist in trying to get him to play. Andy continues to ignore them. Finally, they take Andy by the arms and try to drag him off.

Andy refuses to go and the girls wander off.

Andy says to a friend playing nearby, "Make them not to get me, Frankie, O. K. ?"

The teacher continues to sit and watch the children play.
Vignette 7

APPROPRIATE

A group of four-year-old children are making rolls for their afternoon snack. They are busily rolling the dough into balls.

The teacher is working with the children on the rolls.

He asks, "How many rolls do we need to make?"

Sandi quickly begins counting the people in the classroom. She counts 11 people. The teacher suggests that they count again. Together they count 13.

The teacher asks, "Do we have enough rolls for everyone?" Eddie and Sandi begin counting the rolls. They count 12.

The teacher asks, "How many more do we need?"

Sandi rolls one more roll and places it in the pan. She states proudly, "That's all we need."
Vignette 8

INAPPROPRIATE

Marcie, a teacher of three-year-olds, has pieces of yarn for the children to use to string macaroni.

Christie comes to the table where Marcie is sitting. Marcie hands her a string and shows her how to put the string through the hole in the macaroni. Christie watches attentively.

Marcie hands Christie the string and a few pieces of macaroni and says, "Can you do that Christie, or is it too hard?"
Vignette 9

INAPPROPRIATE

It's January and a group of four-year-olds are getting ready to go outside. They all need to wear coats, snow pants, boots, hats and mittens. Jason, who tends to dawdle, slowly finishes his snack and wanders aimlessly around the room. A teacher reminds him that it is time to get ready to go outside. He moves to his "cubbie" but continues to dawdle.

The teacher says, "Jason, you need to get ready to go outside. The other children are already out."

The teacher continually urges Jason to hurry until he finishes dressing himself for outside.
Vignette 10

APPROPRIATE

A special cooking activity has been set up in the classroom for a group of three-year-old children. The teacher plans for them to make pancakes. Six children are immediately interested and gather round the cooking table.

The teacher places a large poster board with pictures on it to illustrate the measuring cups, spoons, and ingredients used to make pancakes. She talks briefly with the children about the different size cups and spoons and what they are used for. She explains that the card that tells them how to make pancakes is called a "recipe".

The children take turns adding ingredients to the pancakes, talking about the quantities of ingredients, the changes each ingredient makes in the texture, color and even smell of the batter, and the changes that occur when the batter is placed on the hot griddle.
Vignette 11
INAPPROPRIATE

Four three-year-old children are working with legos at a round table. The teacher sits and talks with them as they work. While she is involved in conversation with one child, two others begin to fight over a piece that they both want to use. As the disagreement continues, the two children begin hitting each other.

When the teacher realizes the situation she looks lovingly at the two children and says, "Come on now, let's be nice at the lego table. Let's be sweet to each other."

She turns back to the other children and continues talking with them.
Vignette 12

APPROPRIATE

Annie is busy trying to work a puzzle. She is quickly becoming frustrated with the task.

A teacher who is sitting nearby says, "That piece you have has part of the mailbox on it. Do you see a piece that has the other part of the mailbox on it?"

Annie searches and finds the piece that fits the piece she has.

Her teacher says, "Yeah, Annie! Now let's find a piece that fits onto this part of the road."
VITA

Margaret Hardy Snider was born in Danville, Virginia on December 4, 1960. She graduated from Asbury College in Wilmore, Kentucky with a Bachelor of Arts degree in Christian Education. She founded The A.R.K. Christian Child Care Center in Chatham, Virginia and directed the center for 3 years. In September, 1986 Margaret began her graduate studies at Virginia Polytechnic Institute and State University in Family and Child Development. During this period of graduate work, Margaret taught the combo and the 4-year-old class at the Child Development Laboratory of Virginia Polytechnic Institute.

Margaret Hardy Snider