

## DOCUMENT RESUME

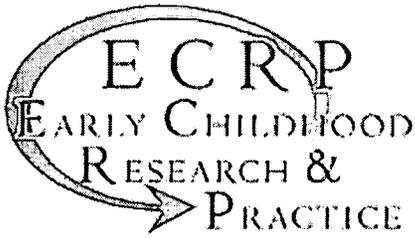
ED 471 903

PS 030 922

AUTHOR McMullen, Mary Benson; Alat, Kazim  
TITLE Education Matters in the Nurturing of the Beliefs of  
Preschool Caregivers and Teachers.  
PUB DATE 2002-00-00  
NOTE 17p.; In: Early Childhood Research & Practice: An Internet  
Journal on the Development, Care, and Education of Young  
Children, Fall 2002; see PS 030 921.  
AVAILABLE FROM For full text: <http://ecrp.uiuc.edu/v4n2/mcmullen.html>.  
PUB TYPE Journal Articles (080) -- Reports - Research (143)  
JOURNAL CIT Early Childhood Research & Practice; v4 n2 Fall 2002  
EDRS PRICE EDRS Price MF01/PC01 Plus Postage.  
DESCRIPTORS Bachelors Degrees; \*Beliefs; Caregiver Attitudes; \*Child  
Caregivers; \*Developmentally Appropriate Practices;  
\*Educational Attainment; Outcomes of Education; \*Preschool  
Teachers; Teacher Attitudes

## ABSTRACT

This study examined the relationship between educational background and the philosophical orientation of early childhood educators who worked as caregivers and teachers of preschoolers, ages 3 to 6 years, in one midwestern state (Indiana) in the United States. Specifically, the highest level of education attained by the early childhood professionals and their educational background (whether specific to working with young children or not) were compared to their self-reported beliefs about best practice with young children, using developmentally appropriate practices (DAP) as the philosophy for comparison. A comparison of factor analyses from this study and from studies conducted by Charlesworth and colleagues in 1991 and 1993 indicate clear similarities. A significant, positive correlation was found between level of education and scores for self-reported DAP beliefs. Results from 2 x 3 ANOVAs of the three factors that emerged from these data indicate that professionals with a bachelor's degree or higher more strongly adopted DAP as a philosophy overall than colleagues with less education, whereas coursework specific to working with young children was found to be significant only in the case of beliefs related to child-initiated learning. Thus, in general, participants with 4 years of college or more, even if in an unrelated field, held stronger DAP beliefs than those with less education, even if that education was directly related to working with young children. The article suggests that more research needs to be done to examine whether a 4-year degree may be most desirable in terms of ensuring better-qualified preschool teachers. The article also discusses the implications of this finding for policy and advocacy in the field of early childhood education. (Author/HTH)



Fall 2002  
Volume 4 Number 2

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ED 471 903

# Education Matters in the Nurturing of the Beliefs of Preschool Caregivers and Teachers

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## Abstract

This study examined the relationship between educational background and the philosophical orientation of early childhood educators who worked as caregivers and teachers of preschoolers, ages 3 to 6 years, in one midwestern state (Indiana) in the United States. Specifically, the highest level of education attained by the early childhood professionals and their educational background (whether specific to working with young children or not) were compared to their self-reported beliefs about best practice with young children, using developmentally appropriate practices (DAP) as the philosophy for comparison. A comparison of factor analyses from this study and from studies conducted by Charlesworth and colleagues in 1991 and 1993 indicate clear similarities. A significant, positive correlation was found between level of education and self-reported DAP beliefs scores, and results from 2 x 3 ANOVAs of the three factors that emerged from these data indicate that professionals with a bachelor's degree or higher more strongly adopted DAP as a philosophy overall than colleagues with less education, whereas coursework specific to working with young children was found to be significant only in the case of beliefs related to child-initiated learning. Thus, in general, participants with 4 years of college or more, even if in an unrelated field, held stronger DAP beliefs than those with less education, even if that education was directly related to working with young children. The article suggests that more research needs to be done to examine whether a 4-year degree may be most desirable in terms of ensuring better-qualified preschool teachers. The article also discusses the implications of this finding for policy and advocacy in the field of early childhood education.

## Introduction

Early childhood education professionals in the United States possess diverse qualifications--a diversity that is considered a distinctive, if not celebrated, feature of the profession (Hyson, 2001; Saluja, Early, & Clifford, 2001; Wise & Leibbrand, 1993). Does this diversity in the background and preparedness of early childhood caregivers and teachers matter? Current research confirms findings from the past two decades that teacher qualifications significantly affect the quality of care and education provided to young children (Bowman, Donovan, & Burns, 2001; Lazar, Darlington, Murray, Royce, & Snipper, 1982; Oden, Schweinhart, & Weikart, 2000; Phillips, Mekos, Scarr, McCartney, & Abbott-Shim, 2000; Schweinhart & Weikart, 1999; Whitebook, Sakai, Gerber, & Howes, 2001) and that higher qualifications in preschool children's caregivers and teachers contribute to more positive short- and long-term outcomes for these children (Kontos & Wilcox-Herzog, 1997, 2001; Whitebook, Howes, & Phillips, 1989).

Despite all of this evidence from research about the importance of the qualifications of the professionals who work with young children, currently, at any given preschool or child care program at any given

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location in the United States, we are still likely to find the following extremes in the caregivers and teachers:

- Some have earned college or graduate degrees, while others possess a high school diploma or its equivalent.
- Some have studied early childhood education or child development, while others have not.
- Some have a great deal of experience working with young children, while others do not.

Another aspect of this reality is that preschool caregivers and teachers with or without education beyond high school, with or without specialized coursework or training for working with young children, and with or without experience in the field tend to be compensated similarly and to be recognized as equals among early childhood professionals (see, e.g., Krajec, Bloom, Talan, & Clark, 2001). The diversity of qualifications among early childhood professionals may negatively affect the quality of care and education received by children, the working conditions of professional staff, and the way that early childhood professionals are perceived in our culture.

At the same time that we tolerate such variation in the qualifications of our professional workforce, there is much agreement among early childhood scholars and practitioners about what content knowledge in preservice and inservice training and education is "best" for our caregivers and teachers, at least philosophically. There is general acceptance that preschool curricula and environments built solidly upon the principles of developmentally appropriate practices (DAP) ensure high quality for young children, and thus, currently, the values related to DAP as a philosophy (Bredekamp, 1987; Bredekamp & Copple, 1997) permeate most 2- and 4-year undergraduate early childhood education and child development professional preparation programs in the United States (Dunn & Kontos, 1997). In fact, DAP philosophy is the very foundation upon which the Child Development Associate's (CDA) credentialing courses are built.

Developmentally appropriate practice is not without its critics, however. Whereas some of the profession's leaders such as Charlesworth (1998) assert that, "DAP is for everyone," others argue persuasively that, despite its emphasis on cultural appropriateness, DAP is not "appropriate" for all children in the United States (see, e.g., Cannella, 1997; Swadener & Kessler, 1991; Mallory & New, 1994; O'Brien, 2000). Some of the critics assert, for instance, that multicultural education that relies simply upon the cultural appropriateness described in the 1997 DAP philosophy statement, or even as expanded in so-called DCAP (developmentally and culturally appropriate practices), reinforces stereotyping, does not acknowledge the unique capabilities of individual children, and, ultimately, fails to promote healthy self-identity in children. In particular, the harshest critics of DAP point out that it is a philosophy developed by predominately White, middle- to upper-middle-class people of Western European descent, and that, as such, it favors children from parents within the already privileged classes, thus maintaining their positions of power within U.S. culture.

However, there are no definitive answers and too little evidence to date from the research about how much and what kind of education most fully prepares early childhood educators to work in this field. There have been, however, several notable and theoretically sound efforts to suggest the nature of, and the direction in which we should head, in the restructuring and design of our preservice and inservice professional development programs (see, e.g., Horm-Wingerd & Hyson, 2000).

Thus, admittedly, we still have much to learn and much more to discuss as a field about what teaching beliefs and practices (DAP versus other innovative practices versus more traditional methods, etc.) lead to optimal outcomes for young children, information that would have huge implications for recommended preservice and inservice education of caregivers and teachers. There is, however, another fundamental unknown for teacher educators and all those who prepare or train preservice and inservice teachers: we do not clearly understand the mechanism involved in the adoption of and then the transmission of beliefs about practices into actual classroom behaviors. This process is very complicated and as yet not fully understood (see McMullen, 1997, 1998). We cannot claim with confidence, for instance, that specialized professional development, in which preservice and inservice professionals have been steeped in DAP, ensures that caregivers and teachers will internalize these beliefs, and that their beliefs then become principles upon which they build their practice, design their learning environments, implement curricula,

and assess student learning and development.

We have, however, made progress in identifying many factors that have been found to influence the philosophical beliefs adopted by caregivers and teachers (Buchanan, Burts, Bidner, White, & Charlesworth, 1998; Hao, 2000; McMullen, 1999). Educational background is one such mediator of beliefs in early childhood that has been identified in the research and should be studied more closely because it can influence policy, teacher education reform, and advocacy initiatives. Educational background, in this context, refers to both the level of overall education and the type of coursework or content covered during that education. Some studies in the literature conclude that the overall level of education attained is the most significant educational background factor in the adoption of a DAP philosophy (Kontos & Wilcox-Herzog, 2001; Morgan et al., 1994). In other studies, it is not the level but the type of education that matters most (see, e.g., Cassidy, Buell, Pugh-Hoese, & Russell, 1995); teachers who have taken coursework or engaged in training specific to the acquisition of the knowledge and skills believed to be connected to working effectively with young children have been found to engage in more behaviors associated with a DAP philosophy (Howes, 1983; Scarr, Eisenberg, & Deater-Deckard, 1994; Snider & Fu, 1990).

In this study, the researchers examined the relationship between educational background and the philosophical orientation of early childhood educators who worked as caregivers and teachers of preschoolers, ages 3 to 6 years, in one midwestern state in the United States. Specifically, the highest level of education attained and the type of educational preparation (whether specific to working with young children or not) were compared to self-reported beliefs about practice, using developmentally appropriate practices (DAP) as the philosophy for comparison. For the purpose of this study, the term "beliefs" was operationally defined to refer to the self-reported working philosophies or theories of practice held by the practitioners whom the researchers examined; these beliefs were examined as they related to statements generated from the original DAP position paper (Bredekamp, 1987). The hypothesis tested was that the self-reported beliefs of early childhood education (ECE) practitioners are different in terms of the level of overall education achieved and the type of educational preparation that they have had.

## Method

### Sample

Participants were 151 early childhood caregivers and teachers who worked with 3- to 6-year-old children in a variety of early childhood settings, including family child care homes, child care centers, Head Start centers, registered ministries connected with churches and synagogues, preschools connected to elementary school programs, and Montessori preschool programs. The participants had worked in the field for an average of 8.34 years ( $SD = 7.88$ ; range  $\leq 1$  to 40 years). In terms of experience in ECE settings, 55 (36.4%) were in the early years of their careers (0 to 3 years), 76 (50.3%) were in the middle years of their careers (4 to 14 years), and 20 (13.2%) were in the later years of their careers (more than 15 years).

As can be seen in Table 1, for statistical purposes, the sample was divided into three categories based upon whether participants' highest level of education was, as follows: a high school diploma, GED, or CDA; a bachelor's degree; or a graduate degree. Twenty-nine percent of the participants had achieved the lowest level of education, 29% had four years of college, and 32% had graduate degrees.

The participants in this study all indicated that they spent a significant portion of every workday in the direct, hands-on care or education of young children. Some, however, indicated that they also had part-time administrative duties, for example, as program directors, office managers, or teaching-team leaders.

**Table 1**  
**Demographic Characteristics of Participants ( $N = 151$ )**

Specialized Educational Preparation

Highest Degree	ECE		Non-ECE		Total	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
HS/GED/CDA/Associate's degree	30	19.9%	14	9.3%	44	29.1%
Bachelor's degree	17	11.3%	31	20.5%	48	31.8%
Graduate degree	28	18.5%	31	20.5%	59	39.1%
Total	75	49.7%	76	50.3%	151	100%

## Measures

The questionnaire packet sent to each respondent included a demographic survey from which data were gathered on each respondent's current position (age group of the children with whom they work, job title, whether they do any administrative work in addition to teaching, etc.), highest level of education achieved, type of coursework in their educational background, years of experience, and the context of their work setting (type of setting and program, whether full- or part-time, public or private, etc.). The questionnaire also included the Teacher Belief Scale (TBS) developed by Charlesworth et al. (1991), used in this study to measure the strength of the adoption of developmentally appropriate practices (DAP) as a philosophy of practice in the care and education of young children. The TBS is a widely used and popular instrument with early childhood researchers. The TBS is based upon DAP as outlined in the first National Association for the Education of Young Children (NAEYC) policy statement (Bredekamp, 1987), a statement that is familiar to most readers of this journal. The validity of the instrument was established by Charlesworth et al. (1991; 1993) in a series of observational studies used to confirm practitioners' responses to factors that were identified using the TBS. High congruence was found between the factors and classroom observation in 3 out of 4 teachers examined in the 1991 study and 19 out of 20 teachers examined in the 1993 study. This factorial validity of the TBS was assessed using factor analysis and correlational analysis in which the relationship between practitioners' perceptions of their own beliefs and actual, observable practices was explored. [See Charlesworth et al. (1991; 1993) for more complete information on the validity testing.]

Each TBS item is a statement that the respondent rates on a 5-point Likert scale from "Not Important at All" (ranked as 1) to "Extremely Important" (ranked as 5). Specifically, respondents were asked to indicate how important they believed the practice described in each statement was to them in terms of their own caregiving and teaching of 3- to 6-year-old children. For example, in response to item #22, "It is \_\_\_\_\_ for children to be instructed in recognizing the single letters of the alphabet, isolated from words," the respondents indicated whether they thought this statement was "Not at All Important," "Quite Unimportant," "Fairly Important," "Very Important," or "Extremely Important."

## Procedures

The 151 preschool caregivers and teachers in this study were a subsample of a larger group of 440 early childhood professionals; the remaining 289 members of the complete sample included kindergarten teachers, infant/toddler caregivers, full-time administrators, college instructors, consultants, and students studying early childhood or child development, all of whom identified themselves as early childhood professionals. The population groups targeted for this study were those preschool caregivers and teachers (practitioners who worked daily, directly with children ages 3 to 6 years) who were members of or who attended the professional development activities provided by the state's predominant early childhood professional organization, the Indiana Association for the Education of Young Children (IAEYC). The IAEYC is an affiliate group of the national organization that published the DAP policy statement(s) upon which the research questionnaire was based; therefore, it was anticipated that the sample would be skewed toward a stronger DAP orientation compared with the general population of all preschool caregivers and teachers in the state.

The complete sample was solicited in two ways: (1) through a mailing of 500 questionnaires to randomly selected members of the IAEYC (73% return rate) and (2) two months later, through insertion of the survey instrument packet in 500 randomly selected program guides out of 3000 total that were distributed

on-site at the organization's annual state early childhood professional development conference (15% return rate). Conferees who received a questionnaire in their conference materials were strongly cautioned not to complete a survey if they had already done so as part of the recent random mailing to the professional membership.

## Results

Before comparing groups based upon the independent variables, the researchers tried to determine if there was a relationship among all of the variables of study. As shown in Table 2, Pearson correlation analysis was performed to determine whether there were any significant relationships among the study variables--specialized educational preparation, highest degree attained, and the overall level of adoption of developmentally appropriate practices as a philosophical belief in caregiving and teaching (total DAP scores on the TBS). Results from the correlation analysis reveal a significant correlation between highest degree obtained and DAP scores ( $r = .39, N = 151, p < .001$ ).

**Table 2**  
**Intercorrelations for Scores on Specialized Educational Preparation, Highest Degree, and Total TBS Scores**  
**(Strength of Self-Reported DAP Beliefs)**

	1. Specialized educational preparation	2. Highest degree	3. Total TBS scores (DAP beliefs)
1. Specialized educational preparation	-		
2. Highest degree	.15	-	
3. Total TBS scores (DAP beliefs)	-.08	.39*	-

\* $p < .01$ .

### Differences between Groups

Data were analyzed using 2 x 3 (Specialized Educational Preparation x Highest Degree) two-way between subjects ANOVA. Prior to conducting the ANOVA, homogeneity of variances was tested because of the unequal  $n$  in each cell. Levene's test revealed that the equal variances assumption of the ANOVA was not met ( $F(5,145) = 7.86, p < .001$ ). Therefore, dependent variable scores (i.e., self-reported belief scores) were square-root transformed before the ANOVA was performed. Results indicated that there were significant main effects for specialized educational preparation ( $F(1,145) = 4.32, p < .05$ ) and highest educational degree ( $F(2,145) = 15.62, p < .001$ ) on overall DAP scores from the TBS instrument. There was no significant interaction effect between the educational background and the highest degree attained on the DAP scores ( $F(2,145) = 1.58, ns$ ).

The first effect shows that specialized educational preparation had a significant effect on participants' self-reported DAP beliefs. Although this effect was found to be significant, the effect was relatively weak ( $p = .044, \eta^2 = .28$ ). For further investigation, we compared two educational preparation background groups (those with specialized educational preparation in ECE vs. non-ECE) using a  $t$ -test. Results indicated that there was no significant difference between the two groups in terms of mean scores. However, teachers with ECE backgrounds had relatively higher DAP scores ( $M = 163.43, SD = 12.38$ ) than teachers with non-ECE backgrounds ( $M = 161.22, SD = 13.41$ ).

The second effect indicates that there was a difference in DAP scores that was significantly related to participants' highest educational degree. As shown in Table 3, three educational attainment levels were tested: Level 1. High School/GED/CDA/Associate's Degree; Level 2. Bachelor's Degree; and Level 3. Graduate Degree. The post-hoc analysis showed that teachers with less education had significantly lower

DAP scores ( $M = 154.41$ ,  $SD = 15.78$ ) than teachers with bachelor's degrees ( $M = 163.52$ ,  $SD = 10.35$ ) and graduate degrees ( $M = 167.24$ ,  $SD = 11.00$ ). Means and standard deviations for total TBS scores can be seen in Table 3.

**Table 3**  
**Means and Standard Deviations for Total TBS Scores**

	Specialized Educational Preparation						Total		
	ECE			Non-ECE			<i>n</i>	<i>M</i>	<i>SD</i>
Highest Degree	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>			
HS/GED/CDA/Associate's degree	30	156.07	13.10	14	150.86	20.53	44	154.41	15.78
Bachelor's degree	17	163.12	10.11	31	163.74	10.63	48	163.52	10.34
Graduate degree	28	171.50	6.90	31	163.39	12.59	59	167.24	11.00

### Factor Analysis of the Teacher Beliefs Scale

The results for the analysis of the TBS instrument of DAP scores showed means for the items that ranged from 3.42 to 4.93 (average  $SD = .35$ ). Initial analysis revealed seven factors, which explained 58.18% of the variance. Because the last three items loaded with only one item each and with relatively high item loadings (.84, .80, -.68, respectively), these items were removed from further analyses. The principal components analysis revealed four factors with eigenvalues greater than 1, accounting for 47.72% of the item variance, which, when rotated (varimax) to simple structure, yielded moderate to high item loadings (ranging from .38 to .78) on the designated factors. Of these factors, Factor IV, composed of only two items, was removed after reliability testing because of its relatively low alpha (.30). The factors that remained were named as follows: Factor I. Teacher-Directed/Teacher-Controlled Activities and Materials; Factor II. Child/Individual-Initiated Learning; and Factor III. Child-Centered Literacy Activities. Factor reliability was assessed by Cronbach's alpha. Moderate levels of internal consistency were obtained from items comprising these three factors (.87, .87, and .73, respectively).

Factor structure and related statistics can be seen in Table 4. Table 5 displays a comparison of the factor analysis results from this study with those obtained by Charlesworth et al. (1991; 1993). Although factor names differ across the studies, factor content is nearly identical; that is, Factor I (Teacher-Directed/Teacher-Control) in this study is almost a combination of Factor II and Factor IV in Charlesworth et al. (1991) and Factor I and VI in Charlesworth et al. (1993).

**Table 4**  
**Factor Structure, Eigenvalues, Cronbach's Alpha, Means, and Standard Deviation for the Teacher Beliefs Scale**

	Teacher-Directed/Teacher-Control	Child/Individual-Initiated Learning	Child-Centered Literacy Activities	Item	
	I	II	III	<i>M</i>	<i>SD</i>
I. Teacher-Directed/Teacher-Control					
13 (Workbooks & ditto sheets)	.78			4.80	.55
15 (Basal reader)	.78			4.54	.95
14 (Flash cards)	.76			4.43	1.00
3 (Evaluation by workbooks)	.73			4.73	.63
23 (Letters on lines)	.70			4.69	.70
16 (Whole group activity)	.66			4.26	1.05
1 (Standardized group tests)	.64			4.49	.95

10 (Working silently and alone)	.61	4.71	.69
21 (Letters of the alphabet)	.56	3.87	1.32
19 (Punishment)	.55	4.37	.83
22 (Colors in lines)	.54	4.62	.78
31 (Kindergarten reading emphasis)	.53	3.77	1.60
18 (Teacher authority)	.44	4.03	1.20
<b>II. Child/Individual-Initiated Learning</b>			
8 (Teacher-selected activities)	.77	4.69	.68
4 (Individual differences in interests)	.76	4.58	.72
5 (Individual differences in development)	.72	4.74	.57
11 (Active exploration)	.70	4.88	.41
12 (Learning through interaction)	.63	4.77	.54
30 (Social skills)	.62	4.86	.44
28 (Child/adult interaction)	.60	4.68	.64
7 (Self esteem)	.57	4.78	.58
9 (Child selection of activities)	.54	4.39	.90
33 (Experiences spread over time)	.48	4.67	.57
2 (Observation)	.46	4.75	.52
17 (Teacher as facilitator)	.46	4.62	.80
<b>III. Child-Centered Literacy Activities</b>			
25 (Child dictates story)	.69	4.13	1.12
26 (Functional print)	.68	4.23	1.13
29 (Invented spelling)	.66	4.21	1.19
32 (Integrated curriculum/math)	.58	4.50	.79
6 (Curriculum as separate subjects)	.42	4.63	.85
27 (Dramatic play)	.38	4.78	.49
Eigenvalue	8.64	4.71	1.96
Cronbach's alpha (Whole Scale: .87)	.87	.87	.73

**Table 5**  
**Comparison of Three Studies' Factor Structure for the Teacher Beliefs Scale\***

Current Study	Charlesworth et al., 1991	Charlesworth et al., 1993
I. Teacher-Directed/Teacher-Control	II. Developmentally Inappropriate	I. Inappropriate Activities & Materials
Workbooks & ditto sheets <input type="radio"/>	Workbooks <input type="radio"/>	Basal <input type="radio"/>
Basal reader <input type="radio"/>	Evaluation by workbooks <input type="radio"/>	Workbooks/ditto sheets <input type="radio"/>
Flash cards <input type="radio"/>	Alphabet <input type="radio"/>	Flash cards <input type="radio"/>
Evaluation by workbooks <input type="radio"/>	Flash cards <input type="radio"/>	Print letters <input type="radio"/>
Letters on lines <input type="radio"/>	Punishment <input type="radio"/>	Evaluation by workbooks & worksheets <input type="radio"/>
Whole group activity <input type="radio"/>	Whole group activity <input type="radio"/>	Reading <input type="radio"/>
Standardized group tests <input type="radio"/>	Reasons for rules ** <input type="checkbox"/>	Seatwork <input type="radio"/>
Working silently and alone <input type="radio"/>		Recognizing alphabet <input type="radio"/>
Letters of the alphabet <input type="radio"/>	IV. Inappropriate Literacy Activities	Whole group <input type="radio"/>
Punishment <input type="radio"/>	Letters on lines <input type="radio"/>	Color within lines <input type="radio"/>
Colors in lines <input type="radio"/>	Colors in lines <input type="radio"/>	Selects own activity <input type="checkbox"/>
Kindergarten reading emphasis <input type="radio"/>	Standardized tests <input type="radio"/>	



without this preparation ( $M = 55.65, SD = 5.91$ ) on Factor II scores. In the final analysis, there was a significant effect of highest degree ( $F(2,145) = 10.15, p < .001$ ) on Factor III scores. Once again, early childhood professionals with graduate degrees expressed stronger DAP beliefs ( $M = 27.71, SD = 2.90$ ) than professionals with bachelor's degrees ( $M = 26.92, SD = 3.75$ ) and with HS/GED/CDA/associate's degrees ( $M = 24.48, SD = 4.09$ ). Means and standard deviations for each factor score are shown in Table 6. ANOVA results for factor total scores are shown in Table 7.

**Table 6**  
Means and Standard Deviations for Factor Total Scores on TBS

	Highest Degree	Specialized Educational Preparation						Total		
		ECE		Non-ECE		n	M	SD		
		n	M	SD	n	M	SD	n	M	SD
Factor I	HS/GED/CDA/Associate's degree	30	53.13	10.02	14	52.34	11.39	44	52.89	10.35
	Bachelor's degree	17	56.65	7.79	31	58.00	5.93	48	57.51	6.60
	Graduate degree	28	61.54	3.37	31	59.71	6.79	59	60.58	5.47
Factor II	HS/GED/CDA/Associate's degree	30	55.81	4.10	14	52.36	11.03	44	54.75	7.13
	Bachelor's degree	17	57.47	2.92	31	57.16	2.89	48	57.27	2.87
	Graduate degree	28	58.75	2.19	31	55.65	4.36	59	57.12	3.81
Factor III	HS/GED/CDA/Associate's degree	30	24.40	4.21	14	24.63	3.97	44	24.48	4.09
	Bachelor's degree	17	27.35	3.32	31	26.68	4.01	48	26.92	3.76
	Graduate degree	28	28.86	2.25	31	26.68	3.05	59	27.71	2.89

**Table 7**  
ANOVA Results for Factor Total Scores on TBS

Source	df	MS	F	$\eta^2$
<i>Factor I: Teacher-Directed/Teacher-Control</i>				
Specialized Educational Preparation	1	5.916	.10	.001
Highest Degree	2	719.09	12.54***	.147
Background x Highest Degree	2	32.100	.56	.008
Error	145	57.337		
<i>Factor II: Child/Individual-Initiated Learning</i>				
Specialized Educational Preparation	1	181.70	8.35*	.054
Highest Degree	2	137.08	6.30**	.080
Background x Highest Degree	2	33.46	1.53	.021
Error	145	21.74		
<i>Factor III: Child-Centered Literacy Activities</i>				
Specialized Educational Preparation	1	25.86	2.089	.014
Highest Degree	2	126.15	10.18***	.123
Background x Highest Degree	2	18.13	1.465	.020
Error	145	12.38		

Note:  $\eta^2$  = effect size. \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

## Discussion

There are two primary findings from this study. First and foremost, the level of education was found to

matter more in the adoption of a DAP philosophy of practice than specialized educational preparation. In general, the higher the educational level attained, regardless of the major area of study, the stronger the self-reported endorsement of a DAP system of beliefs. Second, although specialized education was found to be related to child-centered learning, it did not relate to beliefs connected with classroom management, assessment, and issues related to literacy content. Specifically, those teachers with less than a bachelor's degree, even those with specialized preparation that was "steeped" in DAP as a philosophy, scored as having significantly weaker beliefs than those with bachelor's degrees, even when those degrees were in areas unrelated to early childhood education or child development.

Despite the strength of the relationship found repeatedly in this study between educational levels and DAP beliefs, and the fact that correlation analysis found no significant link between specialized educational preparation and beliefs, there was more to the story. Specifically, analysis of the three factors that emerged from these data indicated that coursework specific to working with young children was significantly related to beliefs associated with child-initiated learning, the second factor to emerge in the results. Thus, educational background that included coursework or training specific to working in the field of early childhood education did affect the beliefs held by caregivers and teachers on items that dealt with, for instance, (1) children being allowed to select some of their own activities and the importance of active exploration in children's learning, (2) respect for individual differences in interests and developmental level when planning curricula, and (3) the importance of peer collaboration in play and learning activities and how this collaboration contributes to children's social development.

Specialized coursework or training to work with young children did not affect the two other factors that emerged in terms of strength of adoption of a DAP philosophy. These two factors were Teacher-Directed/Teacher-Control and Child-Centered Literacy Activities, and they include items that dealt with beliefs about the following: (1) classroom management and discipline issues; (2) appropriate methods and reasons for assessing young children; (3) the use of didactic learning materials such as flash cards, ditto sheets, and basal readers; (4) the value of integrating content across the curriculum; and (5) issues related to emergent literacy in general, including inventive or developmental spelling, functional print, stories with children, and learning the alphabet.

Teacher preparation programs in general have a very poor record when it comes to influencing change in preservice teachers' beliefs (see Goodman, 1988; McMullen, 1998). Several studies have found that it is particularly difficult to move students toward the acceptance of newer, more innovative philosophies of practice as college students move through their professional teaching preparation programs and begin their careers. Students who graduate from postsecondary teacher preparation programs tend to maintain the beliefs that they had when they entered about what it means to be a "teacher" and how children learn; these strongly held beliefs about teaching and learning are formed in these students during their own pre-K through 12th-grade education experiences (Lortie, 2002). These strongly held beliefs are formed over a very long time and are highly resistant to change. There is evidence, however, that early childhood teacher educators may be more successful in influencing beliefs than their colleagues who prepare teachers to work at other developmental levels. For instance, Wood, Cobb, and Yackel (1990) and McMullen (1997) conclude from their studies that early childhood teacher education that emphasizes DAP as a philosophy along with supervised field experiences in settings with strong mentor caregivers and teachers can influence the adoption of DAP beliefs.

According to the results of this study, however, it may be only certain, very specific beliefs that are influenced by specialized coursework--those being the beliefs more traditionally associated with early childhood and child development and less with schools of education and general teacher preparation. (Recall that in this study, the child-initiated learning factor was associated with specialized education, whereas the teacher-direction/control and literacy activities factors were not.) This finding may not be surprising if one examines what is known about how, traditionally, schools of education differ from other programs that prepare early childhood practitioners, in particular psychology and home economics programs (many of which are now renamed to be departments or schools of child or human development or family studies). Goldstein (1997) discusses how early childhood education was strongly shaped by the laboratory school movement; developmental psychology; and such scholars as Froebel, Piaget, Erikson, Montessori, and Dewey. Early childhood (birth to kindergarten) was historically taught out of departments of home economics or psychology, and only in recent decades has it been common to find early childhood programs also in schools of education. Kindergarten/primary education, which has typically been housed

in education departments (Bloch, 1991), was still influenced by Dewey, of course, but more so by the social efficiency movement (Callahan, 1962) and social reconstructionists (Cremin, 1961). Teacher education departments have traditionally focused more on aspects of classroom management and methods of teaching (i.e., those items included in the factors found to be unrelated to specialized coursework in this study), whereas caregivers and teachers from home economics and psychology traditions have historically been exposed more to the psychological and developmental aspects of caregiving and teaching. This legacy appears to still be an influential factor in our field, and it may explain the findings of this current study in terms of the particular set of beliefs about early childhood education that were adopted by those with specialized educational background.

It is important to consider a possible alternative explanation for the results of this study. In pondering the significant role that educational level had in this sample, a role that mattered more than specialized educational preparation, the researchers returned to the criticisms of DAP as a "one-size-fits-all" philosophy. If we accept that DAP is a construct built upon a largely White, Western European framework, could socioeconomic status (SES) be the root of the difference among the practitioners in this study rather than educational level alone? Consider the factors that the respondents with less education were unable to embrace--factors related to developmentally appropriate guidance and discipline techniques, more holistic forms of assessment, and support for emergent reading and writing; such items relate to beliefs that are traditionally found to differ between lower and middle/upper classes. Although willing to accept child-centeredness philosophically, lower SES practitioners may not believe that the techniques described in the other two factors that emerged in this study are effective or helpful to their children. Such conclusions are beyond the scope of this study but deserve careful attention in future research and debate.

The results of this study lead the researchers to conclude with some certainty that the achievement of a bachelor's degree matters, at least if the goal is increasing the likelihood that a person will adopt a more DAP philosophy of practice. Whether this conclusion is based upon results that are affected by overall level of education alone or from some interplay of a number of complex socioeconomic status variables that include higher education is unknown. However, we can assert that this finding is particularly important when considering preschool teachers and caregivers, a group whose members, as pointed out earlier in this paper, have the widest variance in terms of professional qualifications and whose members come into the field at such a diverse number of entry points. Consideration of the implications of this finding led the researchers to consider the following question: Should all preschool teachers and caregivers be required to have a minimum of a 4-year college degree? Support for a "yes" answer to this question for some of us may come from recent research by Cassidy and Lawrence (2000) who found that early childhood teachers with 4-year versus 2-year degrees were better able to articulate their beliefs concerning their practices with young children and twice as likely to provide "cognitively focused" rationales for their curriculum choices than teachers with less education. Similarly, Doherty, Lero, Goelman, Tougas, and LaGrange (2000) found in their study of Canadian family child care that the highest level of education "in any subject" was directly related to quality in the care providers that they studied. Doherty and her colleagues concluded that, although it is important to provide specific training courses once someone decides to become a professional care provider, it is more important to recruit well-educated individuals to the field to begin with.

The finding that overall level of education, especially the achievement of a bachelor's or graduate degree, influences beliefs in early childhood education should be comforting to those of us who have devoted our lives to postsecondary education. At the same time, the lack of a strong relationship between specialized preparation/coursework in early childhood education and beliefs in all aspects of developmentally appropriate practice (beyond the notion of child-centeredness) may challenge some of us or, at the very least, spur us on to engage in more serious dialogue about what we are accomplishing in our CDA and early childhood education associate's degree programs. Is what we are doing sufficient to ensure a well-qualified professional workforce? Are we focusing enough attention on some of the more traditional educational issues, such as classroom management, literacy, and discipline-specific teaching methodologies?

One must be cautious, however, in over-interpreting the findings from this particular study. This sample was relatively small, at  $N = 151$ , and it was skewed toward high DAP scores on the TBS; other samples from the United States have shown a more normal distribution using this instrument. The skewed

distribution in this case may be due to the nature of the sampling technique in which participants with bachelor's and graduate degrees were over-represented and all participants were associated with a professional early childhood organization that has a stated policy endorsing developmentally appropriate practices. That being said, because the results of the factor analyses indicate that these data were not significantly different from those found in two large-scale studies by Charlesworth et al. (1991; 1993), the data, although skewed, do deserve careful consideration. It would be important to replicate these findings with a much larger random sample, a sample that should include practitioners both within and outside of the major early childhood education professional organizations. In addition, future research needs to examine the role that ongoing professional development may play as a mediator of practitioners' beliefs about practice. Further, given the possibility of the SES link to self-reported beliefs, it would be important to collect data on related variables such as family income levels and minority status, in addition to educational background.

### Conclusion

The results of this current study, although inconclusive, lend support to a tentative conclusion that a 4-year college degree is desirable in preschool teachers. Teachers of young children, first and foremost, need depth and breadth of education and experience, exposure to a world of ideas and perspectives, along with the skills to communicate and express their knowledge fluidly--the type of knowledge, skills, and stimulation acquired most handily through a 4-year degree program. Although the data in this study do not show a strong relationship between specialized education of preservice or inservice caregivers and early childhood education beliefs, it is important to note that other recent studies, such as that of Hao (2000), do more convincingly connect the content of early childhood teacher training to both DAP beliefs and practices. Indeed, there is consensus in the field among some of our most prominent scholars that to become fully qualified as early childhood educators, caregivers and teachers need to acquire the knowledge and skills related specifically to early childhood education and child development (see Horm-Wingerd & Hyson, 2000).

Overall, this study leads the researchers to assert that the knowledge and skills that are more likely to lead to the provision of high-quality early care and education may more readily be present in well-educated individuals, those with 4-year degrees. Thus, the researchers encourage other scholars, policy makers, and teacher-educators to engage in dialogue and to conduct more studies in which they examine the question, "What educational background is recommended to increase the likelihood that caregivers and teachers will develop the knowledge, skills, and philosophies of practice identified by research as important in delivering the highest quality care and education to our young children?"

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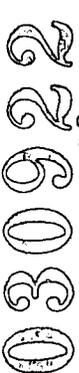
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