

# Understanding Quality in Head Start Classrooms: The Role of Teacher and Program-Level Factors

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# Research Questions

1. What is the quality of Head Start classrooms in 2000-2001, and how does it compare to quality reported in 1997-1998?
2. What are the backgrounds, qualifications and experiences of Head Start teachers in 2000-2001 and were there any changes from the earlier cohort (1997-1998)?
3. What is the relationship between the quality of Head Start classrooms and teacher qualifications, experience and attitudes and knowledge; which factors seem most important in explaining variations in quality?
4. Do factors beyond the classroom, such as the types of curricula Head Start programs provide, the average teacher salaries, and characteristics of families served by the Head Start program explain variations in the quality of Head Start classrooms?



# Classroom-Level Predictors of Quality

- Teacher Background and Experience
  - Years of teaching experience (total years)
  - Teacher holding a BA or AA
  - Teacher ethnicity (African-American, Hispanic)
  - Teacher salary (as deviation from program avg.)
- Teacher Attitudes and Knowledge about early childhood education practices
  - high score = positive attitudes and knowledge



# Teacher Attitudes and Knowledge of Early Childhood Education Practices

- 9 Items from the Teacher Beliefs Scale, one factor
- Rating Scale: Strongly Agree (1) to Strongly Disagree (5)
- Sample Items:
  - “Head Start classroom activities should be responsive to individual differences in development”
  - “Each curriculum area should be taught as a separate subject at separate times (Reverse)”
  - “Students should work silently and alone on seatwork (Reverse)”
  - “Children should be allowed to select many of their own activities from a variety of learning areas that the teacher has prepared (writing, science center, etc.)”
- Fall 2000 Mean = 7.9 out of maximum 10 (N=277)
- Head Start teachers showed generally positive attitudes and knowledge about early childhood education practices



# Classroom Quality Measures

- Classroom Processes
  - ECERS Mean Score
  - ECERS Language Score
  - Assessment Profile Scheduling Score
  - Assessment Profile Learning Environment Score
  - Assessment Profile Individualizing Score
  - Quality Composite (ECERS Language, AP Scheduling, AP Learning Environment)
- Classroom Structure
  - Average Child-Adult Ratio (over 2 same-day observations)
- Teacher Sensitivity
  - Caregiver Interaction Scale (Arnett)



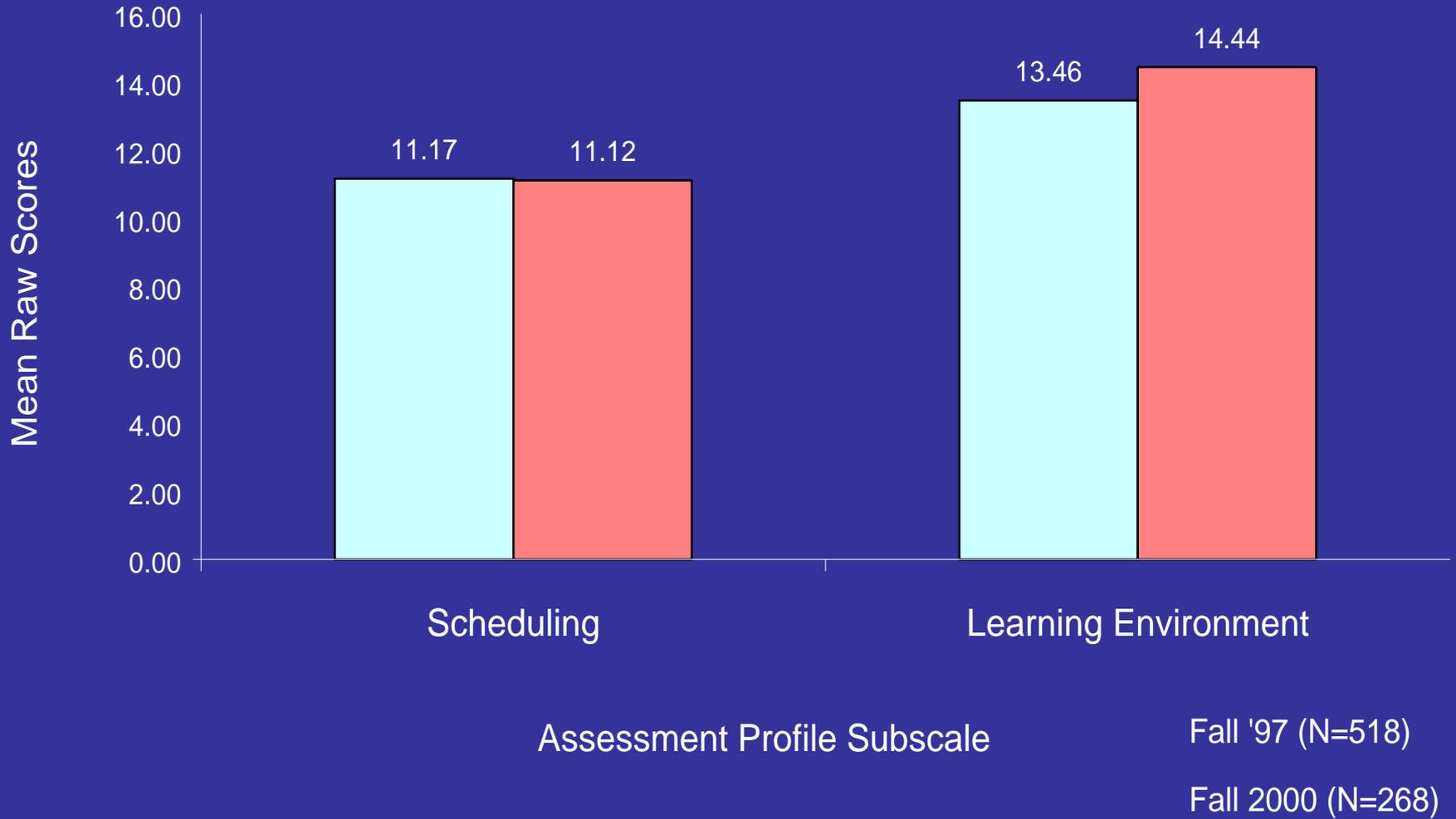
# Research Question #1

## Quality of Head Start classrooms in 2000-2001, and comparison to 1997-1998

- In a new sample of 43 programs, quality continues to be good and above that found among other center-based preschools
- Average ECERS-R score in Fall 2000 was 4.84 (N=258, SD = .87)
- 2000 ECERS-R was comparable to mean ECERS in 1997-1998 (mean=4.93), but there was higher variability in 2000 scores
- Caveat: ECERS-R not the same as the ECERS



## Assessment Profile Subscales, Fall 1997 and Fall 2000



# Quality of Head Start classrooms in 2000-2001, and comparison to 1997-1998

- No change in raw scores on Assessment Profile Scheduling and Learning Environment Scales
- No change in scores on Caregiver Interaction Scale
- Child-Adult Ratio is somewhat lower in Fall 2000 (5.4 children per adult) compared with Fall 1997 (6.3 children per adult)



# Research Question #2

## Significant Changes in Teacher Qualifications, 1997 to 2000

- More new teachers (21%) taught in Fall 2000, compared with Fall 1997 (14%)
- Higher proportion of teachers with a bachelor's degree or higher in Fall 2000 (38.7%) compared with Fall 1997 (28.1%)
- Higher proportion of teachers with graduate level degrees, from 3.2% in Fall 1997 to 10.9% in Fall 2000



# Significant Changes in Teacher Qualifications (Cont'd)

- In Fall 2000, 32.9 percent of teachers with graduate level education or higher were new teachers, compared with only 13.3 percent in Fall 1997
- More teachers studied Early Childhood Education or Child Development for their highest degree, from 62 percent in Fall 1997 to 78% in Fall 2000
- More teachers belong to a national professional association for early childhood educators, from 53% in Fall 1997 to 62% in Fall 2000

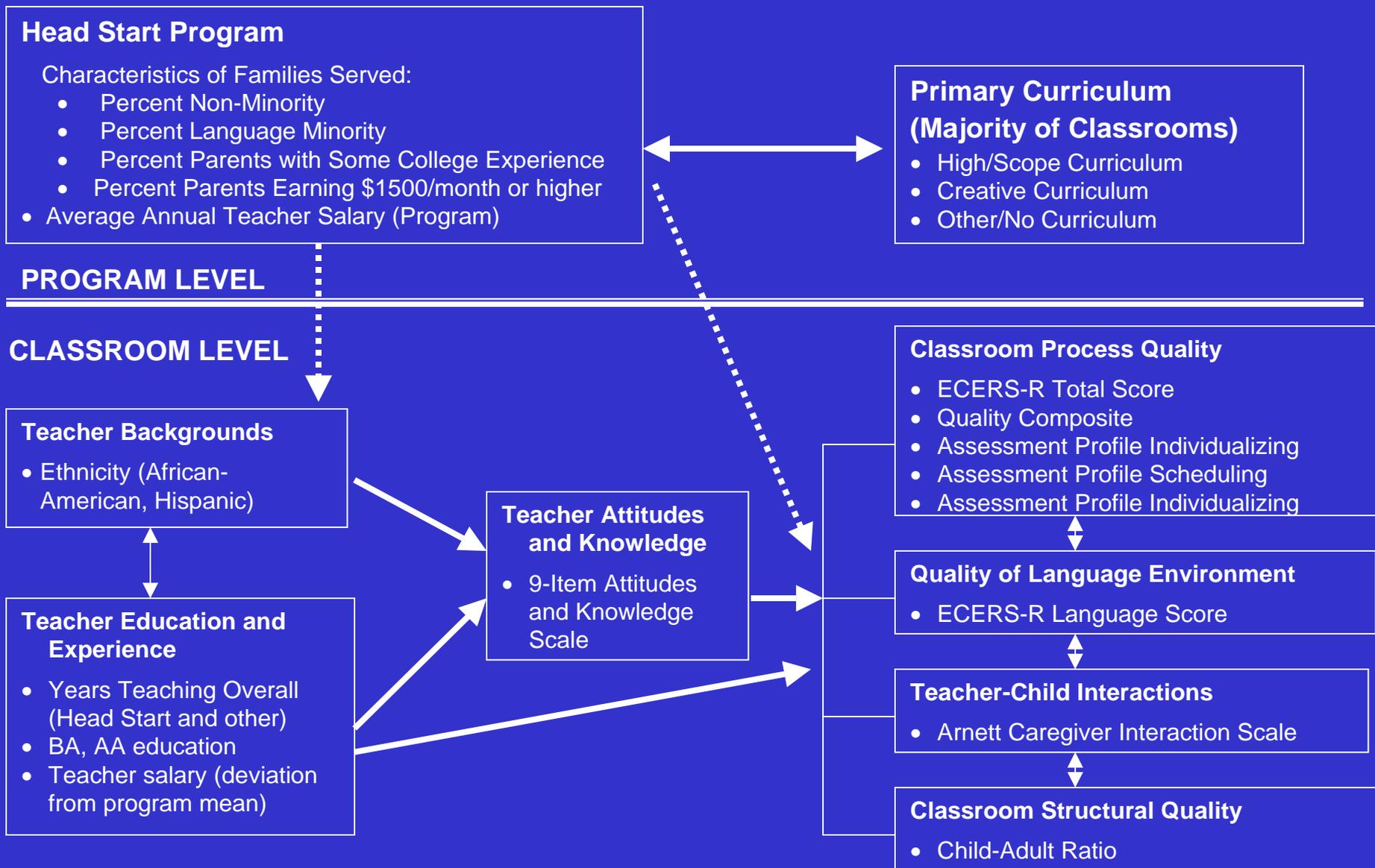


# Research Questions 3 & 4: Do Teacher and Program-Level Factors Explain Significant Variations in Classroom Quality?

- What is the relationship between the quality of Head Start classrooms and teacher qualifications, experience and teacher attitudes and knowledge?
- Which factors seem most important in explaining variations in quality?
- Do factors beyond the classroom, such as the types of curricula Head Start programs provide, the average teacher salaries, and characteristics of families served by the Head Start program explain variations in the quality of Head Start classrooms?



# A Model of Program- and Classroom-Level Factors Explaining Quality in Head Start

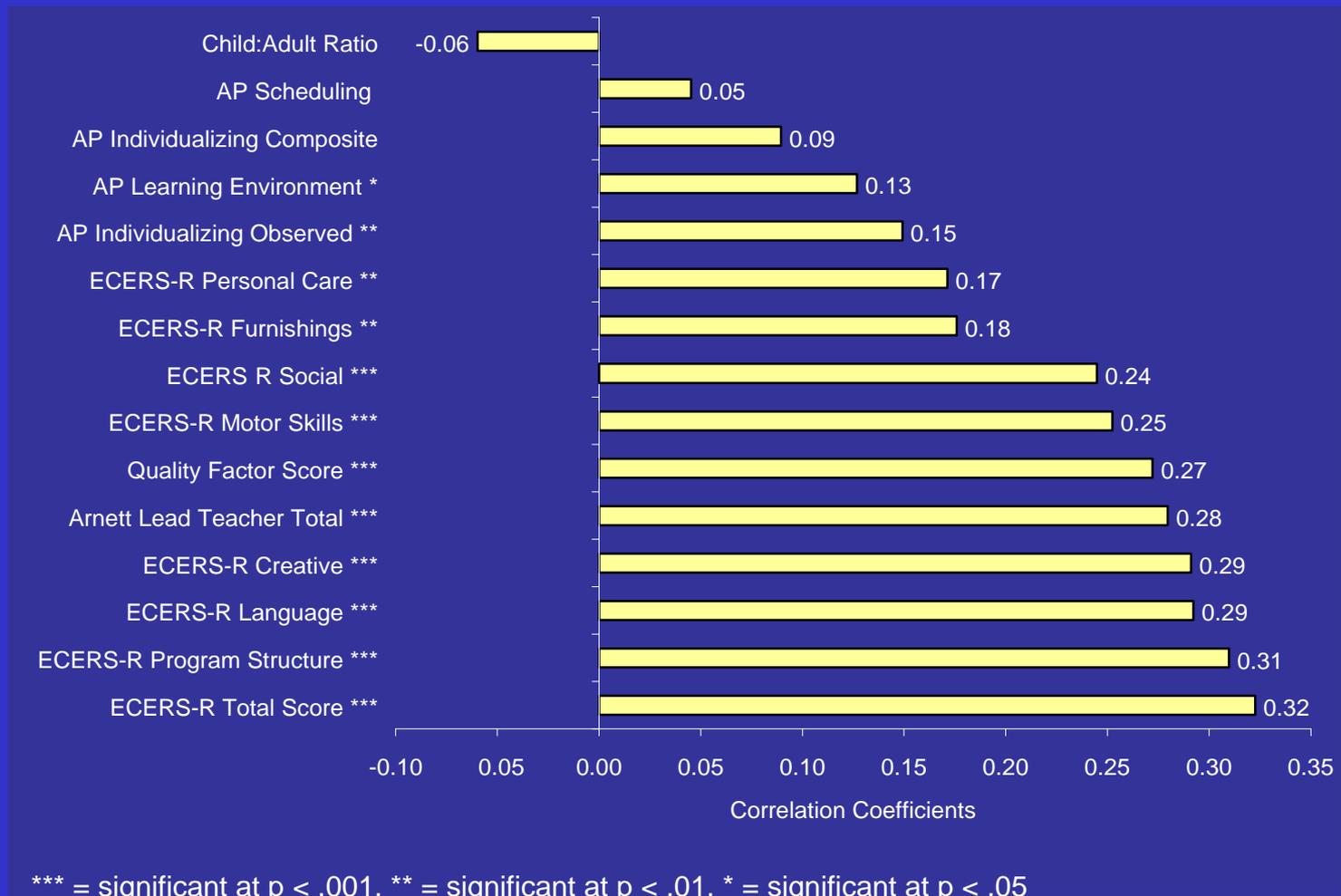


# Teacher Backgrounds and Experience are Related to their Attitudes and Knowledge

- Teachers with higher scores for positive attitudes and knowledge about early childhood education practices were more likely to:
  - have higher levels of educational attainment,
  - have some graduate school education or higher
  - have more total years teaching,
  - belong to an early childhood education association,
  - teach in another language (not including Spanish or English)
  - be Caucasian, Hispanic, or Asian.



# Teacher Attitudes and Knowledge are Related to Classroom Quality



# Teacher Qualifications and Experience are Related to Classroom Quality

- Higher quality classrooms were associated with:
  - higher levels of education, especially having a BA or AA degree or some graduate school education
  - more years teaching overall (not just in Head Start)
  - having a teaching certificate
  - membership in an early childhood education professional association



# Program-Level Predictors (Fall 2000 FACES)

- Characteristics of Families Served by Program
  - Percent parents with some college
  - Percent parents earning \$1500/month or more
  - Percent non-minority students in program
  - Percent language minority students in program
- Primary Curriculum Used in Majority of Classrooms in each Head Start Program
  - High Scope Curriculum
  - Creative Curriculum
- Program Resources
  - Average Annual Teacher Salary



# Summary of Program- and Classroom-Level Factors Predicting Quality

	ECERS-R Total (Intercept=4.8)		AP Individualizing (Intercept=3.5)		Caregiver Interaction Scale (Intercept = 70.9)		Child-Adult Ratio (Intercept= 5.4)		ECERS-R Language (Intercept=4.8)		Quality Composite Score (Intercept=.003)	
	Estimate	Signif <sup>1</sup>	Estimate	Signif <sup>1</sup>	Estimate	Signif <sup>1</sup>	Estimate	Signif <sup>1</sup>	Estimate	Signif <sup>1</sup>	Estimate	Signif <sup>1</sup>
<b>Program-Level Factors</b>												
Percent parents with some college or higher	0.55		0.52		10.59		-2.57		0.46		0.46	0.06
Percent parents earning \$1500/month or more	0.44		3.82	<b>0.01</b>	2.83		0.50		0.36		0.19	
Percent non-minority students	0.82	<b>0.01</b>	0.14		3.24		-0.87		0.68	0.06	0.43	0.06
Percent language-minority students	1.04	<b>0.02</b>	0.22		-1.98		-1.31		0.84	0.10	1.27	<b>0.01</b>
High Scope Curriculum	0.30		-0.40		5.33	0.10	-0.88		0.24		0.22	
Creative Curriculum	0.33		-0.38		6.41	<b>0.02</b>	-0.56		0.27		0.26	
Average Annual Teacher Salary	0.10		-0.34	0.10	1.62		-0.81	<b>0.01</b>	0.08		-0.11	
<b>Classroom-Level Factors</b>												
Teacher having BA or AA	-0.09		0.10		-1.09		-0.04		-0.23	0.09	-0.09	
Teacher Attitudes & Knowledge	0.11	<b>0.00</b>	0.04		1.55	<b>0.00</b>	0.04		0.16	<b>0.00</b>	0.14	<b>0.00</b>
Years Teaching Experience	0.01		0.01		0.17	<b>0.05</b>	0.00		0.01		0.01	
African-American Teacher	-0.14		0.06		-1.75		0.14		-0.22		-0.04	
Hispanic Teacher	-0.18		0.04		-3.91		0.21		-0.34		-0.21	
Teacher Salary (deviation from pgm mean)	0.03		0.15		1.09		0.04		0.11		-0.03	

1. Significance levels in bold indicate statistically significant effects at  $p < .05$ .



# Summary of the Model

- The relationship between teacher education and classroom quality is mediated by their knowledge and attitudes towards early childhood education practice as well as by the type of curriculum used and the teacher's level of experience
- Head Start programs that provide for a common integrative curriculum across classrooms and that pay their teachers better have sufficient resources available to positively influence classroom quality, through the quality of teachers hired, and teacher experience and attitudes



# Conclusions

- Head Start quality is consistently good, over time, according to a variety of indicators;
- More new teachers with advanced degrees are entering Head Start;
- Teachers who are more educated have more positive attitudes and knowledge, which is associated with higher levels of classroom quality;
- Variations in the quality of Head Start classrooms may be explained by characteristics of the families and children they serve, by the curriculum used in the program, and by teacher attitudes and knowledge about early childhood education practice

