

Early Education Quality: Higher Teacher Qualifications for Better Learning Environments - A Review of the Literature

SUMMARY VERSION

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Introduction

As states and communities work toward developing high-quality preschool programs for three and four year olds, they face several intertwined issues related to staffing these programs. The first involves deciding on optimal teacher qualifications. A second set of questions involves what we know about creating effective teachers, including alternative pathways to the four-year degree. A final set of questions involves the feasibility of achieving the new standards, including the capacity of the higher education system to meet a growing demand for teachers with four-year degrees, and whether there will be adequate compensation to recruit and retain such an educated workforce.

Teachers of young children are increasingly called upon to have more sophisticated knowledge of children's capacity to learn and of strategies to help them do so. Writing on behalf of the Research Council of the National Academies of Science, Bowman and colleagues argue in *Eager to Learn* (2001) that there exists a serious "mismatch" between the preparation (and compensation) of early childhood teachers and the expectations for their jobs: i.e., helping children to optimize their developmental potential and to set the stage for success in the school years and beyond. If teachers are required to have bachelor's degrees and specialized training and credentials once children reach kindergarten, are there compelling reasons why similar qualifications, based on appropriate content for the preschool child, should not be required for those who teach children a year or two younger? A first step in addressing this issue is to consider what we know from empirical evidence.

Do teachers with a BA degree in early childhood education (or higher) provide better-quality preschool experiences that lead to better outcomes for three- to five-year-olds? By asking this question, we do not intend to imply that *every* teacher in a given early education program would have a BA degree; rather, a standard might be set at one BA-level teacher per classroom, or for a certain number of children (e.g., 20), with this teacher working with one or more assistant teachers. (While there has been less discussion thus far of qualifications for assistant teachers, there has been some effort to set standards at the associate (AA) degree level.)

To answer this basic question about BA-level preparation for early care and education teachers, we conducted a literature review² of the major large-scale investigations of child care settings conducted in recent years, as well as the most recent research on quality in public preschools and Head Start. While there are some limitations to this group of studies with respect to sample, measures and analytic methods (Barnett, 2003a; Glantz & Layzer, 2000; Lamb, 1998), they underscore, on balance, the importance of more higher education and specialized training, and identify the particular role of the bachelor's degree, most often in early childhood education, in producing teacher behaviors consistent with high-quality programming, which in turn supports better developmental outcomes for children.

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² A more detailed account of this literature review can be found in the full report, "Teacher Qualifications and Early Education Quality: A Review of the Literature," by Marcy Whitebook, available at <http://iir.berkeley.edu/cscce>.

Increasingly, the national trend is to raise teacher qualifications, with an emphasis on college degrees in early childhood education (ECE), child development (CD) or a related field. Head Start has raised its standards to require every classroom to have an associate degree-level (AA/AS) teacher by fall 2003, and the pending reauthorization bill sets a new goal of 50 percent of Head Start teachers holding a bachelor's degree (BA/BS) by 2008.

Table 1 (Barnett, 2003b) indicates where the states have currently set their minimum post-secondary degree standards for teachers in state-financed prekindergarten (pre-K) programs. These range from 24 credit hours in California, a Child Development Associate (CDA) certificate in 11 states, and a BA degree in 20 states and the District of Columbia, to a master's (MA) degree (after five years of employment) in New York. Thus far, however, states have had mixed success in meeting their own standards, particularly in privately operated sectors of state-funded pre-K systems (Bellm, Burton, Whitebook, Broatch & Young, 2002).

Several previous research reviews address the relationship of teacher background and quality (Barnett, 2003a; Bowman, Donovan & Burns, 2001; Howes & Brown, 2000), and have all come to the conclusion that the presence of BA-level teachers with specialized training in early childhood education leads to better outcomes for young children. As we review the research on teacher qualifications and preschool program quality, we must recognize that in most states, recommending a BA in ECE or a similar standard would result in a significant raising of standards for teachers in early childhood settings, and such a suggestion can therefore trigger considerable debate.

In some cases, the underlying cost implications of raising standards drive this debate, and in some communities, concerns about the existing child care workforce's ability to meet a higher standard – and/or issues of linguistic and cultural diversity in the workforce – also prompt questions about raising qualifications. Other concerns include the higher education system's capacity to respond to a demand for more college-educated early childhood teachers, and skepticism about how this long-underpaid field will manage to match higher standards with sufficient teacher compensation (Bellm & Whitebook, 2003).

A great deal appears to be at stake for young children and their families as states and communities grapple with these issues, and the discussion about preschool teacher qualifications is in sharp contrast to trends in K-12 education. The chair of the National Research Council's Committee on Integrating the Science of Early Childhood Development, Dr. Jack Shonkoff of Brandeis University, posed a question to Congress in 2002 about the gap between our current understanding of child development and public policies related to the early education workforce:

How can the recently enacted No Child Left Behind Act emphasize the need for stronger performance standards and financial incentives to attract bright and highly motivated teachers, while we simultaneously tolerate large percentages of inadequately trained and poorly compensated providers of early child care and education who have an important influence on the foundations of school readiness? (Testimony to the U.S. Senate Committee on Health, Education, Labor and Pensions, February 12, 2002, p.3.)

A Summary of Research Findings

Teacher behavior is one of the major influences on child development (Shonkoff & Phillips, 2000), and understanding how to ensure that young children encounter teachers who are sensitive, appropriate and able to create responsive learning environments is one of the central questions facing those who develop and implement early care and education programs – publicly supported preschools in particular.

The evidence to date suggests that optimal teacher behavior in center-based settings, and the skill and knowledge upon which it rests, are best achieved through a four-year college degree, which includes, in most instances, some specialized content in early childhood education or child development. Still, this body of research raises many questions that require further investigation, particularly with regard to: thresholds of education and training; the content, format and quality of specialized early childhood training; variations in strategies for teachers with varying characteristics and needs; and the aspects of the adult work environment that scaffold teachers' knowledge, enabling them to engage in effective strategies with children.

Eight studies specifically explore the relative contributions of a bachelor's degree and specialized early childhood training to teacher behavior and program quality, and among them are the large-scale investigations of center-based early education conducted over the last 15 years. These are listed below in chronological order, along with the particular citations used for this review:

- Bermuda College Training Program Study (Arnett, 1989)
- National Child Care Staffing Study (Howes, Phillips & Whitebook, 1992; Whitebook et al., 1990)
- Cost, Quality and Child Outcomes Study (Blau, 2000; Helburn, 1995; Howes, 1995; Howes, 1997; Phillipsen, Burchinal, Howes & Cryer, 1997)
- Florida Quality Improvement Study (Howes, 1997; Howes et al., 1998)
- Three-State Study (Massachusetts, Georgia and Virginia) (Phillips, Mekos, Scarr, McCartney & Abbott-Shim, 2000; Scarr, Eisenberg & Deater-Deckard, 1994)
- Then and Now: Changes in Child Care Staffing (Whitebook, Sakai, Gerber & Howes, 2001; Whitebook & Sakai, in press)
- Head Start FACES Study (Zill et al., 2001)
- New Jersey studies (Barnett, Tarr, Lamy & Frede, 1999, 2001).

Although these studies have a variety of strengths and weaknesses, they include those with the largest and most diverse samples and those employing the most rigorous analyses. Taken as a group, these studies strongly suggest the important contribution not

simply of more education, but of a bachelor's degree and specialized early childhood training at the college level, in securing high-quality center-based preschool programs. But while the research points to the importance of the bachelor's degree, and the vast majority of studies find that more education and training is better than less, we do not yet understand precisely what we gain from the BA over the AA degree, for example, or what value is added with an advanced degree. Additionally, there is emerging evidence that alternative pathways to effective teaching exist, and may be important for increasing and diversifying the corps of skilled instructors of young children. Howes, James & Ritchie (2003) report that within a group of primarily African American and Latino teachers with less than four-year degrees, working in high-quality programs serving children of low-income families, teacher responsibility was predicted, after controlling for formal education, by such factors as staying in the field for the sake of benefiting one's community, being mentored early in their careers, and receiving ongoing supervision.

Clarifying what is meant by specialized training in early childhood education and child development, and under what circumstances it advances teacher behavior, is of the utmost importance. For many in the current early care and education workforce, specialized early childhood training and higher levels of formal education have gone hand in hand, making it challenging to identify the differing contributions that formal education and less formal training make to teacher behavior. There continues to be not only confusion in the literature, but also among practitioners and policy makers, about the particular role of training in early childhood education or child development, with large investments into a wide array of training programs targeted at a diverse group of teachers and providers (Brown, Burr, Johnson, Krieger & Mihaly, 2001).

Researchers have found it difficult to collect reliable, consistent information about training that helps to clarify how the amount, intensity, content and quality of instruction impact its effectiveness. In part, this is because teachers and providers themselves are often unable to detail their educational and training histories sufficiently; many have engaged in a wide array of professional development activities for years or even decades. Some studies look at the number of courses a teacher has taken over the course of a career, while others look at training completed in the last year. The formal education level of training may or may not be specified in the research designs, and few studies focus on the actual content of training (Arnett, 1989). The issues of supervised teaching or mentoring as training strategies are seldom compared to other more academic approaches to learning (Snider & Fu, 1990; Whitebook & Sakai, 1995), but there are suggestions from the literature that an integrated program of training – such as the CDA, or degree programs with a supervised teaching component and/or mentoring – contribute more to effective and enduring teacher practices (Howes, 1997). This hypothesis needs more direct testing.

For teachers in grades K-12, in-service training must be continuous, intensive and individualized in order to be effective (Bowman et al., 2001). Little is known about the impact of training at different points in the career of a teacher, which types of behavior are sensitive to which types of training, the effectiveness of training related to educational background, and the extent to which exposure to new ideas actually influences teacher behavior in the classroom (Cassidy, Buell, Pugh-Hoese & Russell, 1995; Kaplan & Conn, 1984; Snider & Fu, 1990). Bowman and colleagues (2001) point to the literature in K-12

education, which suggests that teachers adapt their practice to new ideas only when their prior conceptions and memories of early experiences as learners are challenged.

While researchers have moved somewhat beyond the category of child-related training employed in the early child care studies (Ruopp et al., 1979; Berk, 1985; Dunn, 1993), the research, on balance, still uses an “any size fits all” approach to specialized training, making it impossible to delineate the characteristics of effective instruction for adult learners from a wide range of backgrounds. We have yet to understand the different blends of training and formal education that lead to responsive and effective teaching.

We also need further clarification regarding the context of the adult work environment in which teachers operate with other teachers and professionals. There is some evidence of how adult-child ratios, group size, and compensation affect teachers’ behavior in the classroom and their decisions whether or not to remain on the job. But because early childhood classrooms are staffed by more than one adult, and classrooms within a program operate in concert to various degrees, more exploration is needed of how the background of other teachers impacts teacher behavior and program quality, particularly as policy makers grapple with staffing patterns for preschool classrooms.

The *Then and Now* study (Whitebook, Sakai, Gerber & Howes, 2001) suggests that quality is mediated by the background climate of the classroom and center, and that individual teachers are responsive to the training levels of their colleagues, but this finding needs to be replicated in larger, more diverse samples. Highly educated and well-trained teachers may not be able to apply their skills and knowledge, and behave sensitively and appropriately, in a poor-quality program, or when their co-workers do not have adequate professional preparation (Whitebook & Sakai, 1994). Such a situation may even drive them from their jobs or from the field altogether (Whitebook & Sakai, in press).

In addition to understanding more about the adult environment in which teachers operate, we also need to understand how individual characteristics beyond education, training and experience influence teacher behavior.³ The early care and education workforce is exceedingly diverse, not only in terms of education, training and experience, but also with respect to literacy skills, English proficiency, the ability to communicate in other languages, economic background, current family status, and a range of personal characteristics – including levels of social support, as well as depression, which may impact their access to education and ability to learn as adults (Phillips, Crowell, Whitebook & Jo, 2003; Whitebook & Sakai, 2003).

Decisions about qualifications and requirements for preschool and other early childhood teachers will be driven not only by empirical evidence, but also by their feasibility. Thus far, most states have chosen to weave universal preschool into their existing mixed

³ It is important to note that the composition of the early care and education workforce changes over time, with some notable shifts in the percentage of the workforce with college degrees as well as other demographic characteristics (Burton, Lavery & Duff, 2002). How these changes influence the staffing patterns in programs, and the attendant issues of training and educational needs, are questions that have largely gone unexplored.

delivery system of early care and education, for several important reasons: the need for a large number of facilities, which any single sector (including the public schools) is unlikely to be able to provide on its own; the desire to build on the strengths and quality that the system has already achieved; the desire to promote parent choice and meet working families' needs, and to serve as many children as possible; and an interest in serving children where they are, since many of those eligible for preschool will already be in an early care and education setting of some kind.

A primary question is to what extent the existing early care and education workforce (or a segment of it) will participate in any newly configured system, and to what extent it will be necessary to recruit a largely new cohort of practitioners. The members of the current workforce are highly diverse in terms of educational background, ability, and commitment to the profession, but no universal preschool system is taking shape (or is likely to) without involving many of them. This is not to say that all members of the current workforce will be appropriate for the job, or that additional personnel will not also be needed, but it does suggest that if standards are raised, many who already work with young children will seek to upgrade their education and training in order to meet the new requirements. The more diverse a preschool system a state creates, therefore, the more complex it could be to get segments of the current workforce up to a new set of common standards for professional development.

Standards will also have a major impact on training and higher education systems for early childhood education, which, much like the early care and education system, are themselves diverse and uncoordinated. Once a state has set its qualifications for publicly supported preschool staff, what will the higher education system need in order to be ready for the job, in terms of additional instructors, revamping of curricula, and scholarships and other forms of financial support for potential students? The primary shortcomings of the higher education system in most states revolve around issues of articulation, content and institutional capacity (Bellm & Whitebook, 2003; Governor's Task Force on Universal Preschool, 2002; Lekies & Cochran, 2002) and the investment and coordination the system will need in order to meet a growing demand. A limited amount of scholarship assistance and other financial aid is available through Pell Grants and other means, but early care and education students are often uninformed about or excluded from access to them. In some states, four-year institutions, in contrast to two-year colleges, do not generally see early childhood education as part of their purview – leading to the twin problems that most education departments in four-year colleges and universities are poorly integrated into the overall professional development system for early care and education, and are poorly articulated with two-year programs of study (Bellm & Whitebook, 2003).

Perhaps the greatest barrier centers on whether higher standards will be tied to appropriately higher compensation levels. While standards and compensation are often discussed as separate topics, they are really interdependent, and publicly supported preschool offers an opportunity to confront both challenges hand in hand, so that professional development is directly tied to a coherent wage and career ladder, and an equitable compensation package is incorporated into a state's "price tag" of what a universal preschool system will truly cost.

When standards are not linked to an appropriate system of financial reward, the danger is that the compensation, qualifications and retention of preschool staff will vary widely based on where programs are delivered, thus failing to address the fundamental need for a skilled, stable, high-quality workforce throughout the preschool system. A recent study of state-funded prekindergartens by the Center for the Child Care Workforce found disturbing evidence of a two-tier system emerging in several states, in which personnel at publicly operated Pre-K sites had significantly higher educational qualifications, higher compensation levels and lower turnover than those at privately-operated sites. In California, for example, where 30 percent of State Preschool staff in public school settings had earned a BA, only eight percent of their counterparts in privately operated State Preschools had done so. Further, average starting salaries for State Preschool teachers were \$14.16 and \$10.84 per hour in publicly-operated and privately-operated settings respectively. Across states, this trend appeared to be due primarily to public schools' larger infrastructure and greater access to resources (Bellm et al., 2002). If preschool services are to be delivered partly through the private system, and if teachers are required to achieve four-year degrees, it will be essential to establish resources and mechanisms to avoid such a disparity, and to integrate compensation standards for preschool into overall program design.

Conclusion

Throughout the United States, many children are failing to reach their full potential in school. But driven in part by what we have learned about early childhood development, the academic, business (The Business Roundtable, 2003) and policy communities now recognize that high-quality preschool programs are an important way to rectify this situation. And based on what the research has shown thus far, it appears that teacher preparation at the four-year college degree level is the best way to achieve such quality. We do need, however, to learn more about effective alternative pathways to teacher preparation, particularly to ensure linguistic and cultural diversity in preschool programs.

If we do indeed agree that early learning environments are critically important to children's later success, then our goal must be to ensure that preschool programs can live up to the expectations placed on them. This is largely a question of resources and public will. We can set preschool teacher standards at the BA level, but unless we put together the resources to make educational opportunities available to current and prospective teachers, clarify what are the optimal characteristics of preschool teacher training, and compensate teachers sufficiently to retain them in the field, the question of higher standards will remain an academic one, and preschool could continue to be a stepchild of our educational system.

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Table 1: Minimum Post-Secondary Degree Requirements For Preschool Teachers, By State⁸

State	Kindergarten	State Financed Pre-K	Child Care ²
ALABAMA	BA ¹	BA ¹	None
ALASKA	BA	CDA ⁵	None
ARIZONA	BA	CDA	None
ARKANSAS	BA	BA ¹	None
CALIFORNIA	BA	40 credits ⁶	6 credits ³
COLORADO	BA	CDA	None
CONNECTICUT	BA ¹	CDA	None
DELAWARE	BA ¹	CDA	CDA
DISTRICT OF COLOMBIA	BA ¹	BA	CDA
FLORIDA	BA	None	None
GEORGIA	BA	AA ¹	None
HAWAII	BA	CDA	CDA
IDAHO	BA	N/A	None
ILLINOIS	BA	BA ¹	CDA or CCP
INDIANA	BA	N/A	None
IOWA	BA ¹	None	None
KANSAS	BA	BA	CDA
KENTUCKY	BA ¹	CDA	None
LOUISIANA	BA ¹	BA ¹	None
MAINE	BA	BA ¹	None
MARYLAND	BA ¹	BA ¹	None
MASSACHUSETTS	BA ¹	3 credits ⁴	3 credits ⁴
MICHIGAN	BA	AA	None
MINNESOTA	BA	CDA	CDA
MISSISSIPPI	BA	N/A	None
MISSOURI	BA ¹	CDA	None
MONTANA	BA	N/A	None
NEBRASKA	BA	BA ¹	None
NEVADA	BA ¹	BA ¹	None
NEW HAMPSHIRE	BA	CDA ⁵	12 credits ⁷
NEW JERSEY	BA	BA ¹	CDA
NEW MEXICO	BA	None	None
NEW YORK	BA	BA	None
NORTH CAROLINA	BA ¹	AA ¹	None
NORTH DAKOTA	BA	N/A	None
OHIO	BA ¹	AA ¹	None
OKLAHOMA	BA	BA ¹	None
OREGON	BA	CDA	None
PENNSYLVANIA	BA	BA	None
RHODE ISLAND	BA ¹	BA ¹	BA ¹
SOUTH CAROLINA	BA	BA ¹	None
SOUTH DAKOTA	BA	N/A	None
TENNESSEE	BA	BA ¹	None
TEXAS	BA	BA ¹	None
UTAH	BA ¹	N/A	None
VERMONT	BA	BA ¹	12 credits ⁴
VIRGINIA	BA ¹	CDA	None
WASHINGTON	BA	AA ¹	None
WEST VIRGINIA	BA	BA	None
WISCONSIN	BA ¹	BA ¹	None
WYOMING	BA	N/A	None

AA – Associates Degree; BA – Bachelor’s Degree; CDA – Child Development Associate Credential; Pre-K – Prekindergarten; CCP – Certified Childcare Professional. N/A – state does not provide finances for pre-k; None – no post-secondary degree requirements. 1 – with courses or certification in early childhood. 2 – many states require professional training or ongoing development. 3 – 2 year vocational child care course or 6 credits in early childhood education. 4 – in topics related to early childhood education or child development. 5 – Head Start requirements used because all state pre-k funds supplement Head Start program. 6 – 24 credits in early childhood education and 16 credits more in general education. 7 – in early childhood education, 6 of which may be non-credit courses. 8 – update June, 2003.

Source: Barnett, W. S. (2003b). Better teachers, better preschools: Student achievement linked to teacher qualifications. *NIEER Policy Facts*.