

An ongoing debate exists within the early childhood research community regarding the level of relationship between teacher credentials and child outcomes. Some researchers believe that a high quality Head Start program must have teachers with baccalaureate degrees. Their belief is reflected in the teacher credentialing requirements in the enacted *Improving Head Start for School Readiness Act of 2007*. In recent studies, however, other researchers have found that simply having teachers with baccalaureate degrees does not make a Head Start program a high-quality program nor does it necessarily translate into higher child outcomes.

This *Dialog Brief* contributes to this debate regarding teacher credentials and program quality. Drs. Margaret Burchinal, Marilou Hyson, and Marty Zaslow find that there is a weak relationship between teacher credentials and classroom quality and they provide several possible explanations for this weak linkage. They argue that a comprehensive professional development approach is needed to support all those who work with children in a center, not just the lead teacher.

Competencies and Credentials for Early Childhood Educators: What Do We Know and What Do We Need to Know?

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Introduction

State and federal governments use high-quality preschool experiences as one way to address achievement gaps between children from low- and middle-to-high-income families, relying on research that demonstrates that

high-quality early care and education (ECE) improves academic and social skills in children from low-income families. Research evidence also suggested that teachers with baccalaureate degrees tended to provide a high quality educational experience, so some have urged policymakers to require these degrees. While no one doubts that the quality of the classroom teacher matters, recent evidence raises questions about whether standards based primarily on

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teacher education degrees are producing the desired results. This evidence suggests that a greater focus on the *content* of pre- and in-service training is needed to create a better-prepared and more effective early childhood workforce.

Quality in ECE: Earlier Evidence

Children who experience high-quality ECE tend to start school with stronger language, academic, and social skills (Vandell, 2004). Experimental studies demonstrated that high-quality ECE experiences produced stronger cognitive and academic skills at entry to school; in turn, these translated into better adolescent and adult outcomes (Campbell et al., 2002; Lazar & Darlington, 1982; Martin et al., 2008; Nores et al., 2005). Descriptive or quasi-experimental studies (i.e., studies that did not involve random assignment to ECE conditions) provided further support with larger, more representative samples (Gormley et al., 2005; Howes et al., 2008; National Institute of Child Health and Human Development Early Child Care Research Network, 2005; Peisner-Feinberg et al., 2001; Reynolds et al., 2002). Based on this relatively consistent evidence, both state and federal governments have focused on funding high-quality preschool programs for children from low-income families to address the growing achievement gap in this country.

Policymakers have also turned to the research community to determine how they can ensure that their preschool programs are of high quality. Observational research has found an association between higher quality care and both teacher education and training. These associations were observed in both large studies (Burchinal et al., 2002; Clarke-Stewart et al., 2002; Howes et al., 1992; Kontos & Wilcox-Herzog, 2001; National Institute of Child Health and Human Development Early Child Care Research Network, 2000; 2002; Phillipsen et al., 1997; Scarr et al., 1994) and smaller ones (Burchinal et al., 2000; de Kruif et al., 2000; Vandell, 2004). A recent review of this research

literature by Tout et al. (2005) concluded that higher levels of teacher education, especially education that focuses on early childhood, are generally related to higher quality but that no evidence existed indicating that a certain education level (such as a bachelor's degree) will ensure high-quality ECE.

Based on this research evidence and recommendations from early childhood advocates (Barnett et al., 2005; National Research Council, 2001; Trust for Early Education, 2004), state and federal policies have focused on requiring that early childhood teachers receive training and obtain college degrees. As of 2005, 17 of the 38 states with public pre-kindergarten programs require that all lead teachers hold a bachelor's degree and another 12 states require a bachelor's degree of some pre-kindergarten teachers. Similarly, the recently enacted *Improving Head Start for School Readiness Act of 2007* requires that at least 50 percent of Head Start teachers in center-based programs nationwide have a bachelor's degree.

Limits to the Evidence Base

The link between program quality and teacher education is clearly not perfect. There are highly skilled and effective teachers who do not have any college training, and there are teachers with advanced college degrees who are neither responsive to the needs of the children in their care nor very stimulating.

Analyses of data from three large projects: the *Cost, Quality, and Outcomes Study*, the *National Center for Early Development and Learning Multi-State Study of Pre-Kindergarten*, and a study of child care programs in Massachusetts, Virginia, and Georgia (Blau, 2000; Early et al., 2006; Phillipsen et al., 1997; Phillips et al., 2000), showed an association between higher quality care as measured by direct observation and higher levels of teacher education. However, once other characteristics of the early care

and education setting such as classroom size and child-teacher ratios were taken into account, this association was no longer statistically reliable (Blau, 2000; Early et al., 2006; Phillipsen et al., 1997; Phillips et al., 2000).

Such findings raise questions about whether observed associations between teacher education and classroom quality were due to education effects (i.e., college education courses may have taught early childhood educators to be better teachers) or individual effects (i.e., individuals who had obtained college degrees may have had a different set of attitudes and practices even before they attended college, and those attitudes and practices may have then led to higher quality care). However, because different researchers have often used different measures of teacher education (for example, degree attainment, number of years of education, certification in early childhood), it has been difficult to determine whether differences in research results are attributable to measurement differences, or whether there is a genuine lack of association between teachers' education and program quality when other features of the environment are taken into account.

To address such concerns, data from seven large studies of the early care and education of 4-year-olds (Early et al., 2007) were reanalyzed using the same definitions of teacher education and classroom quality and the same analytic methods across all major large child care study data sets. The data sets included three studies of public pre-kindergarten programs, three studies that either exclusively or primarily examined Head Start classes, and one study that primarily focused on community child care. Using the same analyses for all seven data sets, the researchers examined the association between teacher education and classroom quality as measured by either the *Early Childhood Environmental Rating Scale-Revised* (ECERS-R) or the *Observational Record for Childcare Environments* (ORCE) and language and academic child outcomes. Various indices

of teacher education were examined: highest degree level, whether the teacher had a bachelor's degree, highest education level among teachers with ECE major, and ECE major among teachers with a bachelor's degree. No consistent pattern of association was found between any index of teacher education and either classroom quality or child outcomes.

The authors offered several possible explanations for this lack of association, including the newness of some early childhood education training programs and the possibility that "reverse selection" occurred, resulting in degreed teachers who were of lower quality remaining in preschool classrooms while other, higher-quality degreed teachers were selected by their school systems to move up into the higher grades. At the same time, it may be that the highest-quality teachers without college degrees or teaching certificates are promoted within preschool programs and the lowest-quality noncertified teachers may be replaced.

Emerging Perspectives

Emerging research adds further complexity to the question of associations between teachers' educational degrees and classroom quality. Although degrees do not guarantee quality, this research suggests that in certain contexts college degrees may make an important contribution.

A study in California found that the importance of having a bachelor's degree to observed quality varied by type of early care and education setting (Vu et al., in press). Having a bachelor's degree predicted quality where there were fewer resources and supports, as in community-based child care, but not in the more resourced and supported settings.

Other researchers have questioned whether it is enough to focus on the education of the lead teacher in isolation from the broader context. Ginsburg & colleagues (2006) studying professional development for early math instruction, and Dickinson & Brady (2005) considering approaches

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to strengthening the skills of early childhood educators in early language and literacy instruction, both note the importance of taking a team approach to early childhood professional development. They discuss the value added by providing professional development to all of the early childhood educators in a school or program together and of emphasizing the role of the director or administrator in supporting the implementation of professional development.

The quality of early childhood teacher preparation programs is another important factor that may underlie inconsistencies in the association between professional development and observed quality. The requirement for lead teachers with bachelor's degrees and ECE teaching certificates in pre-kindergarten and Head Start programs has created a huge increase in the demand for higher education to prepare these teachers. Many of these teacher preparation programs are small, have limited resources, and may have had a different target audience in the past. Recently they have been expected to make major changes to accommodate public demand for preschool teachers with college degrees.

To examine how the programs have been meeting such demands, Hyson et al. (2008) conducted a national Web-based survey of early childhood higher education programs. A random sample of approximately half of the directors in all 1,126 higher education programs in early childhood education (ECE) yielded a 45% response rate, with about half of the responding baccalaureate programs being accredited by the National Council for Accreditation of Teacher Education (NCATE) and the National Association for the Education of Young Children (NAEYC).

The survey showed both positive efforts toward quality improvement and areas for concern. Many of these programs reported relying on national and state standards in determining their course and field work. Programs cited as a top priority helping their teachers learn to implement quality curricula effectively. However, only 37 percent of

baccalaureate programs cited as a top priority teaching students to engage more frequently in developmentally supportive teacher-child interactions (a key practice in producing quality and positive outcomes). Only 29 percent listed as a program priority helping students know about and use research in their practice.

Capacity issues appeared to constrain the quality improvement efforts of many programs. Most programs reported needing more faculty members, having a primarily part-time faculty, needing more professional development for faculty, and having heavy, often overwhelming course loads. These findings suggest that overburdened, under-resourced baccalaureate programs may not be able to provide the level of professional development that will translate into high-quality practices once the graduates start teaching in early care and education settings. This work emphasizes the need to consider not just whether early childhood educators have completed a bachelor's degree but also the quality of the degree-granting program.

Recent research has also emphasized the potential importance of ongoing training, defined here as professional development focusing on helping early childhood educators implement specific practices in interacting with children. A meta-analysis of published papers from 1980 to 2005 showed that specialized training improved the competency of child care providers ($d=.45$, $se=.10$) and children's outcomes ($d=.55$, $se=.30$), and that in-service training or training workshops were most effective when training was manualized and tailored to the specific audience (Fukkink & Lout, 2007).

Several recent studies provide further indications that important aspects of effective professional development may occur outside of a bachelor's degree program. Much of this work focuses on the provision of feedback on early childhood educators' interactions with children through

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technical assistance or coaching. A process that involves reviewing videotapes of the teacher interacting with children while delivering a well-defined curriculum may be especially promising in helping teachers become both more sensitive and effective in providing stimulating instruction (Lonigan & Whitehurst, 1998; Dickinson & Caswell, 2007; Pianta et al., in press). Programs in which the new teacher receives on-site mentoring also appear to improve and maintain the entry-level teacher's skills when she or he begins to teach in a setting that can have a very different orientation toward teaching than the teacher learned during her/his pre-service training. Several intensive curricula combined with coaching are also showing promising results in terms of both improved classroom quality and child outcomes (Clements & Sarama, 2007; Dickinson & Caswell, 2007; Pianta et al., in press). Many of these findings, drawn from studies of ongoing training and professional development, have potential to improve the quality of "pre-service" higher education programs as well.

Conclusions

In summary, the quality of early education and care can be improved when teachers receive carefully selected and implemented professional development (either training outside of an institution of higher education, or via higher education courses). However, at this point in time, the data suggest that quality is not *necessarily* higher when teachers have a college degree. It is likely that many higher education programs currently lack the capacity to ensure that their graduates are able to provide high quality early care and education. In addition, recent evidence suggests that going beyond pre-service education to consider in-service training may be important in assuring that quality is reached and sustained. We may also need to move beyond considering the lead teacher and his or her education as the lone support for quality, focusing instead on providing

professional development jointly to all program personnel who interact with children. We also see that the impact of the academic degree may vary by context and may especially vary depending on the extent to which the new graduate's work in an early care and education setting continues to be monitored and supported. Finally, early childhood educators may benefit from the background knowledge that formal education provides but may also need direct, ongoing feedback on the nature of their interactions with children in order to ensure high quality.

Overall, before it is reasonable to expect higher education to produce high quality ECE teachers, we need to pay more attention to the content and quality of the degree granting program, the context the early educator is teaching in, and the supports the educator receives in the teaching setting. These, and not the degree alone, are likely to lead to improved outcomes for children.

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