



**Supply, Demand and Accountability:
Effective Strategies to Enhance the Quality of Early Learning
Experiences Through Workforce Improvement**

An HSPC Whitepaper

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Supply, Demand and Accountability: Effective Strategies to Enhance the Quality of Early Learning Experiences Through Workforce Improvement

Executive Summary

The problem:

- Well-qualified, adequately compensated staff are the demonstrated basis of quality of teaching and early learning outcomes for young children;
- High rates of teacher turnover interfere with children's development and inhibit the development of effective teaching teams;
- Market constraints affecting both supply and demand preclude most ECE providers from recruiting and retaining well-qualified staff and providing high quality early learning experiences;
- While there is uncertainty regarding the optimum levels of staff qualifications and compensation, it is clear that current levels are far from adequate to recruit and retain well qualified staff;
- Washington lags other states in the minimum qualifications it sets for early childhood teachers and in innovative approaches to enhancing quality;
- Making substantial changes in staff quality will require major changes in organization, operations and financing of the ECE system; such changes will require sustained effort and experimentation;
- Low cost, low intensity interventions - such as training incentives and wage supplements – have produced marginal improvements in quality, but not of sufficient magnitude to assure access to good teaching by stable, qualified staff. Wage supplements do not appear to be a sustainable strategy due to substitution of supplements for base salary over time;
- Experience from other service systems, such as health care and elementary secondary education indicate that to be effective, the changes in ECE staffing will have to be dynamic (designed to adapt and improve over time) and performance oriented (based on direct observations of quality of caregiving).

The solution - a dynamic strategy overcoming constraints in supply and demand, while providing accountability.

1. Progressively increasing standards for both individual teachers and provider organizations; rating systems built around observation of actual quality of interaction between teachers and children;
2. Direct linkages between quality and cost, such as performance pay and tiered reimbursement, considering improvement as well as level of quality;
3. Capacity for professional preparation and development, by higher education institutions and community based organizations;
4. Information and financial support for families to make them effective consumers of high quality early learning services;
5. Organizational structures to monitor quality, analyze impact of pilot strategies and modify strategies as necessary.

Elements of An Effective Strategy To Overcome Supply And Demand Constraints While Providing Accountability:

1. Standards for individual teachers and provider organizations; rating systems build around observation of the quality of interaction between teachers and children;

- Establish standards for high quality teaching of young children, that include both formal education and demonstrated competence interacting with children;
- Create a dynamic structure that includes:
 - a. A base level of staff qualifications specified in licensing regulations that requires staff to have some reasonable knowledge of early childhood development and appropriate practice;
 - b. Higher levels of staff qualifications indicated for higher tiers or quality rankings;
 - c. Guidelines for compensation sufficient to recruit and retain staff with the levels of qualification specified in quality rankings;
 - d. A gradual phasing up of both minimum regulatory standards and quality levels so that overall system quality improves over time;
 - e. Rating of providers on improvement over time as well as on current quality;
 - f. Requirements and incentives for both provider organizations and individual teachers to improve quality of caregiving.

2. Direct linkages between quality and cost, such as performance pay and tiered reimbursement, considering improvement as well as level of quality:

- Establish a performance-based compensation system that increases compensation commensurate with increasing levels of qualification and demonstrated competence and achievement of child outcomes;
- Base public and private reimbursement rates on estimates of what will be required to recruit and retain qualified staff, desirable child:adult ratios and investment in professional development.
- Assured cash flow for providers making the transition to higher quality, including investments in staff performance and professional support. Build center budgets and reimbursement rates to include margin for reserves to be invested in quality improvements.

3. Capacity for professional preparation and development, by higher education institutions and community based organizations;

- Improve support and incentives for professional development, reaching both provider entities and individual teachers;

- Increase capacity of the higher education system to generate a supply of well qualified teachers, including both institutional support and student aid;
- Establish an individual staff certification system, including observations of interaction with children, peer monitoring and mentoring by a master teacher corps, and a management information system to serve parents, providers and monitoring agencies (public and private);
- Provide management training for center directors and administrators, including methods of staff development and financial management.

4. Information and financial support for families to make them effective consumers of high quality early learning services;

- Parent information programs, backed up by management information systems that provide information about quality derived from a Quality Rating System to parents, providers and public and private agencies;
- Sufficient financial assistance that low, moderate and middle income families can all afford high quality ECE; relate assistance to income to assure that the objective of middle income affordability is balanced with targeting the majority of funds to the children and families with greatest need.

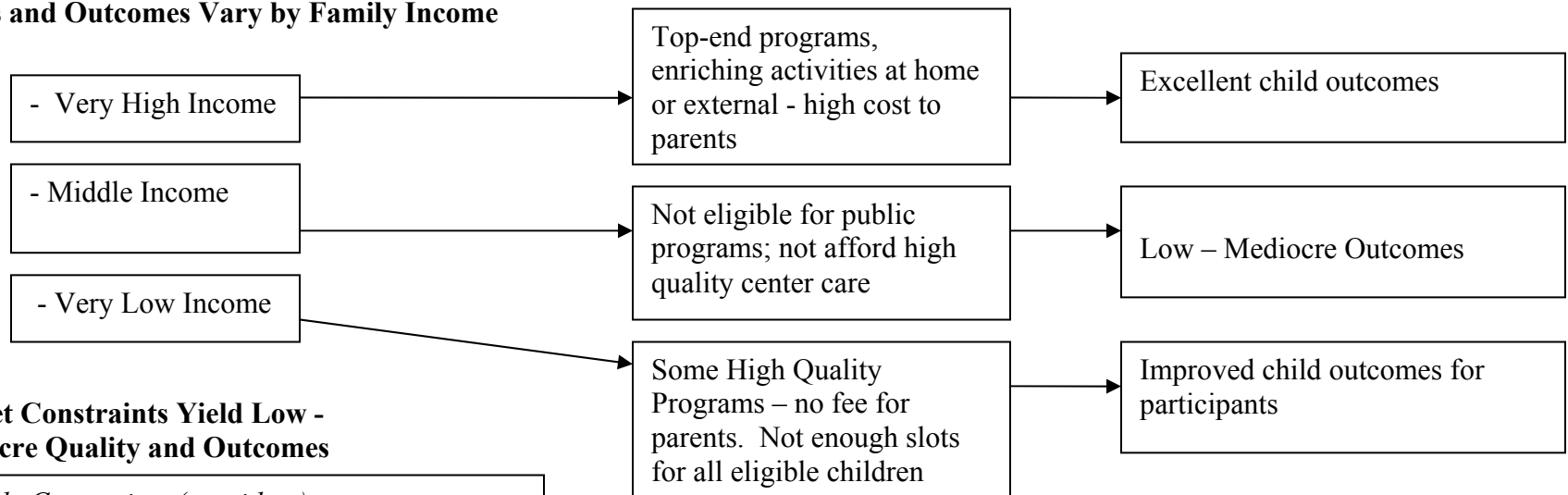
5. Organizational structures to monitor quality, analyze impact of evolving efforts and modify strategies as necessary.

- Develop an organizational structure that recognizes and supports the roles of both provider organizations and individual teachers, and provides appropriate incentives and accountability for each.
- Conduct controlled experiments on such topics as levels of compensation necessary to attract/retain qualified staff, changes in quality as a result of changes in standards and support, willingness of families to pay a higher percent of income for higher quality ECE.
- Consider an organizational structure that has oversight roles for both public and private agencies, recognizing that public agencies have great authority, private can have greater flexibility and independence;

(Figure 1: Market Failures Limiting Access to Effective Early Learning Opportunities)

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Access and Outcomes Vary by Family Income



Market Constraints Yield Low - Mediocre Quality and Outcomes

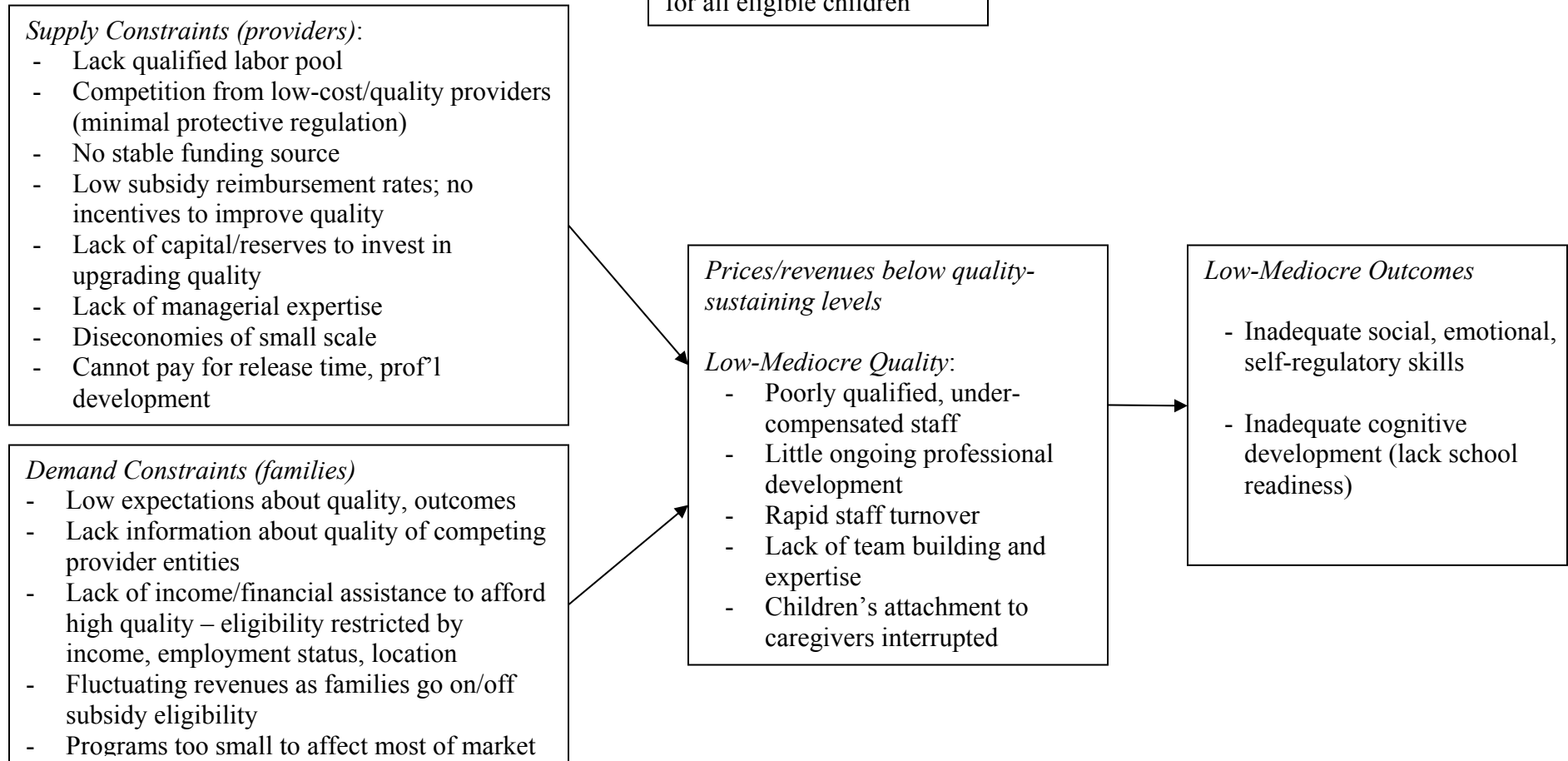
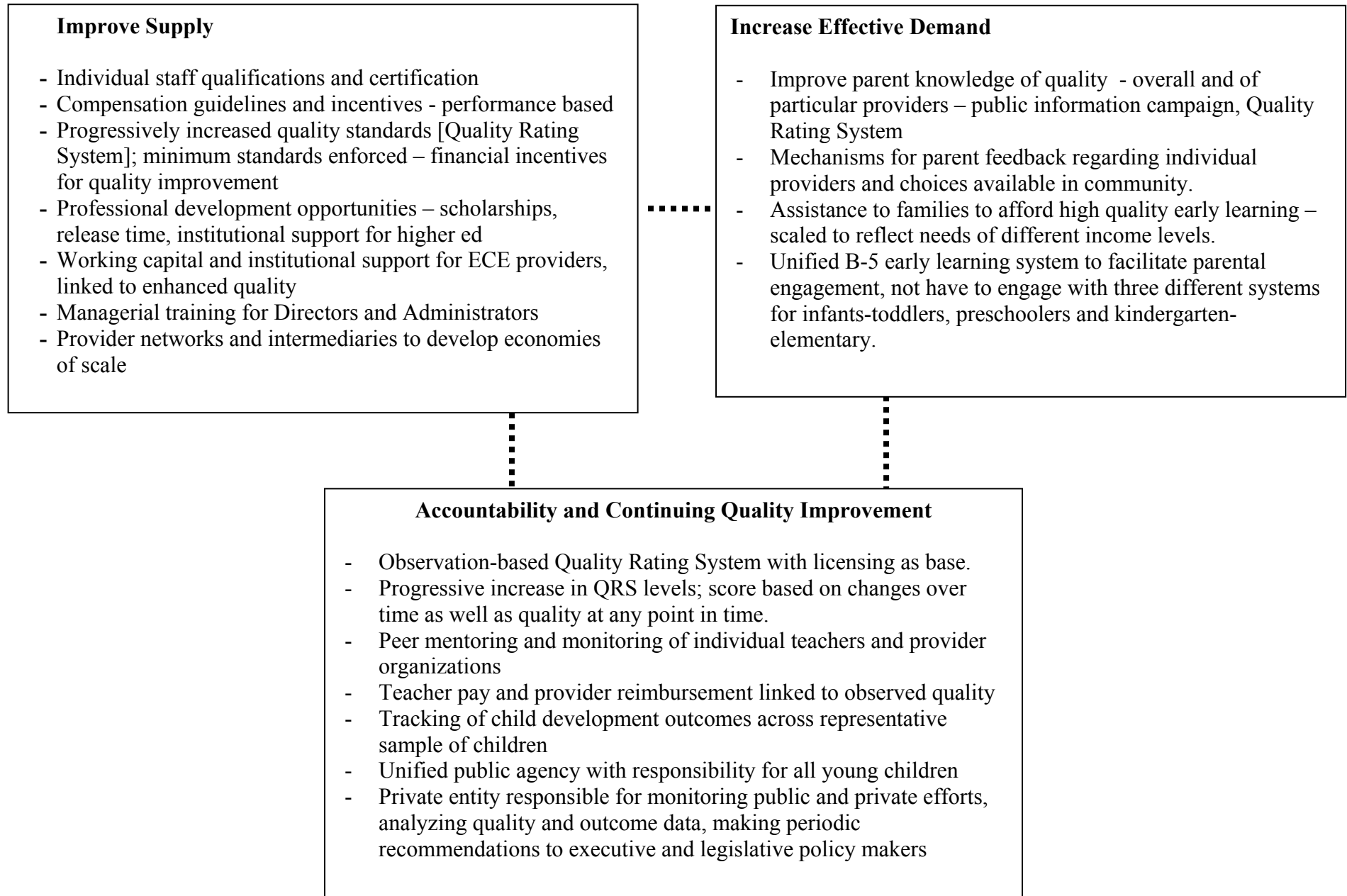


Figure 2: Market-Oriented Solutions for Access to High Quality Early Learning Opportunities

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**A Strategy to Improve the Quality of Early Learning Experiences by Upgrading the
Early Care and Education Workforce**

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A. Introduction: background and purpose of paper.

The purpose of this paper is to consider what would be an effective strategy to improve the quality of teaching and caregiving by Early Care and Education (ECE) staff, nationally and in Washington State. While there is a compelling, research-based professional consensus on the need for improved staff quality and qualifications, there is no consensus on what steps will be effective to achieve it. We therefore review the reasons a stable, well-qualified and appropriately compensated staff are necessary for achieving desirable child outcomes. We then consider what levels of qualifications and compensation are necessary, considering perspectives of staff recruitment and retention and market feasibility. Next is a review of what is known about the impact of various strategies that have been developed to address these issues, considering both available evaluations and applying economic and organizational principles to major design questions. Finally, based on these reviews, I suggest what seems to be a feasible strategy to promote quality over an extended time period.

A central premise of this paper, derived from a careful reading of the research literature, is that several popular strategies for increasing ECE staff quality have made statistically significant but small improvements. They are able to modestly improve the situation, but not to solve the problem. We have therefore tried to focus on what can potentially get the job done, recognizing that it will be a long-term endeavor. While some of the analyses, such as cost and affordability of high quality ECE, are based on Washington data, our previous analysis using national data produced similar results (Brandon et.al., 2004). As shown in Figure 2 above, effective solutions to promoting early learning require improvements in supply, effective demand and accountability. Demand issues were addressed at length in Brandon et. al. (2004) and related studies. In this paper, we focus on the supply and accountability components of an effective strategy.

B. Stable, Qualified Staff and Child Outcomes

What is the value of more highly educated and trained early childcare teachers/workers? Will higher education and more advanced training lead to increased performance and student outcomes? What is the potential for market-based incentives to improve staff quality?

Why are enhanced ECE staff qualifications and reduced staff turnover important to child outcomes? How do current staff qualifications compare to desirable levels?

“One of the most consistent and ubiquitous findings in this literature links the quality of child care that children receive to virtually every measure of development that has been examined. While hours of care, stability of care, and type of care are sometimes associated with developmental outcomes, it is the quality of care and, in particular, the *quality of the daily transactions between child care providers and the children* for whom they are responsible, that carry the weight of the influence of child care on children’s development.” (Shonkoff & Phillips 2001: pg. 310. emphasis added)

Several well-designed studies have documented the low to mediocre level of quality of care at most child care centers, using the classroom as a unit of analysis (Bryant et al. 2003, Helburn 1995, Marshall et al. 2001, Marshall et al. 2004, Tout & Sherman 2005).

A substantial body of research literature published over several decades has indicated that the quality of early learning experiences is determined primarily by the knowledge, skills and attitudes of the individuals caring for children (Bowman et al. 2001, NICHD Early Child Care Research Network 1996, 2000, Shonkoff & Phillips 2001, Zaslow et al. 2004; Tout, Zaslow & Berry, 2006). This is consistent with findings in the K-12 education literature that teacher-related factors are the greatest determinant, after social-economic status, of student performance (Goldhaber et al. 1999). Formal education is one indicator of quality. Caregivers with more education, particularly education in early childhood development, are more child-responsive, more nurturing, more stimulating. As a result, children cared for by better educated caregivers have better developmental outcomes (Cost Quality & Child Outcomes Study Team 1995, NICHD Early Child Care Research Network 1996, 2000, Raikes 2003). As a result, there is a consensus in the field that improving staff qualifications is central to improving quality caregiving and child outcomes (Bowman et al. 2001, Shonkoff & Phillips 2001). This is evidenced in both public and private professional policies, such as the requirement that a majority of Head Start teachers obtain college degrees (Head Start Amendments of 1998 (42 USC 9831) and the recent NAEYC Accreditation standard phasing up toward a requirement that three quarters of center teachers have a BA level degree in early childhood (NAEYC 2005). As will be discussed in a later section, however, higher education levels do not guarantee high quality, and it is not clear whether the education level of staff is itself the driver of better quality and outcome, or a proxy for other attributes of skilled caregivers. We will therefore use the term “qualifications” to refer to the entire set of attitudes, skills and knowledge that produces high quality interaction of adults and children. Qualifications may include formal education, specific skills training in early childhood development, supervised experience and demonstrated competence. “Quality” will refer to the observable pattern of interaction between adult teachers or caregivers and the children they are responsible for. There are many dimensions to desirable adult:child interaction, which are measurable by different scales.

The major child outcomes that have been shown to be affected by better qualified staff in ECE settings, and by high quality interventions for low income children and families, include (see Barnett 1995, NICHD Early Child Care Research Network 1996, 2000, Peisner-Feinberg et al. 1999, Shonkoff & Phillips 2001):

Short-term:

- Cognition: school readiness, reading and math achievement
- Language: vocabulary, IQ and communication skills
- Social and emotional development: interaction with peers
- Self-regulatory behavior: cooperation with adults

Long-term:

- School achievement
- Avoidance of crime and delinquency

□ Employment and economic self-sufficiency

The major features of teaching and caregiving that have been associated with better qualified staff and better child outcomes are:

- Supportive attitude and interaction
- Verbally and cognitively stimulating
- Sensitive and responsive interaction;
- Non-authoritarian and child-centered beliefs
- Continuing of relationship between caregiver and child
- Balance safety and freedom to explore
- Safe and supportive physical and social environment.

LEVELS OF EDUCATION:

High School Diploma/GED – General Education Certificate

Certificate or Diploma - These nondegree offerings generally lead to employment in an occupational field. For example, to enter fields such as computer science or teaching, you may first have to get a certificate or diploma.

CDA – The Child Development Associate (CDA) Credential is a nationally recognized early childhood professional credential. The CDA curriculum provides formal training and professional mentorship that supports each student’s ability to meet the national CDA assessment requirements. Each state has the power to establish qualifications for staff who work in licensed child care centers. State laws describe types of staff (Directors, Teachers, Aides) and establish guidelines regarding age, prior education, prior experience, and ongoing training.

AA – Associate’s Degree

An associate of arts (AA) or associate of science (AS) degree is received after completing two years of study similar to the first two years of a four-year college. Community colleges or four-year universities offer associate degrees. After earning an AA or an AS, one may transfer to a four-year college to complete the requirements for a bachelor's degree. The associate of applied science (AAS) degree is awarded on completion of technological or vocation programs of study.

BA – Bachelor’s Degree

Complete a four- or five-year, full-time program of study (or its part-time equivalent) at a college or university. The Bachelor of Arts (B.A.) and Bachelor of Science (B.S.) are the most common.

Accreditation. A certification of quality by a professional organization. Recognized accreditation agencies include NAEYC, The NAFC, Montessori Accreditation Council for Teacher Education; Association of Christian Schools International; The National Early Childhood Program Accreditation; and The North Central Association Commission on Accreditation and School Improvement. Requires a combination of self-study and on-site observation by the accrediting body, as well as meeting higher structural quality standards.

Numerous studies have shown that low income children are at greatest risk for poor outcomes in general, and have the lowest level of developmental outcomes in the early years (Brooks-Gunn & Duncan 1997; Barnett et.al., 2004). Because of this risk, the impact on development of quality teaching and caregiving may be heightened for children of lower socio-economic groups, and the strong evidence of long-term social and economic benefits has been derived from interventions with very low income populations (Karoly et.al. 1998). However, different studies examining the relationships among teacher qualifications, ECE quality and child outcomes across a broad range of income groups have produced mixed evidence in this regard. Children from middle income families have been shown to lag upper income children in both cognitive and emotional readiness for school (Barnett et al. 2004), and some studies have shown children across all socio-economic groups to derive equal benefits from high quality ECE or participation in preschool programs with college-educated teachers (Burchinal et.al.2002, Gormley & Phillips 2003; Gormley et.al., 2005). Vandell and Wolfe (2000) suggest that there is likely to be a differential impact of providing access to high quality ECE for low income children because their parents work disproportionately in non-standard hours, when high quality ECE is not available.

What levels of formal qualifications are required for effective early childhood teaching?

Unfortunately, the strong, research-based professional consensus on the need for improved staff quality and qualifications, is not accompanied by a consensus on what

steps could be effective to achieve it. The research literature leaves unanswered many questions that are critical for designing program interventions to improve caregiving. For example, there are contrary findings regarding whether general educational attainment is more or less important than specific training in early childhood development and practice.

Regarding general education level, there is no clear threshold of acceptable education level (Zaslow et al. 2004; Tout, Zaslow & Berry, 2006). Further, it is not yet possible to determine whether it is a specific skill set learned in college that makes a better teacher/caregiver, or whether those who achieve a college degree are more competent individuals, and their competence shows up in their caregiving as well as in other parts of their lives. Teachers attitudes and psychological condition also seem to factor into the quality of their interaction with children (Pianta et al. 2005). An important lesson from elementary and secondary education is that formal pre-service qualifications may not guarantee effective classroom practice. When comparing across a wide range of predominantly low qualified, low paid teachers, those with more formal education seem to do better. However, evaluation of the Georgia universal pre-K experience yielded no significant difference in pre-K student performance between BA-level, certified public school teachers and teachers in those child care centers that qualified for pre-K participation (mostly non-BA level; Henry et al. 2002, Henry et al. 2003). Similarly, a major study of pre-kindergarten programs across six states found that “Ratings of classroom productivity and emotional quality were below the mid-point on a seven-point scale, despite teachers being fully credentialed and experienced and using an organized curriculum (Pianta, 2006, p.239). As noted by Pianta (2006, p. 240), “The set of classroom, program, or teacher parameters used to regulate classroom/setting quality does not appear to ensure high quality, nor does professional development as currently implemented.” It is therefore important to consider policies and programs that not only assure formal qualifications, but also require demonstrated skill interacting with children. The ECE field has a model for this in the Child Development Associate (CDA) credential, which entails less than an AA level educational requirement, but requires a demonstrated competence interacting with children. In one major study, holding a CDA was shown to be a better predictor of quality of care than formal education level (Raikes 2003). Similarly, an evaluation study of the Oklahoma quality rating system found that centers which met teacher standards that included a CDA as an alternative to a BA/BS level degree had high quality ratings, even with a small percentage of BA/BS level teachers (Norris et.al. 2003). Tout, Zaslow & Berry (2006) also cite two studies that found positive effects of a CDA on quality, equaling that of a BA on some dimensions of caregiving.

TEACHER ALTRUISM: it has been found that school teachers will accept a lower wage than other workers with comparable qualifications because they are committed to the mission of teaching.

Further, most of the research literature is cross-sectional, comparing the caregiving skills of different teachers at the same point in time. There is little research literature evaluating the impact of specific educational or training programs on caregivers already working in ECE on caregiving behavior. For example, the Smart Start Evaluation Team (Bryant et al. 2003) has documented improvements in program quality over time for

centers participating in the cluster of Smart Start activities. These include on-site technical assistance, teacher education scholarships and wage supplements, and increased child care subsidies. However, the evaluation has not been able to isolate the specific components contributing to quality improvement; understanding these components is necessary to craft effective policies regarding professional preparation, development and recruitment. This illustrates the difficulty of determining whether better caregiving is a result of knowledge and skills that can be imparted in a higher-ed classroom, or whether they occur simultaneously with other caregiver attributes (better education, greater income, more stable family life) that in turn affect caregiving. It is also possible that better funded centers have more resources to recruit and train their staff, or that their better funding reflects the fact that their client parents and community place a greater value on high quality ECE. The federal Child Care Bureau has recognized the importance of these information gaps, and funded a multi-year, multi-site evaluation of several training interventions (QUINCE: Quality Interventions in Early Care and Education) which is currently under way.

The policy implications of this body of research are that a college level of education is likely to be a significant component of providing high quality early learning, regardless of whether it is due to the educational experience producing certain knowledge, skills and attitudes, or whether it is due to selecting more generally competent individuals who are more likely to possess those attributes. However, since college education is no guarantee of competence, field demonstration of effective interaction with young children should be another component. Finally, there needs to be more detailed experimentation and analysis of what types of training or in-service education may improve the knowledge, skills and attitudes of current staff.

Why is decreasing the turnover rate for ECE teachers important to child outcomes? Is it possible to utilize the current turnover rate in child care to attract more highly qualified workers while upgrading the qualifications of a portion of the current workforce?

Turnover rates of ECE staff are a concern both from the perspective of children developing secure attachment to adults and in consideration of effective management.

It is conventional wisdom in the field that ECE staff turnover rates are too high, approaching 32 percent a year. However, while turnover rates are high, the problem is probably not this extreme. It is important to distinguish between job turnover – the rate at which workers leave a particular place of employment, and occupational turnover – the rate at which they leave a field entirely (Center for the Child Care Workforce and The Human Services Policy Center 2002, Whitebook et al. 2001). Job turnover affects the stability of a child's relationship to a caregiver, and unsettles the center's operations. Occupational turnover affects the child and the center, and also limits the return to investments in professional development, since the newly acquired knowledge and skills end up not being applied to the care of young children. The most highly publicized turnover rates – about 32% -- are for job turnover; occupational turnover seems to be about half that rate, about 16% (Whitebook et al. 2001).

It should be noted that the sample in the widely cited staffing study by Whitebook et. al. (2001) was of relatively high quality centers, with almost half the teachers having a BA or higher degree, and not necessarily generalizable to all centers. Within their sample, more than half of centers had low turnover – less than 20%. The remaining 47% of centers had a wide range of teacher turnover, from 21 to 100%. It is therefore not clear to what extent high teacher turnover is a characteristic of certain types of centers, or an endemic feature of the entire ECE field.

The overall turnover rate for ECE center teachers also seems to be an average between one group of teachers that stays a very long time, and another group which turns over rapidly, either moving among centers or moving out of ECE entirely. Such a pattern was documented in the Oklahoma QRS validation study, with about half the teachers having long duration tenure and a smaller share turning over rapidly (Norris et.al, 2003). It is also notable that Whitebook et.al. (2001) divided their sample of center teachers into three subgroups of teachers who left a center between 1996 and 2000, each of which was about one third of the total. One group was quite stable, with an average tenure in the field exceeding 15 years. A second set had an average tenure of almost 9 years in the field. The third group, newcomers to a particular center between 1996 and 2000, had an average of more than 10 years in the ECE field. So even though there was considerable job turnover, most of the sampled teachers had a decade of experience in ECE. The ECE stayers earned an average wage of \$16.00 per hour in 2000. Of those who left their jobs, those who stayed in the ECE field averaged \$14.24, while those who left ECE averaged \$18.40 in other fields (Whitebook et al. 2001). This suggests that many of those with the greatest alternative opportunities leave. Interestingly, there was a substantially greater proportion of teachers of color and non-English language fluent teachers among the stayers than the leavers. This may reflect either greater commitment to early childhood among those groups, or the relative lack of more desirable alternative occupations.

There is a dual purpose to reducing the current turnover rate for ECE staff. The primary concern is maintaining a secure attachment of children to caregivers. If children experience a rapid change of caregivers, it interferes with their ability to develop secure attachment and trust, which in turn inhibits their social, emotional, cognitive and regulatory development (Whitebook et al. 1998).

An important secondary concern is maintaining a stable work environment, where team building and professional development can be nurtured. We cannot harvest the benefits of investment in professional development if large numbers of staff leave the field (but not

TYPES OF TURNOVER

1. **Job turnover** occurs when a teacher or director leaves a child care center, but does not necessarily leave the child care field. Job turnover may be involuntary, in the case of a dismissal, or voluntary, as when a teacher or director leaves a program for a better-paying job or in response to a pregnancy or family move.
2. **Position turnover** occurs when a teacher moves to a different classroom within a center, or when a teacher or a director moves to a different site within an agency, resulting from a promotion or perhaps a desire to work with another age group of children.
3. **Occupational turnover** occurs when a teacher or director leaves a job at a center and also departs from the child care field.

Source: Whitebook M, Sakai LM. 2003. "Turnover Begets Turnover: An Examination of Job and Occupational Instability Among Child Care Center Staff" *Early Childhood Research Quarterly*, Vol. 18, No. 3, 2003, pp. 273-293.

job) each year. However, while we know that current turnover rates are too high to achieve these objectives, there are no clear guidelines about what is a desirable/acceptable turnover rate. Creating a situation of virtually no turnover, where low quality teachers remain in place for the sake of stability, is not the objective to be sought. Rather, we want to retain skilled teachers long enough to assure stability and reap the return on investment in their professional development and on-job experience. However, we should also want systems that identify poorly performing teachers and either guide them to improvement or counsel them out of the field. A reasonable level of mobility and opportunities for advancement within or across fields is probably necessary to attract high quality professional staff.

Evaluations of wage supplement initiatives show that turnover is affected by value of staying, and the opportunity cost of leaving. If there are very low pay, and low entry requirements, then there is little cost to leaving the job or occupation.

K-12 research on the relationship between teacher experience and gains in student achievement suggests that the critical period for becoming an experienced, rather than novice teacher is 3-5 years (Goldhaber 2002, Goldhaber & Anthony 2004). I know of no comparable ECE studies, and more research is required to determine the critical points in teacher tenure and performance.

While there has been a lot of speculation about ECE teachers moving on to higher paying jobs in public schools, this does not appear to be a major cause of the turnover documented by Whitebook et.al. in their *Then and Now* study. Of the teachers who left their ECE jobs, only 7% became elementary school teachers. Of course, these were probably concentrated among the most highly educated ECE teachers, since a BA or MA degree is required of elementary school teachers. If a higher percentage of ECE teachers come to have BA degrees, this may become a more significant issue. The degree to which it is important will also be determined by whether demand for elementary school teachers increases or decreases, and whether college-educated ECE teachers are new individuals added to the teaching corps or are drawn from the current pool of kindergarten-elementary teachers. While it seems reasonable to assume that there will be some additions and some draw down of the existing teacher pool, this will also be affected by higher education policy. If additional resources are made available to institutions of higher education, then they are more likely to create a new pool of ECE teachers and limit the potential competition between early learning and elementary schools for teachers. If there is less competition among employers, then the levels of compensation necessary to recruit and retain early learning teachers will be moderate.

C. How far do we have to go: what are the current levels of ECE staff qualifications and compensation?

As noted above, formal education of teachers is a highly imperfect measure of ECE teacher competence. However, it does seem clear that having most ECE teachers college educated at the AA or BA level will be a necessary component of assuring high quality

early learning opportunities. It is therefore necessary to examine the current level of ECE teacher education and see how far we have to go to achieve that goal.

While we lack a consistent national data source indicating the current qualifications of ECE teachers, we do have a range of good quality surveys from a diverse set of states that shine some light on this subject (see Stahr-Breunig et al. 2003 for survey quality criteria). I have reviewed these surveys in another paper (Brandon & Martinez-Beck 2005), and have reproduced the data below:

Table 1: Current Educational Qualifications of ECE Staff

	Centers - Directors		Centers - Teachers			Family Child Care Providers	
	% BA+	%AA	%BA	%AA	College: BA+AA	%BA	%AA
Hawaii	80	16	48	37	85	NA	NA
Illinois	33	37	24	30	54	10	10
Mass	NA	NA	14	25	39	NA	NA
Maine	37	16	22	14	36	12	12
Washington	No Washington Data Currently Available						
Florida	39	22	16	18	34	NA	NA
North Carolina	32	16	12	10	22	10	10
Nevada	20	18	8	11	19	NA	NA
Oklahoma	20	10	8	3	11	12	12
Vermont	NA	NA	NA	NA	NA	15	15

Reprinted from Brandon & Martinez-Beck, 2005; Washington notation added

For center teachers, it seems likely that the average is around 20-25 percent at the BA level, plus 15-20 percent at the AA level. There is considerable variation, with some unexplained state features, such as Hawaii having an exceptionally high percent of college educated teachers, and Oklahoma and Nevada having quite low levels. Overall, it seems clear that a majority of center teachers currently lack any kind of college degree. Lacking any reliable Washington data, and knowing that Washington has mid-range licensing and program requirements (see table 2 below), it is therefore likely that less than half of Washington's ECE teachers have a college degree. For family child care providers, the education level appears to be considerably lower, with about 10-15 percent each with BA or AA degrees. It is clear that if the field is to move toward having a majority of teachers with a BA level degree, a substantial change will be required. To give a sense of the scope of change required, HSPC has estimated that the number of paid ECE staff in the US

Washington's Early Childhood Education and Assistance Program (ECEAP)

- WA state preschool program, largely modeled on Head Start;
- Eligible population is four- and three-year-old children at or below 110 percent of the Federal Poverty Guidelines.
- No fees or charges to family
- Education, health, safety, and nutrition, family support and parent involvement
- Operated by local contractors, including school districts and community colleges, so wages vary considerably
- Half day, school year

is 60% as large as the number of elementary and secondary school teachers (Center for the Child Care Workforce and The Human Services Policy Center 2002). Since there are over 52,000 elementary and secondary teachers in Washington, there are likely to be tens of thousands of paid ECE staff.

The great variation among states regarding the educational qualifications of teachers reflects both differences in state culture, labor markets and differences in regulation. It also reflects the fragmentation of funding sources. States with large, school-system-based pre-K programs tend to have stronger teacher requirements for those programs than in the general ECE market. The federal Head Start program has moved to require that a majority of teachers have a college degree, at either the BA or AA level (ACF 1998), and recently met that requirement (Brandon & Martinez-Beck 2005). State child care regulations and resources vary considerably in how much education or preparation they require and how much support they provide to assist in workforce improvement.

The following tables, excerpted from Ackerman (2003; Washington emphasis added) show that there is a wide variation among states with regard to the level of professional preparation required. It tends to be much higher for pre-K programs – often based in or linked to public school systems – than for child care centers. Washington State is clearly not a leader in this regard.

Table 2a, b: Excerpts from Ackerman, Debra J.(2003). “States’ Efforts in Improving the Qualifications Of Early Care and Education Teachers” National Institute for Early Education Research; Rutgers University Graduate School of Education.

Table 2a: Professional Preparation Requirements for State PreK Programs

Child Development Associate (CDA)	Arizona, Colorado, Connecticut, Delaware, Florida, Iowa (in private ECE setting), Massachusetts (if in private ECE setting), Missouri, Oregon, Vermont (if in private ECE setting), Virginia
Associate’s Degree	Ohio (by 2008)
AA in Early Childhood or equivalent	Alabama, Georgia, North Carolina, Washington (ECEAP)
College Credits in Early Childhood	California (24 credits)
Bachelor’s (BA) degree without specific Early Childhood endorsement or equivalent	District of Columbia, Louisiana, Maine, Michigan, Minnesota, Nebraska, Nevada, New Jersey, New York, West Virginia, Wisconsin
BA with specific Early Childhood endorsement or equivalent	Arkansas, Illinois, Iowa (if in public school setting), Kansas, Kentucky, Maryland, Massachusetts (if in public school setting), Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont (if in public school setting)

Source: National Center for Early Development & Learning (NCEDL), 2001.

Original author’s note: Alaska, Hawaii, Idaho, Indiana, Mississippi, Montana, New Hampshire, North Dakota, South Dakota, Utah and Wyoming do not have state-financed preKs.

Table 2b: Professional Preparation Requirements for Child Care Centers

No requirements	Alaska, Arizona, Arkansas, Colorado, Connecticut, Idaho, Indiana, Iowa, Kentucky, Louisiana, Maine, Michigan, Mississippi, Missouri, Nebraska, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Utah, Virginia, West Virginia, Wyoming
10 clock hours or less of training	Georgia (10 hours within 1st year of working), Montana (8 hours within 1st year of working), Nevada (3 hours within 1st year of working), Texas (8 hours)
11-20 hours of training	Alabama (12 hours), Washington (20 hours)
More than 20 hours of training	Delaware (60 hours plus 1 year experience), Florida (40 hours), Maryland (90 hours plus 1 year experience), Wisconsin (2 non-credit ECE courses plus 80 days experience)
Child Development Associate (CDA)/certified Child Care Professional (CCP)	District of Columbia, Hawaii (plus 1 year experience), Illinois, Kansas (plus 1 year experience), Minnesota (plus 1,560 hours of experience), New Jersey (plus 6 credits in Early Childhood or related field)
College coursework in Early Childhood or equivalent	California (6 semesters), Massachusetts (2 year vocational child care course), Vermont (12 credits plus 3 years Experience)
Associate's degree (AA) in Early Childhood or Equivalent (2 year vocational child care course)	New Hampshire
Bachelor's (BA) degree (must meet standards for state Early Childhood certificate, with 24 Early Childhood Education credits and 6 credits in student teaching)	Rhode Island

Source: Azer, et al., 2002; LeMoine, 2002.

Original author's note: "Of the states that have no requirements for teachers in private ECE centers, Alaska, Idaho, Indiana, Mississippi, North Dakota, South Dakota, Utah, and Wyoming also do not have any state- financed preKs."

D. What Level of Compensation is Necessary to Recruit and Retain Well-Qualified Staff?

In the US economy, opportunities for increased compensation are the primary incentives used to draw desired workers to a field. If market forces are to be mobilized to recruit qualified staff, ECE will require adequate resources to compete with other sectors for skilled labor. This includes both the ongoing flow of revenues to cover costs and reserve revenues available for investments in improved service.

Compensation:
 salary plus benefits. Benefits include retirement, health insurance, paid leave, discounted tuition for caregiver's children.

Child Care Worker

Minimum qualifications:

Varies by state, HS diploma is common.

Job Description:

Nurture and teach pre-school children in child care centers, nursery schools, preschools, public schools and family child care homes.

Preschool Teachers

Minimum qualifications:

Vary by state and by employer; public schools require BA and teacher certification.

Job Description:

Nurture and teach pre-school children in child care centers, nursery schools, public schools, and family child care homes.

Human Services Worker

Minimum qualifications:

AA or certificate in social work/related fields.

Job Description:

Various job titles; usually work under the direction of professionals from a variety of fields (e.g., nursing, psychiatry); provide direct/indirect client services.

Social worker

Minimum qualifications:

BSW minimum; MSW for clinical practice; many health/mental health settings require MSW.

Job Description:

Help people function the best way in their environment; deal w/ relationships & solve family & personal problems. School social workers diagnose students' problems and arrange needed services.

Elementary School Teachers

Minimum qualifications:

public schools require BA, approved teacher education program, and licensed

Job description:

Introduce children to numbers, language, science and social studies

[See Appendix B for a more detailed descriptions.]

Current low levels of formal education for ECE teachers are consistent with a low level of compensation. While it seems clear that wages in the current \$18-25,000 a year range are not sufficient to recruit and retain well-qualified teachers, there is great uncertainty regarding how much more would be required. Table 3 below shows a wide range of salaries among different AA and BA level occupations in health, education and human service fields. Studies that have attempted to directly measure the independent relationship between wages and quality of caregiving have found no significant relationship with wages once education and other key characteristics are held constant. This holds whether one is looking at child care center teachers with wages in the \$8-11 an hour range (Tout & Sherman 2005) or pre-K teachers averaging \$21 an hour (Pianta et al. 2005). Thus, wage levels appear instrumental to attracting qualified staff, rather than a direct objective.

We must therefore focus on determining the market wage rates for the alternative occupations currently drawing the staff who potentially meet the qualifications desired for ECE. Table 3 below compares the average wages of child care workers and preschool teachers in Washington State with the wages for education and human service occupations that require an AA or BA level degree plus certification (BLS 2005b). It is clear that ECE staff wages are far below the prevailing levels paid to recruit and retain most health and human service workers at the AA level, far less the BA level. The gap in average annual wages between current ECE staff and health, human service and educational employees in occupations requiring either an AA or BA levels of qualification is about:

- \$10,000 to reach market wage levels for occupations requiring an AA,
- \$25,000 for occupations requiring a BA degree.

Table 3: Average Annual Wages in Washington State (November, 2004)

	<i>Mean Annual Wage</i>		
<i>Federal Poverty Level¹</i>	15,219		
Dishwashers	17,870		
Child Care Workers	18,350		
Maids, Housekeepers	19,250		
Locker Room Attendant	19,350		
Grounds Maintenance	22,320		
Janitor, Cleaner	24,240		
Pre School Teachers	24,990		
Occupations Requiring AA Degree*		Occupations Requiring BA+Certification *	
<i>Occupation</i>	<i>Mean Annual Wage</i>	<i>Occupation</i>	<i>Mean Annual Wage</i>
Dental Assistants	32,670	Social workers (Child, Family and School)	35,390
Occupational therapy assistants	38,910	Dieticians and nutritionists	51,040
Social and Human Service assistants	23,690	Recreational therapists	43,820
Recreation workers	23,800	Medical and clinical technologists	51,120
Registered nurses	59,650	Teachers. Kindergarten	42,050
Cardiovascular technologists	52,650	Teachers, Elementary	44,820
Paralegal and legal assistants	46,170		

* These are minimum requirements of a degree plus certification; some professionals included in the wage average may have higher level degrees

Source: US Dept of Labor, Bureau of Labor Statistics, OES (2005a) – accessed 1/17/06 at http://www.bls.gov/oes/current/oes_wa.htm

¹ 2004, for family of 3, 1 adult, 2 children.

E. Affordability/Market Feasibility

How much will appropriate compensation change the cost of early education, how much can middle income families afford to pay, and how much public/private subsidy would be required to assure that middle income families are not priced out of the market?

What are the proper roles of the market and public policy in this equation? Is it possible for the market, more so than public (social) policy, to reward early child care workers properly at a level that reduces turnover and increases outcomes for children?

As noted above, there is a wide range of potential compensation levels appropriate for recruiting and retaining well qualified ECE staff. We currently have a mixed private-public market. Compensation for the majority of workers is set by private for-profit or non-profit providers. For a significant portion of the workforce, compensation is set either directly by public agencies operating programs (Head Start, public pre-K), or indirectly through the reimbursement rates paid on behalf of low income families. In this mixed market, increased compensation will have to be passed on in the prices charged to parents or paid by public or private agencies on behalf of parents. While many factors affect the cost and price of ECE, staff compensation is the main driver. In the *Universal Financing Project* analysis (Brandon et al. 2004), we found that staff compensation accounted for 70-85% of the total costs of a high quality ECE system. Improved compensation therefore leads directly to issues of market feasibility (can consumers afford the enhanced service) and subsidy cost (what will it take for public or private agencies to assist parents who cannot afford higher prices). In this section of the paper we therefore address the issue of what these different compensation levels imply for the pricing and market feasibility of paying adequate compensation. Two measures are applied to get a sense of market feasibility.

The first measure is *family affordability*. If the cost of high quality ECE is more than middle income families can afford at a share of income that lets them meet other necessities (food, health care, housing, transportation), then unless they receive assistance, providers will not be able to pass on to consumers the full cost in prices charged. The problem with affordability analysis is that it does not take into account that families trade off among different goods and services and have different priorities. For example, many families spend more than the 30 percent of income that experts consider reasonably affordable for housing; others spend less than that amount, giving other purchases a higher priority.

The second perspective – *market pricing* – responds to the inability of the family affordability approach to consider variation in consumer preference patterns. It does this by examining the high end of prices currently charged to see what the market will bear. Seeing how much families with greater or lesser budget constraints have been willing to pay for ECE, given their other consumption needs and preferences, provides an indication of what range of price is feasible. It should be borne in mind that the desirability of particular goods or services may change as either quality changes or consumers gain a greater appreciation of their utility. Thus, families may be willing to spend a greater

share of income for ECE if they perceive it to be higher quality than at present and if they gain a better appreciation of its value to their children. A consumer education component of a quality improvement strategy, communicating levels of quality determined by a Quality Rating System, may thus affect the price equation. Such perceived desirability, however, may hit against a budget constraint of available income, so both perspectives are necessary to judge market feasibility. We will therefore consider both to determine the market feasibility of offering higher quality and higher cost ECE.

Family Affordability:

Unfortunately, there is no definitive metric for affordability of ECE (Brandon 2004). A limit of 10 percent of family income is often used in the field, and is embodied in federal guidelines; however, it is not clear (a) what the basis for this limit is, (b) whether it refers to percent of gross or net income, and (c) whether it applies to the cost per child, or total family expenditures.

For the sake of this analysis, we have attempted to reflect a concept of reasonable disposable income -- the spending of which will not interfere with a family's ability to meet its other consumption needs (demands). For middle income families, we therefore apply the 10 percent criterion to total family income after taxes. Since one third of families with a child age B-5 have another child in that age range, we assume that only 6-7 percent of net income is affordable on a per child basis.

In our multi-state analysis (Brandon et al. 2004), we found that:

At a lower salary standard (BA linked to social worker wages), the 2001 hourly costs of the high quality ECE implied by the policies specified by state teams (informed by expert working groups) ranged from \$4-6 for infants, \$3-5 for toddlers, and \$3-4 for preschool age children.

At a higher salary standard (BA linked to elementary school teacher wages), the costs ranged from \$5-8 for infants, \$4-7 for toddlers, and \$3.50-5 for preschool age children.

In Table 4 below, the hourly costs of those high quality policies are calibrated to reflect wage levels in the Washington state labor market, adjusted for inflation (CPI) to 2004 prices. We also made some refinements based on additional studies we conducted (HSPC 2005).² It should be noted that as Washington policy makers develop their own quality standards, cost estimates will have to be developed reflecting those particular

² Under the Minimum Adequate A (lower cost) scenario, 21% percent of center staff would be at the BA/BS level for infants, 26% for toddlers and 50% for preschoolers.

- Under the Minimum Adequate B (higher cost) scenario, 51% percent of center staff would be at the BA/BS level for infants, 47% for toddlers and 52% for preschoolers.
- Under either A or B, about one in twenty (5%) FCC providers would have BA/BS level degrees, 40% would have an AA and 55% a High School diploma.

specifications. HSPC is producing such estimates as part of the financial access study we are conducting for the Washington Learns Early Learning Council.

Table 4: Washington 2004 Estimated Hourly Costs of High Quality Center-based ECE (based on policy specifications) [HSPC Estimates, Updated 2006]

	Lower Salary Standard (Social Worker Equivalence)	Higher Salary Standard (Elementary Teacher Equivalence)
Infants (0-17 months)	6.35	9.94
Toddlers (18 – 35 months)	5.37	8.41
Pre-Schoolers (36- 71 months, if not in school)	4.45	6.29

What price can middle income families afford to pay for high quality ECE?

Table 5 below shows that a middle income family of four in Washington (\$70,857 annual gross income) could afford about \$2.62 an hour for total family expenditure. This would be about \$1.83 an hour per child, if there were more than one child in the family. The affordability figures would be substantially lower for a family of three, where median family income is \$57,773. Prices of almost \$4 to \$9 an hour would be two to four times as much as a middle income Washington family could afford.

Table 5: Affordability of Full time, Full year ECE

	<i>WA 2004</i>
Med. Fam. Income (family of 4) ³	\$70,857
Take Home Pay – annual	\$54,560
Hourly Take Home Pay	\$26.23
10% Take Home Pay	\$2.62
7% Take Home Pay	\$1.83

Another way to look at affordability is to compare what current average ECE costs are as a percentage of income, to what share of income would be required to pay for high quality ECE. For the purpose of this analysis (Table 6 below), we compare the cost of full time, full year ECE to after-tax take income of the average Washington family. It should be noted that the ratio of current prices to income are probably over-estimates, since many families find these percentages of income un-affordable, and trade down to

³ Families of 4 predominate in use of paid non-parental care.

lower quality ECE or use fewer hours per week. These are also full prices as reported by centers on the state market rate survey; many families receive discounts from these prices. Thus, the increases from current affordability to high quality affordability are probably greater than they appear in Table 6.

Table 6: Cost of ECE as Percent of Average After-Tax Income

	<i>Current Average Price*</i>	<i>Cost of High Quality: Lower Salary Standard</i>	<i>Cost of High Quality: Higher Salary Standard</i>
Infant	18 *	23	36
Toddler	15 *	19	30
Pre-Schooler	13 *	16	23

* It should be noted that the percentages for current prices are probably over-estimates, since many families find these percentages of income un-affordable, and trade down to lower quality ECE or use fewer hours per week.

We see that moving to higher quality ECE would entail costs that are substantially higher than what families are currently paying, requiring expenditure of from one fifth to one third of after-tax income *per child* for ECE. For the 30 percent of families with two or more children age B-5, full time, high quality ECE would cost between 40 and 70 percent of after-tax income.

Market rates:

States are required to conduct surveys of licensed child care providers at least every two years to determine the current price structure in the child care market. These data indicate that many parents pay more than the table above suggests they can afford. The median or 50th percentile prices for center-based ECE in Washington (Schrager & Rowswell 2005) average (with wide variation across regions of the state) \$4.67 for infants, \$3.88 for toddlers and \$3.44 for preschoolers, or about 13-18 percent of take home pay, per child (or 19-25 percent for a family with two young children).

How do parents pay more than they can ostensibly afford? First, many use less than full time ECE, even if their earnings are full time. Second, many shift from centers to lower cost/quality modes of care, such as Family, Friends or Neighbors – for all or part of the week. Others may stretch to meet their ECE budget by shorting family needs for housing or health care. Still others may fail to fully pay their ECE bills, or receive discounts, reducing providers’ expected revenues and leaving them the difficult choice of expelling children or absorbing the loss. This inability to fully recover costs adds to the downward pressure on provider quality.

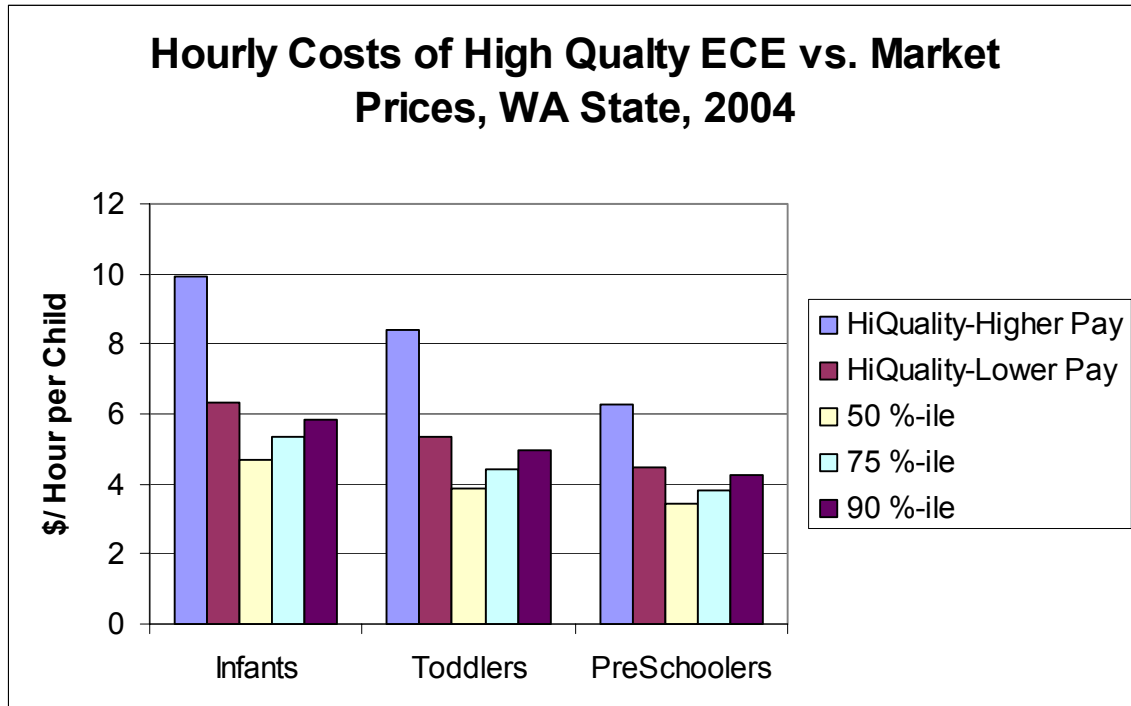
When comparing HSPC estimated costs to market prices, it is important to bear in mind that prices are an imperfect reflection of costs. Witte (2002) has documented considerable cross-subsidizing by age. It is common practice in the field to charge

families with children age 3-5 more than actual cost in order to be able to charge families with infants less than actual cost, since the actual costs for infants are not affordable. That is one reason that HSPC estimated costs are closer to 75th percentile prices for preschoolers than for infants.

The 75th percentile market rate reflects the price that upper-middle income families are willing and able to pay for ECE. The 90th percentile rate indicates what upper income families, facing little or no budget constraint, are willing to pay.

In 2004, 75th percentile rates averaged across regions were about \$5.33 an hour for infants, \$4.42 for toddlers and \$3.82 for preschoolers. These are somewhat lower than the HSPC estimated costs of high quality ECE at the lower salary standard. However, they are well below (about two thirds as high as) the high quality costs at the higher salary standard.⁴

Figure 3



The 90th percentile rates indicate the top of the market – what families who have little or no budgetary constraint choose to pay for center care (leaving out what affluent families pay for nanny care, which may be much higher). These top-of-the-market prices average about \$5.81 for infants, \$4.97 for toddlers and \$4.23 for preschoolers. These approach the estimated high quality costs with the lower salary standard, but are well below the high quality cost with a higher salary standard linked to elementary school teacher

⁴ We have used 40 hours per week to convert weekly to hourly rates, to be consistent with the wage-based calculations in our high quality estimates.

salaries. This suggests that if the high quality standards adopted included BA level ECE teacher salaries calibrated close to that paid for BA level social workers, the top end of the market would not be changed substantially. Rather, the lower end of the market would be brought closer to what is currently the top; and low, moderate and middle income children would have access to the same level of quality as currently experienced by the most affluent children. If an elementary teacher pay standard were to be adopted, even affluent families would have to be convinced to pay substantially more, unless all children were subsidized, as in a public schooling approach.

The above discussion treats parents who pay fees as a constraint. They should also be considered an opportunity. Ultimately, quality improvement will only occur if ECE consumers demand it through political demands, private payments or a combination.

The analysis presented above indicates that most parents will need assistance to afford better quality ECE. But giving them financial assistance does not in itself assure improved quality. It is therefore important to explore direct linkages of cost to quality. For example, Maine gives parents a higher tax credit if they enroll their children in a higher quality program (Gormley & Lucas 2000). This notion could be expanded to the entire set of parental assistance provisions. Thus, for example, there could be either 'hard' or 'soft' linkages of subsidy payments to quality standards. A hard linkage would be that assistance would only be received if the child were enrolled with a provider meeting a threshold level of quality. A soft linkage would be a differential co-payment rate for the parent, higher if quality standards were not met, lower if they were. This would align the financial incentives to parents with those to provider organizations and individual teachers. It should be noted that while this seems to make sense conceptually, it needs to be piloted in controlled experiments to determine how different groups of parents react to these incentives and whether there are any detrimental side effects.

These affordability analyses show that:

- The costs of high quality ECE, using a mix of AA and BA level teachers and a reasonable salary standard linked to human service or social worker salaries in Washington, would be considerably higher than middle income families could afford without assistance. And the costs are substantially more than families and public agencies are currently spending. Achieving the staff qualifications that drive these costs would therefore require providing partial financial assistance to average working families. This in turn would require an expansion of current public and private spending.
- More affluent families currently paying at the 75th percentile rates would have to spend somewhat more than they currently do. This would require either convincing them of the importance of better quality, or providing modest amounts of assistance, perhaps in the form of assisting providers to pay part of the cost of higher quality, without a strict relationship to the family income of enrolled children.

- The most affluent families, who set the top of the market (90th percentile), are already spending at the cost levels estimated for high quality ECE with the lower salary standard, so the top end of the market would not have to change substantially. However, as top end providers seek to distinguish themselves and compete for the best staff, they might drive salaries and prices up toward the higher level, competing in the public school teacher labor market.
- Giving parents a direct financial incentive to select higher quality settings – for example by linking their co-payment rates to quality levels -- combined with improved information resources, seems worthy of experimentation.

F. Approaches to Improving ECE Staff Qualifications/Behaviors/Outcomes

Staff/teacher incentive programs – provide education-based salary supplements by rewarding teacher education and continuity of care. “Wage Incentives, also referred to as Wage/Compensation Supplements or Retention Grants, are designed to reward early care and education teachers and providers for increasing their level of education and years of tenure. Salary increases are often targeted to experienced, well-trained caregivers whose salaries do not reflect their level of educational attainment.” (www.ccw.org)

In this section we review some of the major policy approaches that have been designed to improve ECE staff quality and attempt to derive lessons for a more effective strategy. We start with the general proposition that to be effective, incentive structures must be designed that are appropriate to both provider organizations and individual staff members. We then consider the incentive levels and effectiveness of current approaches.

1. Designing effective incentives at the organizational and individual levels

How could we provide incentives for child care workers to pursue more training, and how do child care centers change their hiring and compensation practices as part of an effort to provide higher quality care?

One of the areas of conceptual confusion in ECE is between the roles of organizations and of individuals. The term ‘provider’ is often used interchangeably to refer to an organization such as a child care center, or to an individual teacher or caregiver. As noted above, such common guidelines as NAEYC Accreditation and the ECERS/ITERS rating scales, combine attributes of organizations and individuals. To design an effective incentive system, it is necessary to consider the different needs, capacities and likely responses of organizations and individuals.

- For *individuals*, likely motivators are earning an acceptable salary, helping children and families, having a comfortable and supportive work environment and recognition of their contribution. Constraints include energy to take on additional tasks, competing family pressures and the possibility of higher compensation in other occupations.
- For the leaders of ECE *provider organizations*, motivations include a combination of providing good quality early learning, maintaining a stable staff with good

morale, remaining fiscally viable (which may include returning a profit), and enhancing professional and community reputations. It may or may not include growth to serve more children or more communities, or return additional profits. Constraints include short term cash flow, size and arrangement of facilities, organizational capacity to manage change or expansion.

What kinds of incentives might appeal to each of these sets of motivators and avoid the constraints?

For *individual teachers*, the experience with wage supplement programs suggests that many are likely to respond to opportunities to increase their professional competence, particularly if they are promised higher compensation. This responds to both their professional service and income motivations. If improvements in both staff qualifications and retention are the goal, then it is important that the compensation increase be available at successively higher levels, and not a one-time bonus.

Bonus, supplement: amounts added onto compensation. May be one-time, annual or ongoing.

Otherwise, better qualified staff are likely to shift to other occupations where they can better reap the rewards of their investment of time and energy. The results of the post-pilot evaluation of the Washington State Career and Wage Ladder are sobering in this regard. After the end of the pilot, the compensation difference between pilot and comparison teachers drifted away. The increases in qualifications had come from hiring new staff with greater education – but these were the first to go when the pilot funding ended and no additional revenues were available to pay enhanced compensation (Boyd & Wandschneider 2005).

The fact that many or most of ECE teachers are women with their own children or other family responsibilities, suggests that it may be preferable to offer in-service education and training primarily during the work day, rather than as a supplemental evening or weekend activity. If salaries are raised substantially, so that ECE teachers can afford assistance with their family responsibilities, it may be possible to have a mixture of weekday and evening-weekend offerings, as occurs in elementary and secondary education. Teachers would have to be compensated so that they did not lose earnings while participating in education and training; providers would have to be compensated to backfill with substitute teachers. Institutions of higher education or other training institutions would have to be compensated for at least part of the cost of instruction to keep it affordable, since ECE teacher pay would not go up until they had improved their skills, and current pay is not sufficient to afford additional education or training.

Providing a combination of monitoring and mentoring by a master teacher corps or other early childhood professional entity could help overcome fears and resistance to change or to being evaluated. The costs of mentoring and monitoring would be included in the professional development component of the cost, covering release time for both mentors and mentees.

For provider organizations, helping their staff obtain better qualifications and competence helps meet their quality of service and reputational objectives. However, monitoring and certifying qualifications and competence entails administrative costs that would have to be reimbursed and risks that must be offset. If ECE provider entities are to shift to a higher cost structure, maintaining fiscal viability requires considering both ultimate return and short term cash flow. For ultimate return, there must be a likely revenue source sufficient to cover costs plus profit (or reserves for non-profits). For low income families, state reimbursement rates must be sufficient to cover the salaries of well qualified staff, and to sustain the periodic increases inherent in performance pay systems. For non-subsidized families, the costs of well qualified staff have to be affordable as a reasonable share of family income. Maintaining affordability while shifting the cost structure upward may require increasing the maximum eligibility level so that more families qualify for assistance.

The realities of provider cash flow must also be taken into account. If employers are being asked to increase their cost structure, with an uncertain return from increased private fees and public reimbursement rates, they are likely to keep child:adult ratios higher than desired, or pay less than the level of compensation required to meet staff qualification goals, in order to limit their financial exposure. Including in the financing structure a component that assures a certain share of costs, based on the incremental cost of moving to higher quality, could make it easier for providers to respond. Medicare and Medicaid have long had a form of this cash flow assurance. They make periodic payments to hospitals based on experience in prior years, and then adjust payment levels up or down several months later when actual billing experience has been provided. Similarly, the public or private funders could make periodic interim payments to ECE providers based on the estimated cost of delivering high quality ECE, and then adjust accounts later on, after actual receipts from parents and subsidies are known.

As with individual teachers, enhanced revenues should be linked to enhanced performance. If a Quality Rating System is one method for certifying quality at the organizational level, it could be implemented either by public regulators or by contracting out the review. External reviewers could include peer review teams or evaluators from institutions of higher education. These could be organized at the county or community level, subject to state standards and audit, to enhance communication and trust between providers and monitors.

2. Professional Development

How can we make education or professional development activities available on a scale large enough to meet the need?

As discussed above, some professional development activities have been associated with higher quality of caregiving and better child outcomes. To maintain cultural diversity in the ECE workforce, and assure improvement over time, we need a large scale system that does not just rely on pre-service education, but also offers in-service professional development opportunities, monitors their effectiveness and stimulates further strategic

improvements. The Head Start experience suggests that it is possible to increase the percent of staff with college degrees while maintaining cultural diversity (Brandon & Martinez-Beck, 2006). However, it is not yet known whether those increases in staff education levels have produced increases in quality of teaching and child outcomes.

We must recognize that the current paid ECE workforce numbers about 2.5 million nationwide, which is about sixty percent as large as the elementary and secondary education teacher corps. While the elementary and secondary schools are supported by a state-supported system of colleges of education, and an industry of trainers and consultants who offer in-service training, there is much more limited capacity for early education. There are some ECE programs at community colleges, and some training systems operated by resource and referral agencies or other institutions with limited public support. While funding for colleges of education is built into state budgets, augmented by federal grant and loan programs, support for developing early educators is mostly on a limited grant basis. Some CCDF quality set aside funds are used for staff development. Special appropriations support ECE training and education programs like TEACH in many states, and the federal government offers competitive grants under the Early Childhood Educator Professional Development Grant Program under Title II of NCLB (Ackerman 2003).

Fortunately, in our universal financing analysis, we found that the cost of a generous program of ongoing professional development was only about 4-5 percent of total costs of a high quality system (Brandon et al. 2004). This included both institutional grants to develop and offer appropriate courses and tuition assistance for ECE teachers/students. We also noted that if professional development was to be the key component of quality promotion, it would be desirable to have it embedded within per-child payments, rather than appropriated as a separate – and vulnerable – line item. Models of this approach can be found in the funding of in-service training as part of elementary-secondary state allocations to districts and in the amortization of the costs of continuing medical education in patient fees reimbursed by private insurers and public agencies. It would be useful for ECE financing to emulate this practice. These financing approaches directly link the availability of professional development resources to the size of the allocation for direct services, so that the two have grown in concert.

3. Wage supplementation/Career and Wage Ladder

One mechanism that policy makers in many states have adopted to address the gap between current market levels of compensation and the level required to recruit and retain qualified staff, is to pay for wage supplementation tied to improvements in education level. The underlying assumption of wage supplementation is that the market will not support higher wages, since un-assisted parents (most of the market demand) cannot or will not pay higher fees. We therefore examine several programs that have been shown to have at least a marginal

<p>Career and Wage Ladder or Career Lattices – A structure that relates teacher wages to levels of education/training, responsibility and experience. Can refer to either relative wages of workers, or ability of individual worker to increase wages over time.</p>
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impact of reducing turnover. These include TEACH/WAGES, which originated in North Carolina and has been extended to many other states; the Washington Career and Wage Ladder (CWL), Kansas and Florida WAGES, Wisconsin R.E.W.A.R.D., REWARD Oklahoma, Missouri WIN, Georgia Incentives, Illinois Great START, and the Utah EC Career Ladder. Table 7 outlines a brief summary of patterns of major provisions for these various programs. A detailed description is provided in Appendix A.

Impact of Wage Supplementation

The few evaluations available suggest that wage supplements have a positive short term impact on the ability to attract better qualified teachers and reduce turnover. However, a statistically significant difference does not mean that the effect is large enough to solve the problem. For example, the average ECERS/ITERS scores for teachers in the TEACH evaluation increased from 4.61 to 4.80, moving toward but not crossing the threshold of 5 for a 'Good' rating (Cassidy et al. 1995). In the Smart Start study of changes over time, the entire cluster of interventions (technical assistance, training, wage supplementation, subsidy increases) improved average ECERS scores from 4.25 to 4.73 over 8 years. This left a majority of centers below the 'good' rating (Bryant et al. 2003). Similarly, in the evaluation of the Washington Career and Wage Ladder, the average months of employment before leaving among new hires was 15 months in the pilot program, compared to 11.6 months in the comparison group (Boyd & Wandschneider 2004). We must therefore ask how great a difference in ECE teacher pay would be required for the ECE sector to compete in the labor market for workers with the qualifications necessary to assure high quality caregiving.

Table 7: Summaries^a of Wage Supplementation Programs:

STATE:	North Carolina (participating Smart Start partnership counties)	Kansas (eligible or participating counties)	Florida (pilot counties in 2003-04; open enrollment to rest of counties in 2004-2005)
INCENTIVE PROGRAM:	Child Care WAGES® Project	Child Care WAGES® Project	Child Care WAGES® Project
PROVIDER STANDARD:	Licensed	Licensed	Licensed or; Licensed-exempt ECE program
AGE OF CHILDREN IN CARE:	0-5 years old	0-5 years old	0-5 years old
MAXIMUM ANNUAL SALARY ELIGIBILITY^b:	\$30,368	\$30,056	\$36,400
RANGE OF WAGE SUPPLEMENTS:	\$200 - \$3,000 annually	\$300 - \$4,000 annually	\$200 - \$3,000 annually
MINIMUM HOURS IN ECE/WEEK:	10 hours/week	20 hours/week	10 hours/week
EDUCATION REQUIREMENTS FOR APPLICANTS:	Some formal child care credential and/or education beyond a high school diploma	Some formal child care credential and/or education beyond high school diploma from a regionally accredited institution	Some formal child care credential and/or education beyond a high school diploma from a regionally accredited institution
RESTRICTIONS ON PRIOR LONGEVITY/ MOVING JOBS:	Work at least 6 months in same ECE program. <ul style="list-style-type: none"> If a participant moves to another licensed child care program in a participating county within the six months, then the commitment period must be reset based on her/his employment date at the new site 		Work at least 6 months in same ECE program. <ul style="list-style-type: none"> Be employed at this same program at the time of employment confirmation Participants who remain in the same program do not need to reapply in order to receive future installments

^a We have focused here on provisions affecting teachers; many of the programs also have incentives for Directors or Administrators, which are included in the detailed appendix, contains detailed provisions of the various programs.

^b Reported hourly wages are annualized for easy of comparison with supplements. Annual salary is calculated by Hourly rate * 2080 hours

STATE:	Wisconsin	Oklahoma	Missouri	Georgia	Illinois
INCENTIVE PROGRAM:	R.E.W.A.R.D.	REWARD	WIN (Workforce Incentive Project)	Incentives	Great Start
PROVIDER STANDARD:	<ul style="list-style-type: none"> o Licensed child care center or o Licensed or certified family child care program, or o any Head Start Program 	DHS or tribal licensed early care and education facility. <ul style="list-style-type: none"> o At least 10% of facility's licensed capacity filled with children receiving DHS and/or tribal subsidy or o Other special criteria 	<ul style="list-style-type: none"> o Licensed 	Licensed registered facility that is: <ul style="list-style-type: none"> o Accredited or o Serves at least 25% subsidized families or o Participates in CACFP 	<ul style="list-style-type: none"> o Licensed
AGE OF CHILDREN IN CARE:	0-5 years old	0-5 years old <ul style="list-style-type: none"> • School-age teachers or home providers if at least 30 hrs/week. 	0-8 years old		
MAXIMUM ANNUAL SALARY ELIGIBILITY^b:	--	\$24,960	\$42,000	\$30,056	\$31,200
RANGE OF WAGE SUPPLEMENTS:	\$250-\$3,500 annually	\$200-\$2,000 annually	\$500-\$2,500 annually	\$400-\$2000 annually	\$150-\$1,950 annually
MINIMUM HOURS IN ECE/WEEK:	20 hours/week (at least 5% of time directly with children)	30 hours/week	30 hours/week, 9 months/year	25 hours/week	15 hours/week
EDUCATION REQUIREMENTS FOR APPLICANTS:	Registry Certificate: <ul style="list-style-type: none"> • Level 2 or above (G.E.D.). • Level 1 may apply if living or working in Milwaukee County. 	Formal education above a high school diploma or G.E.D.	<ul style="list-style-type: none"> • CDA or • 1 yr Certificate of Proficiency, or • 9-30 approved college credits (6-12 hours in ECE/CD) • Completion of various DHSS curriculum trainings. 	At least a CDA, CCP, TCC, NAC or TCD.	None
RESTRICTIONS ON PRIOR LONGEVITY/ MOVING JOBS:	<ul style="list-style-type: none"> • Be employed with the same child care program for 2 continuous years or; • 5 Stars on Registry Cert. 	Be employed with the same facility for 6 months.		Be employed with the same licensed child care center for 1 continuous year.	Be employed with the same employer for a minimum of 1 year.

STATE:	Utah	Washington			
INCENTIVE PROGRAM:	Early Childhood Career Ladder	Career & Wage Ladder			
PROVIDER STANDARD:	Employment must be in one of the following positions: <ul style="list-style-type: none"> • a licensed or residential certificate family child care provider caring for at least 2 non-related children • a child care center teacher, caregiver, or director • a license exempt preschool teacher or director • a regular every day classroom teacher, classroom aide, or education specialist in a Head Start program 	Participating centers must: <ul style="list-style-type: none"> • Be state licensed or certified; • Adopt the wage scale as specified and published, by the state’s administrating agency, the Division of Child Care and Early Learning of the Washington State Department of Social and Health Services; • Enroll low-income subsidized children into at least 10 percent of their slots, with an additional requirement that at least 20 percent of the total pool of children in participating centers be state-subsidized. 			
AGE OF CHILDREN IN CARE:	Birth through preschool	Early learning and care workers; school age care workers in participating child care centers.			
MAXIMUM ANNUAL SALARY ELIGIBILITY^b:	NA	NA			
RANGE OF WAGE SUPPLEMENTS:	\$100-\$1000 for each level of training completed.	\$7.20 - \$14.70 – King County \$6.92-\$14.20 – Except KC (\$14,394 - \$30,576 annual equivalent) Starting with a base wage set at Washington’s inflation-indexed minimum wage, the model specified that teachers participating in the program would receive pay increments of between \$0.25 and \$0.50/hour depending on educational credentials, years of service, and increased responsibilities.			
MINIMUM HOURS IN ECE/WEEK:	20 hours/week	ECE workers: 20 hours/week School-age care workers: 15 hours/week (in participating centers for pilot program)			
EDUCATION REQUIREMENTS FOR APPLICANTS:	NA	NA			
RESTRICTIONS ON PRIOR LONGEVITY/ MOVING JOBS:	Continuous employment in the same program for at least 6 months.				

Adequacy of current wage supplementation programs

In the program summary above, we see a wide range of supplemental amounts, from a modest level of \$200-300 a year, to substantial increases equivalent to \$3,000 a year. These supplements tend to increase incrementally with the level of educational attainment. Some states have a gradual progression for each step of educational attainment, others have jumps of as much as 25 percent between certain steps.

Table 8 shows the relative amount of state supplements for obtaining AA or BA degrees. States vary in their value increases, with some states rewarding BA attainment as much as three times more in supplement value than AAs, while other states offer similar amounts for each degree. On average, the value of supplements for a BA is almost double that for an AA degree.

Table 8. Relative supplement amounts for attaining BA vs. AA degrees

State/Program	Supplement Level [†]		BA:AA Ratio
	BA	AA	
Washington Career & Wage Ladder	na	na	na
North Carolina WAGES	\$2,250	\$ 750	3.00
Kansas WAGES	\$3,000	\$1,000	3.00
Florida WAGES	\$2,250	\$ 750	3.00
Wisconsin R.E.W.A.R.D	\$ 800	\$ 500	1.60
REWARD Oklahoma	\$1,500	\$ 950	1.58
Missouri WIN	\$1,750	\$1,250	1.40
Utah	\$1,000	\$ 900	1.11
Georgia INCENTIVES	\$2,000	\$1,500	1.33
Illinois Great START	\$ 975	\$ 825	1.18
<i>Average BA:AA Ratio Across State Programs</i>			<i>1.91</i>

[†]Supplement categories for each state were selected based on most representative BA and AA comparisons.

In table 9, we show for the various states the current average child care worker and preschool teacher salaries, what level those salaries can be increased to with the *maximum* supplement offered under the relevant program, and how that salary compares to the average market wage for health, human service or educational occupations requiring an AA or BA level of education plus field certification, in the same state (see detailed program information in Appendix A).

It should be noted that some state officials have told us that the supplement amounts are set below the levels they consider necessary to be fully effective, due to funding restraints.

These estimates suggest that most of the wage supplement programs, if the supplement is paid on an ongoing basis (as opposed to a one-year bonus), are sufficient to bring ECE teacher wages within 80-90 percent of what AA level human service workers earn in the state in question. To bring them all the way to the AA level market wage would require increasing the supplement amounts by about 50-100% over current levels.

If it is desired to bring annual ECE teacher salaries up to the market rates for BA level human service staff, such as child and family social workers, the maximum current wage supplements would raise child care or preschool teacher wages to 61% of the market rate. Getting all the way to the market wage rate would require increasing maximum supplements by large multiples of their current amounts.

If it is desired to not just achieve BA-level education, but allow ECE teachers to be recruited in the same labor market as elementary school teachers, and be less likely to move on to the public schools as an alternative occupation, then current wage supplement programs do not bring wages into the ballpark. Rather, they only reach about 45-60% of elementary teacher wages. It should be noted that this comparison is between twelve month wages for ECE teachers and nine months school year wages for elementary school teachers. If we were to use a 12 month annualized equivalent for the comparison, the wage supplements only bring ECE wages to 30-40% of elementary teacher pay.⁴ If it is desired to require a substantial proportion of ECE teachers with BA level degrees, and link their salaries to that of elementary teachers, then the wage supplement approach is not likely to achieve that goal.

Wages vs. total compensation

It is also important to note that we are here considering only wages. Many child care staff have minimum health and retirement benefits, while these are fairly generous in the occupations which we are using for comparable market wages. Total compensation, including benefits, would therefore have to increase by amounts that take benefit differentials into account. For example, benefits for public school teachers are typically about 30 percent of salaries.

⁴ Many teachers would rather work a full year and earn more money, but the school year contract is all that is available. Whether the nine-month contract is desired or not, the three months of leave have a considerable economic value. Teachers can teach summer school, work at another job, earn credits that will increase their salary or enhance the quality of their life with leisure. Thus, while it may be politically difficult to have the annual salary amount for ECE teachers exceed that of elementary teachers, a 12-month equivalent salary is the more economically correct comparison.

Table 9: ECE Teacher Wages Before/After Supplements, Compared to Market Wages for AA, BA Level Social Workers and Elementary Teachers

State/Program	Maximum Annual Supplement	Weighted Average Current ECE staff wage ^a	ECE wage + max suppl	AA HS worker wage	ECE wage + max suppl as % AA HS worker wage	BA social worker wage	ECE wage + max suppl as % BA social worker wage	BA elem teacher wage (school year)	ECE wage + max suppl as % BA elem teacher wage (school year)
				\$	%	\$	%	\$	%
Washington Career & Wage Ladder	\$1,560	\$20,482	\$22,042	\$23,690	93%	\$35,390	62%	\$44,820	49%
North Carolina WAGES	\$3,000	\$18,212	\$21,212	\$25,320	84%	\$35,980	59%	\$37,980	56%
Kansas WAGES	\$4,000	\$18,481	\$22,481	\$23,600	95%	\$32,920	68%	\$36,710	61%
Florida WAGES	\$3,000	\$18,611	\$21,611	\$24,980	87%	\$33,090	65%	\$42,680	51%
Wisconsin R.E.W.A.R.D	\$900	\$19,574	\$20,474	\$27,800	74%	\$39,040	52%	\$43,130	47%
REWARD Oklahoma	\$2,000	\$17,308	\$19,308	\$20,420	95%	\$29,620	65%	\$33,520	58%
Missouri WIN	\$2,500	\$17,577	\$20,077	\$21,230	95%	\$29,380	68%	\$35,900	56%
Utah	\$1,000	\$17,738	\$18,738	\$21,690	86%	\$32,750	57%	\$39,580	47%
Georgia INCENTIVES	\$2,000	\$18,433	\$20,433	\$25,380	81%	\$33,560	61%	\$45,880	45%
Illinois Great START	\$1,950	\$21,977	\$23,927	\$24,790	97%	\$42,170	57%	\$44,460	54%
Average Across State Programs	\$2,212	\$18,839	\$21,052	\$23,890	88%	\$34,390	61%	\$40,466	52%
US Average	\$2,212	\$20,638	\$22,850	\$26,300	na	\$38,280	na	\$46,350	na

^a BLS OES average wages for child care workers and preschool teacher, weighted by number of each per state.

Source: Various Wage Incentive Programs; November 2004 Census Occupations & Employment Statistics

Fiscal Displacement

The level of earnings achieved through supplementation is one important criterion for assessing such a strategy. The second criterion is whether the earnings increases are sustainable over time. Even if wage supplementation programs were increased to yield adequate levels to recruit and retain well qualified staff, such a strategy faces a serious problem of *fiscal displacement* that is likely to undermine long term effectiveness.

In the short term, it is possible to know what the market wage rate for ECE staff is, and what individual employers are currently paying. It is thus relatively easy to assure that any wage supplement goes to increase staff salaries. However, due to fiscal displacement, the supplementation effect is likely to degrade over time. Suppose a two-dollar-per-hour wage supplementation is put in place for 5 years. In the first couple of years, it is relatively easy to assure that this \$2/hour will be added to current pay, because we know this year's pay and can project next year's reasonably well. However, we would expect market wage rates to increase over the 5-year period due to inflation and increased demand. But we don't know by how much. Suppose that over the 5-year period, market wages absent the supplement were likely to increase by \$3/hour. If ECE employers were counting on a consistent \$2/hour supplement from external sources, they would be tempted to offset some of the \$3/hour market increase by substituting the \$2/hour supplement for the market increase, rather than paying a total of \$5/hour higher than the base year wage (\$3/hr market increase, plus \$2/hour supplement).. Supplemented wages would thus tend to converge with market wages. The longer the wage supplement were in place, the more likely that it would simply become a partial source of revenue for whatever the market wage rate was, and lose its impact as a supplement that increased total wages in return for quality improvement.

Unless provider entities can increase prices to cover the higher compensation, replacing wage supplementation with fees, there is not likely to be a long term effect on employee earnings, undercutting the ability to recruit and retain better qualified staff.

4. Pay Scale Increases Linked to Qualifications

In contrast to the wage supplementation approach is a direct increase in overall salary levels tied to increased training with observation, professional development, and educational qualifications. The one large scale attempt at this approach is the Military Child Care Act (MCCA). This was evaluated by the Rand Corporation and found to substantially increase both overall pay levels and quality of care (Zellman & Johansen, 1998). The pay increases were about \$2 an hour between 1989 and 1993, pre-post MCCA (Park-Jadotte et.al, 2002). This would be equivalent to a pay supplement of over \$5,500 a year in 2006 dollars for a full time employee, far more than state wage supplementation programs have been allocating. Increasing overall wage scales in return for increased qualifications is a much more direct method of moving to wages that can compete in the labor market than wage supplements. It is of course more conceptually straightforward to implement in a large organization that directly hires staff, such as the military, than in a diverse and fragmented private market. However, if we follow the basic logic that desirable wages are those that will allow recruitment and retention of well-qualified staff, then a market-oriented policy can focus primarily on setting the qualifications, letting the market determine the appropriate compensation. A necessary component of such a strategy is that assistance to families be sufficient for them to afford the price of care that derives from that level of compensation. Thus, if public policy focuses on qualifications and quality of staff, and on assistance to families, then the

market (in interaction with assistance levels) can determine the optimum compensation level.

5. Performance Pay

How can we reward teachers with increased pay for high quality performance, not just for longevity?

The evidence across a wide range of studies regarding the impact of higher formal education levels for ECE teachers is that it has a statistically significant but modest relationship to quality of teaching and performance of children (Burchinal et al. 2002, Clifford 2005, Pianta et al. 2005, Pianta 2006). For example, among the teachers sampled in the *Cost, Quality and Outcomes Study*, ITERS/ECERS scores averaged 3.60 for teachers with no college education, 4.0 for those with some community college courses, 4.18 for those with an AA or CDA and 4.43 for those with a BA or BS degree (Burchinal et al. 2002). Note that a rating of 5.0 qualifies as “Good,” and a 7.0 as ‘Excellent.’ So more than half of the BA/BS level teachers had a quality score below the “Good” level. Many other factors therefore come into play to determine what will actually make a good or excellent teacher; a college degree is no guarantee.

It is important to draw lessons from elementary and secondary education in this regard. Teacher certification seems to assure a minimum degree of professionalization, and certified teachers appear to be more effective than non-certified teachers (Darling-Hammond et al. 2005) A positive feature from K-12 is that teacher wage scales embody an expectation that as teachers obtain greater education, they can count on pay increases, and this expectation is built into state funding formulas. Developing such linkages between qualifications and compensation is an important incentive. Several states (Massachusetts, New Mexico, South Carolina, Utah) have developed career lattices to provide guidance for professional development, and California awards Child Development Permits in accordance with such a lattice (Ackerman 2003) .

However, there is also a negative lesson from the K-12 experience. Neither requiring a degree from a college of education nor increasing a teacher’s salary in return for extra educational credits or degrees guarantees good teaching. Even such higher standards as board certification seem to identify and reward the highest quality teachers, but do not serve as a method of inducing lower-performing teachers to improve their skills. Further, board certified teachers are more likely to be teaching more affluent students (Goldhaber & Anthony 2004). The ECE data cited above – that BA levels teachers only average at the bottom of a ‘good’ rating – is consistent with this K-12 finding. If ECE staff qualifications and compensation are substantially increased, the problem may shift from reducing turnover overall, to appropriate retention of high-performing staff and instituting mechanisms to identify and either improve or remove low-performing staff.

Some interesting large scale efforts at rewarding effective teaching in public schools are under way, as in the Cincinnati initiative (Kellor & Odden 1999). However, these have not been evaluated or adapted to the early childhood world.

A feature of the Cincinnati model that is potentially important and appropriate to ECE is that evaluation is done by peers, as it is in higher education. One of the political

Structural quality. The degree to which a provider organization has inputs that have been shown to correlate with improved caregiving and child outcomes. These include staff qualifications, child:adult ratio, group size, learning materials, access to ongoing professional development.

Process quality. The degree to which caregiver:child interactions are characterized by behavior that has been shown to promote children's social, emotional, cognitive and self-regulatory development. Such interactions are nurturing, stimulating, consistent and stable.

struggles around merit pay has to do with the fear of having evaluation responsibility lie solely with the school principal. While one could argue that such responsibility is a normal and central feature of management, it seems to engender fears of excessive authority and control by one individual. In the child care center world, where average center size is about 60 children and about 8-10 staff, the center director's capacity for thorough and objective evaluation may be limited by lack of time and organizational capacity. Creating a local corps of master ECE teachers, who might serve on review committees on a rotating basis, could serve two functions. First, it would provide a resource that could both review teacher performance and give useful feedback. Second, it could provide a route for professional advancement and remuneration for excellent teachers that does not take them out of teaching and into program administration. Such a master teacher corps could inform the classroom teaching of the colleges and universities providing in-service training for ECE teachers, and would also provide likely recruits for the expanded faculty required to educate large numbers of ECE teachers.

One advantage that ECE has is that there is a set of well-developed and generally accepted instruments to measure teacher performance based on observations of caregiver:child interaction. The most commonly used are the ECERS and ITERS scales, which measure a combination of classroom environment and teacher interaction with children (Harms & Clifford 1980). These have been widely used for multi-site studies (Helburn 1995, Marshall et al. 2001, Marshall et al. 2004, Raikes 2003). Tennessee has used ECERS for all licensed centers as part of its quality rating system (Tennessee 2005), so cost and operational experience for large scale application are available. A more extensive set of measures of caregiver:child interaction, the ORCE, was developed for the NICHD Early Care and Research network (NICHD Early Child Care Research Network 1996). Pianta (2006) notes that there are several other available scales that have potential merit for observational evaluation of early childhood teachers. Since the ECERS was originally developed as a criterion for practitioners, it is conceptually aligned with use for measuring individual performance. It has been subjected to test-retest and found to be highly stable across time (Clifford 2005); get published cites). However, moving from using the ECERS/ITERS scales to measure the performance of centers as an organization, to using them to measure individual performance in an accountability and reward system will require a mind-shift in the field. One advantage ECE has in this regard is that it does not have the entrenched labor-management structures that have made it difficult to adopt performance pay in elementary and secondary education. However, since there is a nascent movement to organize child care workers, the earlier this conversation begins, the better the chance it has. If it can be considered into early

discussions with potential unions, such as SEIU, as part of a package to significantly increase compensation, it may be possible to develop agreement rather than opposition.

6. Quality Rating Systems/Tiered Reimbursement

What are the potential opportunities and limitations of such mechanisms as quality rating systems and regulatory requirements to affect quality and staff qualifications and compensation in the child care market?

It is important to start with consideration of the role of regulation, particularly state licensing, in affecting quality of ECE, since there is a system already in place. It also addresses a known defect in the ECE market – bottom fishing. That is, as long as many parents have trouble affording ECE, then there will be providers who meet market demand by offering a low cost, low quality service. When low quality endangers children, there is a classic basis for governmental regulation. While we want to focus primarily on the role of incentives in promoting higher quality, it is necessary to keep in mind the necessity of a regulatory underpinning for any system.

While the research literature on the impact of regulations is scant (see Gormley 1999 for a brief review), the research that exists suggests that higher regulatory standards are linked to higher quality of caregiving.⁷ The *Cost, Quality and Outcomes Study* (Helburn 1995) found that a higher level of state regulation was associated with a high quality of caregiving. Maher et.al. (2003) found that state regulations requiring lower child:staff ratios were linked to lower average ratios as reported by parents. While regulatory systems are necessary to provide a minimum floor for health and safety, political and economic pressures have so far prevented them from assuring an adequate level of quality. Doing so will require not just increasing the minimum standards, but creating a cadre of qualified licensing staff with the capacity to judge quality of caregiving and recommend effective changes.

A challenge to the potential use of licensing as a quality improvement strategy is that a large proportion of children are in legally license exempt care by Family, Friends or Neighbors (FFN). In fact, FFN is the predominant mode of non-parental care for infants and toddlers, amounting to 46 percent of aggregate non-parental hours (Brandon, 2005). For children age 3-5, FFN represents a significant 27 percent of non-parental care. The studies available suggest that while FFN care has the advantage of lower child:adult ratios, observed quality of interaction is marginally lower than in center-based care. Analysis of parental preferences and the structural characteristics of FFN care suggest that financial access to high quality regulated ECE will slightly reduce reliance on FFN care, but that it is likely to remain a major ECE sector (Brandon, 2005). The difficulty is compounded by the fact that there is no clear line between which situations should be licensed and which need not be. A center with multiple staff and children, operating on a regular basis and charging fees, should obviously be regulated. A grandmother caring for

⁷ Note that this is not necessarily a causal relationship. It is possible that certain states have cultural expectations that generate both a strong consumer demand for high quality ECE and a strong demand for regulation

one grandchild a few hours a week should obviously not be. But in between lie situations such as aunts or neighbors caring for one related child and one or two non-related children on a regular basis, and receiving some payment for each. The prevalence of these less formal arrangements and the tendency for parents to use them when more formal arrangements are not affordable, implies that unless broad scale financial access to higher quality care is assured, raising regulatory requirements in a way that increases cost and price is not likely to succeed. As Blau (2001) points out, increased regulation can have negative consequences for families who lack the resources to meet the cost of licensed care without decreasing consumption of other critical goods or services, such as housing, health care or food. It therefore seems reasonable to gradually raise regulatory floors, but also focus on guidelines and incentives to move quality upward above those floors. It is also necessary to consider such quality incentives in conjunction with assistance to parents. Finally, it must be recognized that while critical, regulatory requirements will not affect the FFN sector, and a combination of voluntary assistance to meet FFN caregivers' perceived needs and financial incentives will be required for that sector.

Quality Rating Systems (QRS), often tied to differential state reimbursement rates, are a hot topic in ECE policy, with 11 states having systems in place and many more (including Washington) having them under design (NCCIC 2005). The essence of a QRS is that the state moves beyond a minimum licensing standard to create three to five quality levels, often designated by an increasing number of 'stars' to denote increasing quality. The appeal of QRS seems to be that it addresses the entire ECE market, has roles for both parents and providers, and provides an initial step toward high quality that states can take without an immediate large funding increase. They tend to complement state regulatory systems, with minimum licensing compliance often set as the lowest level rating.

A major challenge in considering Quality Rating Systems is that while there has been a lot of conceptual discussion of how to design them, there has been very little empirical analysis of their impact. The first major study is due out soon, with RAND expected to release its evaluation of the impact of Qualistar (Colorado) ratings on quality of care and child outcomes. One useful study of North Carolina's 5-Star rating system used the ECERS scale to validate the fact that centers with higher star ratings actually provided a higher quality of care (Bryant 2001).

Quality Rating Systems (QRS) are a method to assess, improve and communicate the level of quality in early care and education settings. The scope of a Quality Rating System may include a broad range of early care and education programs (e.g., center-based child care, family child care, afterschool, prekindergarten, and/or Head Start) and funding streams. Quality Rating Systems are part of a broader quality improvement continuum, and have the following five common elements:

1) **Standards** that are based on the foundation of compliance with child care licensing regulations (taking into account exemptions) and include two or more levels, or tiers, of quality criteria above basic licensing requirements.

2) **Accountability**, through appropriate means of assessment and monitoring, for compliance with the specific criteria of the standards. Monitoring and assessment together provide the accountability measures for funding and for program and practitioner support.

3) **Program and practitioner outreach and support** including efforts to promote participation in the Quality Rating System, as well as technical assistance, training, mentoring, and other supports.

4) **Financing incentives specifically linked to compliance with quality standards** such as quality bonus payments, tiered reimbursement rates, contracts, quality grants, and wage supplements.

5) **Parent education** designed to ensure that parents understand the Quality Rating System and how it benefits children, families, and the early care and education system as a whole.

Lacking empirical evaluations, at this point we have to base our discussion on economic principles. We see many opportunities to promote improvements, but many design challenges for improvement to occur across the market instead of just rewarding a few high quality providers.

On the positive side of the ledger, QRS can provide a basis for systematically rating quality of care for all or most licensed providers in a state. Such quality ratings are potentially useful for influencing parent demand for higher quality early learning, and channeling that demand toward providers who are interested in meeting it. Through Tiered Reimbursement and related policies, public and private payments for ECE can potentially be linked to levels of quality, providing a financial incentive for improvement. QRS also recognizes the great variability in the current market and provides a basis for improvement across many different levels, rather than just promoting a single program model that may be best for some children and parents, but not for others.

The challenges of QRS lie largely in having it serve as a dynamic force that progressively increases quality across the entire ECE system. A central issue is that the providers who seek higher ratings may be those of higher current quality or greater ambition, rather than those that most need improvement. Thus, QRS may simply reward the currently higher quality providers, rather than inducing low quality providers to improve.

In many states, QRS is a voluntary system; in a few, such as Tennessee, it is mandatory. The underlying assumption of a voluntary system is that all providers will want to appeal to a more demanding clientele and voluntarily improve if they are given recognition and maybe increased payments. The rating system then overcomes the market imperfection of inadequate parental information. However, if only a selected sub-set of providers are motivated to improve, then those in greatest need of improvement may not participate. If parents face financial constraints, irregular or non-standard work schedules, or other factors that inhibit their ability to act on information about quality, this will limit effectiveness. A related issue is that for infants and toddlers, and a substantial percentage of 3-5 year olds, the predominant type of providers (Family, Friends or Neighbors) are outside the system and unlikely to participate if invited in, since they are mostly unpaid and do not consider child development their profession.

Financial constraints can be a major inhibitor. Many state differential or “Tiered” reimbursement systems offer only modest bonuses of 3% to 10% for higher levels of quality, and only for subsidized low income children. These bonus amounts are not based on any solid estimate of what quality improvements would actually cost the provider. They appear to embody an underlying assumption that quality just means trying harder, or that there is some pot of money that providers can release if they are given a small bonus payment. Or they assume that if parents receive a certification of quality, they will be willing and able to pay higher fees that will in turn support higher quality. If the higher rating levels of quality require staff to have significantly higher qualifications, or providers to institute lower child:adult ratios, then substantial increases in both private payments and public subsidies would probably be required for providers to achieve the desired levels, as shown by the affordability analysis above.

If meeting higher costs is dependent upon increases in public subsidies (“Tiered Reimbursement”), then providers can only meet costs by (a) providing economically segregated services, or (b) raising fees to non-subsidized families by far greater amounts than they are currently willing or able to pay. For example, if moving from a level 3 to a level 4 requires a 20% increase in revenues, and only half of the children served in a center are subsidized, then a center will only gain a 10% increase in revenues from a 20% per child increase in subsidy rates. The analysis in the previous section suggested that most parents are not willing or able to pay an additional 20% out of pocket. Therefore, to move up to level 4, the center would have to serve only subsidized children; or more likely, to dilute the intended level of services to live with a 10% increase. In addition, part of the subsidies would effectively be used to raise quality for non-eligible children.

In some situations, QRS may be undertaken as an alternative to investing substantial funds in qualified staff. In such cases, QRS would fall under the category of band-aids applied to make the system a bit better, but not to ultimately succeed in assuring high quality.

Cash flow and firm assurances of greater payments are important issues in determining the feasibility of improvement. If providers are asked to make major changes that will affect their costs, with little assurance of increased revenues, they are likely to make only modest or partial improvements, and the system may get stuck on minimal changes.

To save money on QRS implementation, most states focus only on inputs, or structural measures of quality, rather than observing actual quality of caregiving. Tennessee is the one example which has mandatory ratings for all centers and annual observations with the ITERS/ECERS scales. Continuation of full scale monitoring is currently under threat due to budgetary pressures. Without direct observation, there is little assurance that quality of care is actually improved.

There are potential QRS designs that appear likely to overcome these challenges and yield an effective quality promotion system.

First, QRS ratings can be based on direct observations of quality of caregiving by external reviewers. As discussed earlier in the paper, such “structural” measures as teacher education level or child:adult ratios are only modestly related to quality of interaction, and do not guarantee a “good” level of performance. It is therefore necessary to directly measure “process” quality by directly observing the interaction between adults and children.

A ‘graduated’ or ‘earned flexibility’ approach could provide more frequent observations for lower quality providers, and less frequent observations for those who sustain quality over time (with a provision for automatic review if there is a major structural change, such as a new director). This would both reduce the overall cost of monitoring and target monitoring resources toward the lowest quality providers.

There are at least two potential ways to orient the system to improvement over time, so that it does not just reward the currently better providers and leave poor quality providers unchanged:

- a. Ratings or levels could be determined by a combination of current quality and change from previous years;
- b. Requirements for each level could be phased up over time, so that (for example) what produces a level 3 this year may only yield a level 2 ranking three years from now.

Differential reimbursement rates can be calculated based on the estimated cost of making key changes in structural quality. These include higher compensation for more qualified staff; lower child:adult ratios; and enhanced professional development opportunities (HSPC is currently estimating the differential costs to providers at each level of a proposed 5-Star system for South Carolina, and a five-level QRIS system in Washington state). These costs differentials could be monitored and rates modified with experience. The QRS could also be tied to an expanded financial assistance system, which has provisions for:

- a. Support to providers to make the transition to higher quality, with an assured cash flow for a specified period of time;
- b. Assistance to moderate and middle income families to afford the higher levels of quality.

Programmatic as well as financial support could be offered to providers. This could include consultation and self-evaluation on the model of NAEYC accreditation. It could also include expanded opportunities for professional development of staff, on- and off-site, including payments for substitute teachers. On-site peer monitoring and mentoring by teachers of recognized proficiency could assist struggling teachers to improve.

Operational Linkages of Provider and Staff Oriented Incentives in QRS

An interesting design issue that we alluded to earlier in this paper is how to link organizational and individual level incentives for quality improvement. QRS systems make the provider entity the focus – a center or FCC home gets a higher ranking and higher payment rate if its quality improves. But while leadership by the director is an important factor, quality is ultimately determined by the actions of individual staff. If the market does not generate a labor pool from which qualified staff can be recruited, then providers are limited in what quality they can achieve. Generating a large scale pool of qualified staff for licensed providers (0.75 million nationally, about 15-20,000 for Washington state⁵ will require such actions as:

- Adding capacity to the state’s higher education system to prepare ECE teachers and directors, including both pre-service and in-service modes;
- Maintaining a registry of qualified individual staff, and making it available to providers and support associations (Resource and Referral, Director/provider associations, etc.).
- Monitoring the quality of individual staff by observation of actual performance with children in a realistic setting.
- Developing cooperative agreements with other states, to facilitate certification of trained teachers moving into the state.
- Educating parents about the nature of quality and the choices they face and the information they can receive from a state staffing data system.

There are two necessary mechanisms for operationally linking the policies geared to provider organizations and those geared to individual practitioners. On a large scale, effective governance structures are required to monitor the development of a skilled labor force, maintain certification and registry systems and promote necessary investments and cooperation among the different sub-systems, such as higher education and ECE providers.

On the small scale, center directors and administrators will be challenged to develop methods for recruiting, checking staff certification status, meeting requirements for in-service training and professional development, and administering performance-based compensation systems. It must be remembered that except for commercial chains like Kinder Care, and large non-profits that operate multiple centers, most centers are small operations, with a director, 6-10 teachers and part time administrative and custodial help. Center directors will therefore need training and support to fulfill these new functions.

⁵ Note that there are no good estimates of current ECE staffing for Washington State; these are a rough estimate intended to give a sense of the scope of the problem, but not of sufficient accuracy to use for program planning..

Networking approaches to having multiple centers working together on these issues could probably improve effectiveness. Center director associations or Resource and Referral agencies are existing entities which could develop such capacity. But they will require additional resources that grow along with staff professionalization to fulfill these functions. Colleges of education have programs to prepare principals and superintendents for leadership and management functions; a similar capacity will be required for ECE leaders.

G. Organizational Issues: How to Pull This Off

This paper has focused on the need to improve ECE teacher qualifications, competency and compensation, and reviewed potential strategies to achieve these goals. Some of the strategies are market-based, some are based on public support and regulation. Some relate to individual caregivers, some to provider organizations. None of these strategies are self-executing, capable of being effectively implemented by a single grant of authority or allocation of funds. Rather, they will require detailed planning, staffing, development of relationships, trial activities, monitoring and refinement based on operating experience and feedback.

Summary comments from the RAND evaluation of the successful Military Child Care Act (MCCA) effort are instructive:

“This high level of implementation is not surprising for a number of reasons. Key is the fact that the MCCA was a mandate from Congress. Also important was the nature of the implementing organization: The military is a hierarchical, rule-driven organization that is used to following orders, even if those order are imposed from outside, disliked, or seen as inconsistent with organizational goals.

In addition, the MCCA contained within itself mechanisms that structured implementation of key provisions, a factor that has been repeatedly found to increase the probability of successful implementation. In particular, the system of no-notice inspections, the requirement that a training and curriculum specialist (T&C spec) be on staff in each CDC [child development center], and the tying of increased staff pay to completion of required training milestones all contributed to increased quality of care.” (Zellman & Johansen, 1998; p.xix)

Since we are dealing in the context of a fragmented, mixed private-public market, we cannot count on a rule-driven, hierarchical organization to carry out orders and improve quality. A mixture of incentives, regulations and monitoring designed to produce results must be built into the system. As noted by RAND, it is important for such a structure to be clearly stated and enforced. They noted that closure of a center at a Marine base for not meeting standards “caused shock-waves that reverberated far beyond the Marine Corps. Reluctant implementers everywhere understood that compliance failures... would be noticed and publicly sanctioned. (p.212)” The lack of a rule-driven hierarchy in the civilian ECE market suggests that an organizational structure that will continually

monitor compliance and recommend improvements is required. Since the components of a quality-enhancement strategy -- individual staff qualification, provider organization rating and monitoring, compensation for individual staff, reimbursement rates for provider entities -- are all interlocking, they cannot be carried out in isolation by different organizations. Rather, putting these pieces together to be effective over time will require an entity with the capacity to:

- a. Frame, promote and monitor a complex set of strategies;
- b. Learn from implementation experience and periodically modify strategies;
- c. Relate effectively to multiple public and private entities;
- d. Deal with both professional quality and financial issues
- e. Relate to individual caregivers;

There are some critical issues to be considered in the design of an appropriate organization:

- a. Should it be an operating entity, offering training and keeping a registry, and/or certifying providers; or should it be a coordinating entity that contracts services to others:
- b. Should it be a public or private, non-profit agency.

This entails balancing private independence and public accountability. It may be desirable to vest line responsibility in a public agency, while maintaining a private oversight entity to monitor quality and advocate for improvements. A possible model for such an organization is the Pritchard Commission in Kentucky, which evolved from a designer and promoter of enacting education reform to an ongoing monitor, friendly critic and promoter of mid-course corrections (Adams, 1993).

- c. How should it be funded – designated public or private funds, receipts from share of increased rates intended for professional development?

Answering these questions is beyond the scope of this paper. Providing appropriate answers for Washington or other states will require:

- a. Deciding on the specific strategies to promote or implement;
- b. Systematically reviewing public and private entities of this sort in other states;
- c. Monitoring the creation of a new state government entity with responsibility for early learning, and examining the authority and resources it receives;
- d. Considering whether there is a reasonable potential for an existing entity to take on these functions if given sufficient authority and resources;
- e. Considering the potential benefits and barriers of creating a new entity, as opposed to expanding the capacity of existing ones.

Conclusion:

Developing a dynamic strategy for improving staff performance, qualifications and compensation

It is clear from the research findings presented in this paper that improving the quality of early care and education is essential to improving children's cognitive, social-emotional and self-regulatory outcomes. And developing, attracting and retaining a qualified teaching staff is the essential component of quality. However, it is equally clear that while the research literature points us in certain directions, there are too many gaps and uncertainties to design a detailed blueprint. Rather, we need a strategy that takes initial steps based on current knowledge – which is sufficient to get started -- but includes mechanisms to experiment, monitor and improve our efforts.

The current system falls so short of meeting developmental needs for many – perhaps a majority – of young children, that major improvements are needed. It is also clear that most of what has been attempted to date are initiatives that either reach too small a percentage of ECE staff, or offer too little in the way on increased skills and compensation to make more than modest improvements in the failure of the early care and education market to provide high quality service at an affordable price. We must therefore shift our thinking from small interventions or limited incentives to improve quality, and consider a large-scale revamping of requirements and incentives for ECE staffing. There is an opportunity to mobilize market forces if we bear in mind that ECE is a mixed private-public market and if we design appropriate roles for the public and private components. For example, market incentives can address two major needs. Improved compensation, linked to qualifications and demonstrated competence, can allow ECE to compete with other sectors in the labor market for more competent staff. Appropriate information sources, such as a well-designed Quality Rating System combined with ongoing public education, can address the market imperfection of inadequate parental information about the quality of particular providers or teachers, and potentially increase willingness to pay more for quality. However, since we know that the structure of the ECE market offers strong incentives to provide low quality service at low prices, we need a regulatory platform to establish and enforce minimum standards. The market feasibility analysis presented in this paper indicates that middle as well as moderate income families will need financial assistance to afford the market price of high quality early learning. This will require additional public and private investments.

We should design this combination of public and private efforts in a way that recognizes the multiple social and economic functions of ECE – promoter of child development, enabler of parental employment, source of employment for low-skilled, minority women – and maintains cultural diversity. However, while being sensitive to these secondary societal functions, we must keep children's well-being in clear primacy and not shy away from the fact that there may be individuals employed in ECE who are not well suited to meeting children's needs. A successful strategy must combine upgrading the knowledge and skills of a portion of the ECE workforce, while replacing another portion with better qualified and committed individuals. Finally, the strategy must recognize that there is no

free lunch on ECE quality, with the lack of supply of high quality services reinforced by a lack of effective demand due to inability of most families to pay the cost without assistance. Enhanced financing will therefore be required to develop a stable, well-qualified and high performing early childhood teaching corps and make it accessible to all children. The key elements of such a strategy are outlined below. The primary set of recommendations deals with policy changes; the second with research and data collection that will be required.

The solution - a dynamic strategy to overcome supply and demand constraints while providing accountability:

- Establish standards for high quality teaching of young children, that include formal education, skills training and demonstrated competence interacting with children and parents;
- Create a dynamic Quality Rating structure that includes:
 - a. A minimum level of staff qualifications specified in licensing regulations;
 - b. Higher levels indicated for higher tiers or quality rankings;
 - c. Guidelines for compensation sufficient to recruit and retain qualified staff;
 - d. A gradual phasing up of both minimum regulatory standards and quality levels so that overall market quality improves over time; rating of providers on improvement as well as current level of quality;
 - e. Requirements and incentives for both provider organizations and individual teachers.
- Increase capacity of the higher education system and community-based training organizations to generate a supply of well qualified teachers;
- Establish an individual staff certification system, including observations of interaction with children, peer monitoring and mentoring by a Master Teacher Corps, and support and incentives for professional development.
- Establish a performance-based compensation system that increases compensation commensurate with increasing levels of qualification and demonstrated competence; this will require evaluation of pilot programs to determine the most cost-effective levels of compensation;
- Expansion of financial assistance to families and provider organizations so that qualification and compensation increases do not price middle income families out of the market and promote economic segregation,

- Relate financial assistance to income, in order to target the greatest part of funding to children in low and moderate income families.
- Create an organizational structure that recognizes and supports the roles of both provider organizations and individual caregivers, and provides appropriate incentives and accountability for each. Consider combining a public agency that has line authority to implement this strategy, with a private monitoring agency that serves as a “friendly watchdog” and advocates for continuing quality improvement and can generate recommendations for mid-course corrections.
- Determining appropriate revenue sources is a critical issue that can only be addressed within the context of a particular state’s fiscal structure and the policy and political context at the time changes are initiated. There are multiple potential revenue sources, each of which has advantages and disadvantages (Brandon, 2003).

Research and data requirements to sustain the strategy:

- Implementation and evaluation of controlled experimental interventions to induce changes in staff qualifications and teaching/caregiving practice;
- Experimentation with different compensation levels, testing what is required to recruit and retain staff with AA or BA level degrees in different labor markets;
- A tracking and evaluation system to determine the number and qualifications of paid ECE staff in Washington, and sample testing of actual competence in caring for young children; this should include a management information system that makes staffing information available to parents, providers and public and private funding agencies.
- Periodic assessment of a sample of young children, including information on their developmental status and the nature of the caregiving they experience. To minimize time and cost of development, this could be built as a state-level add-on to the federal Early Childhood Longitudinal Survey (ECLS), which has developed appropriate measurement capacity, tools, and sampling and tracking methods nationally.

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Appendix A: Detailed Provisions of Wage Supplement Programs across the U.S.

Summaries of Programs:

The Child Care WAGES® Project provides education-based salary supplements to low paid teachers, directors and family child care providers working with children between the ages of 0-5.

North Carolina WAGES (www.childcareservices.org):

- Created by Child Care Services association in 1994 in Orange County, NC.
- Offered state-wide as a funding collaboration between local Smart Start partnerships (funds from Orange County Partnership for Young Children) and the Division of Child Development
- Semi-annual salary supplement linked to level of education, the position the recipient holds in her/his program and the "Tier" level

In order to participate:

- o interested child care professionals must
 - o complete an application and
 - o provide verification of current employment in a participating county child care program, current wages and educational credentials.
- o A child care center must
 - o agree to provide verification of an applicant's employment status and wages and
 - o agree not to use participation in the Child Care WAGES® Project to offset normal wage increases. The center is not responsible for providing the salary supplement should funding no longer be available.

Eligibility for at least one six month payment during the fiscal year, applicants must:

- o work in a county that uses Smart Start funds to support the Child Care WAGES® Project
- o work in a licensed child care program (center, home or public school site)
- o work with children between the ages of 0-5
- o at least 10 hours per week
- o earn below the income caps selected by the funding Partnership (Any teacher or family child care provider earning less than \$14.60 per hour or any director earning less than \$15.00 per hour)
- o have one of the education levels listed below (from regionally accredited schools).
- o All education awarded as Early Childhood Education must be focused on children ages 0-5; documentation is required.
- o Must have some formal child care credential or education beyond a high school diploma.
- o work at least six months in the same child care program
- o be employed at this same child care program when funding is available and a final confirmation has been completed

Tiers & salary supplements:

- o Salary supplements are tied to the education level of the recipient,
- o The amount of the supplement increases as the level of education increases.
- o Supplements for part-time employees are prorated based on a 40 hour work week.
- o Supplement totals shown represent annual awards.
- o All payments are contingent upon funding availability.
- o Counties choose which tier they want to support.
 - o Tier level is determined by the local Smart Start Partnership for each county.
- o Project staff must verify that participants have worked in their child care programs during the preceding six months before checks can be issued. Once approved for an award, participants who remain in the same child care program do not need to reapply in order to receive future installments.
- o Payments made directly to participant
 - o Each participant who meets the requirements for the Child Care WAGES® Project and remains eligible will receive a check from CCSA in the seventh month, after the completion of her/his six month commitment period.
 - o Checks are issued to participants after each six month period in the same child care program
- o Supplement is income, therefore taxable
 - o Participants will receive an IRS-1099 form at the end of the year if they received \$600 or more from Child Care Services Association during the calendar year. Recipients are responsible for reporting and paying any personal income taxes due.
- o If a participant moves to another licensed child care program in a participating county within the six months, then the commitment period must be reset based on her/his employment date at the new site.
- o Participants in the Child Care WAGES® Project may increase their supplement amounts by gaining more education.
 - o Documentation of increased education must be submitted to the Child Care WAGES® staff in order to qualify for a higher award amount
- o All educational levels prior to the AAS ECE or its equivalent on the scale are temporary. Participants must advance to a higher level within either two (teachers, directors) to three (FCC) years depending on position to remain eligible. Once a recipient reaches an AAS ECE or higher, they can continue to receive supplements as long as they stay in the same program and meet other eligibility requirements, including an income cap. If they change sites, they would have to start their commitment periods over from the beginning.

Kansas WAGES (www.kaccrraa.org):

Eligibility:

- o Must work in an eligible or participating county.
- o the teacher work in a program licensed by the KS Dept. of Health & Environment
- o All of applicant's coursework be from a regionally accredited institution.

- Applicant must work a minimum of 20 hours per week with children ages 0—5 in a licensed child care program.
- Make a wage of less than \$14.45 per hour.
- Must have some formal child care credential or education beyond high school.

Tiers & supplements:

- Supplements paid directly to recipients.
 - Supplements awarded after verification of employment following a six month commitment period.
- The supplement is permanent as long as we have funding and the person continues to meet our eligibility requirements.

Florida WAGES (www.fcforum.org):

The Child Care WAGES® FLORIDA Project (was) offered to selected pilot sites (counties) during the fiscal year 2003- 04 with open enrollment available to the rest of the counties in Florida during the next fiscal year. Administered by Florida Children’s Forum.

Eligibility (for at least one six-month payment during the fiscal year):

- (local School Readiness Coalitions reserve the right to require additional criteria)
- Work in a county that supports the Child Care WAGES® FLORIDA Project
- Work in a licensed or licensed exempt early care and education program (center, Head Start, family child care home or school-based program)
- Earn less than \$17.50 per hour as an early care and education teacher
- Have one of the education levels listed below (from regionally accredited college)
- Work at least six months in the same early care and education program,
- Be employed at this same program at the time of employment confirmation
- All education awarded as Early Childhood Education or Child Development must be focused on children ages 0-5; documentation is required.**
- Funding for level 1 on the above scale is temporary. Teachers awarded at level 1 must obtain level 2 – either the national CDA or 12 credit hours in Early Childhood Education or Child Development within two years (from the date of their first issued check to move up from that level) in order to retain eligibility. Family Child Care Providers must reach level 2 within three years for continued funding.
- Anything above a level one does not have a time limit, but if a participant uses their National CDA or CDA Equivalency to qualify they must provide us with a current copy. Once their CDA expires they will either have to send us a copy of their renewed certificate or they will become ineligible.

In order to participate:

- Complete an application and provide verification of
 - (1) current employment in a participating county child care program,
 - (2) current salary and
 - (3) educational credentials.

Recipients must:

- work with children between the ages of 0-5
- for at least 10 hours per week
- in a child care program,
- in a participating county,
- and must have some formal child care credential and/or education beyond a high school diploma.

Tiers & supplements:

- Salary supplements are tied to the education level of the recipient and the position the recipient holds in her/his program.
- Supplements paid directly to recipients.
- mailed in the seventh month after their six month commitment period has been completed
- Wage supplements for part-time employees are prorated based on a 40-hour work week.
- Participants will receive a check in the seventh month, after the completion of her/his six- month commitment period.
- Participants may increase their supplement amounts by gaining more education.
- Documentation of increased education must be submitted to the Child Care WAGES® staff in order to qualify for a higher award amount.
- All payments are contingent upon funding availability.
- Before checks can be issued, project staff must verify participants have worked in their child care programs during the preceding six months.
- Once approved for an award, participants who remain in the same child care program do not need to reapply in order to receive future installments.

Wisconsin R.E.W.A.R.D. (www.dwd.state.wi.us/dws/programs/childcare/teach/reward.htm)

Eligibility:

- employed a minimum of 20 hours per week in a licensed child care center, licensed or certified family child care program, or any Head Start Program.
- Family child care providers or teachers: Must work at least 5% of your time directly with children.
- Center directors or administrators: Must work at least 5% of your time in the classroom with providers or teachers (may include subbing, filling in, or providing guidance/support to staff).

If response necessitates, priority consideration will be given to the following:

- Individuals working the most time directly with children.
- Individuals with greater longevity in the field.
- Applicants must have a Registry Certificate reflecting Level 2 or above.
- Applicants with a Registry Certificate reflecting Level 1 may apply if they live or work in Milwaukee County.
- Registry Certificate must reflect highest level of education attained. No documentation other than your Registry Certificate will be considered. Your certificate must also be reflective of The Registry's current 10 level system.

Applicant must demonstrate longevity in one of the following ways:

- By having completed two continuous years of employment at current child care program (On or before July 25, 2003, the R.E.W.A.R.D.™ WISCONSIN Stipend Program deadline).
- Or by having 5 Stars on her/his Registry Certificate.

REWARD Oklahoma (www.cccpd.org/Reward/rewardoklahoma_new.html)

Eligibility:

- Must work in A DHS or tribal licensed early care and education facility. At the time of application, must have at least 10% of facility's licensed capacity filled with children receiving DHS and/or tribal subsidy or have the following criteria: 1. Have a current DHS and/or tribal subsidy contract number, 2. Be a "1 star plus" facility or higher, 3. Justify lack of 10% subsidy in care. (Head Start must be receiving subsidy from at least one child)
- Must work a minimum of 30 hours per week with children.
- Supplement paid directly to the early care and education professional
- Teachers and family child care providers must earn \$12 per hour or less. Directors must earn \$15 per hour or less and have the Oklahoma Director's Credential.
- Must have formal education above a high school diploma or G.E.D. (see scale below).
- Facility agreement is required from every early care & education facility.
- Some levels (A,D,&E) temporary, requiring movement to the next level within 1 – 2 years
- The facility must agree to provide verification of a participant's employment status and wages.
- facilities must meet the state or tribal licensing requirements for Oklahoma.
- Teachers/home providers who work with school age children are eligible as long as they work in the classroom with children at least 30 hours per week.
- Must be at the same facility for 6 months before receiving supplement.

Tiers & Supplements:

- All payments are contingent upon funding availability.
- Annual amounts are divided in two supplements.
- Once approved, participants who remain in the same early care and education facility and continue to meet requirements do not need to reapply in order to receive future supplements.
- Applicants must work a full six month commitment period before receiving a supplement.
- The salary supplement is income; therefore, if participants received \$600 or more from R.E.W.A.R.D. Oklahoma during the calendar year, they will receive an IRS 1099 form at the end of the year. For this reason, a current W-9 must be on file before a check can be issued.
- If you leave your center or close your home, you can reapply, however you will have

to wait one year before receiving your next check.

- Taxes are not taken out of the check; therefore participants are responsible for reporting this income and paying taxes owed. An IRS form 1099 will be issued to participants who make over \$600 for the year.
- If a participant leaves their facility prior to the end of the commitment period, no supplement will be awarded. They may reapply from their new facility. If they are still eligible and this is the first time they have left a site since being on R.E.W.A.R.D, then they will only need to work a six month commitment period before receiving a supplement check. Any subsequent times that a participant leaves without working at least one year in each site, will require one year of employment before receiving any supplement checks from R.E.W.A.R.D.

Missouri WIN (Workforce Incentive Project) (<http://www.openinitiative.org/win.html>)

Eligibility:

- Teaching and directing staff who work with children birth through age eight or administrators of an early childhood or school-age/after-school program
- Work in a licensed program that remains in substantial compliance
- Work at least 30 hours/week, 9 months/year
- Earn less than \$42,000 annually
- Must be at a Level 2 or higher on the Career Lattice (see WIN Incentive Structure for more information about the Career Lattice Levels)
- Must provide documentation of completion of 12 clock-hours of training each year as specified by the Department of Health and Senior Services (DHSS). For the purpose of the WIN Project, this training must occur between January 1 and December 31. We will not accept any transfer of hours from a different calendar year.
- Complete at least 14 clock hours of an "approved" curriculum training if the professional has an "a" designation on the Career Lattice
- This is a one-time requirement. The training may have been completed in previous years as long as documentation is provided.
- Current WIN participants will have a 6-month grace period to complete the training requirement.
- In order to count, the curriculum training must be from an approved trainer from one of the state approved curriculum entities (Creative Curriculum, Project Construct, High Scope, West Ed) and total at least 14 hours in a given curriculum. Most curriculum trainings will be for 20 or more hours

Utah Early Childhood Career Ladder (jobs.utah.gov/occ/training/careerladder.asp)

Eligibility:

To be eligible for the Career Ladder, providers must meet the following requirements:

- You must be currently employed working at least 20 hours per week with children ages birth through preschool in an early childhood program.
- You must have been continuously employed in this capacity in the same program for at least the past six months.
- Your employment must be in one of the following positions:

- o a licensed or residential certificate family child care provider caring for at least 2 non-related children
- o a child care center teacher, caregiver, or director
- o a license exempt preschool teacher or director
- o a regular every day classroom teacher, classroom aide, or education specialist in a Head Start program

Washington Career & Wage Ladder (www.econop.org/Policy-EarlyLearning&Care.htm)

The Washington State Early Childhood Education Career and Wage Ladder, a pilot program from 2000 to 2003, is a model for improving the quality of early learning and care by support the career goals of child care workers. The program directly rewards teachers for relevant education, experience, and job responsibility by providing incentives through wage increments for teachers to gain relevant higher education and make a professional commitment to early childhood education.

The career ladder applies only to ECE workers who work 20 hours or more a week and school age care workers who work 15 hours or more a week. To participate in the project, centers must: adopt the career development ladder, enroll subsidized children into at least 10% of their child slots, provide a minimum of 12 days paid leave each year, provide access to the Basic Health Plan and pay at least \$25 per month towards employees' health care, coverage. They must also establish Quality Care Committees with members including the ECE teachers.

Responsibility increments are 50¢ per hour and paid by the center. State-paid Education Increments are 50¢ each step. These steps are High School or GED, STARS, 30 credits, CDA, and every 45 credits above ECE.

Georgia Incentives (www.smartstartga.org)

Eligibility:

The INCENTIVES\$ program supplements salaries of early care and education professionals meeting credential and degree requirements and who:

- o Work in a licensed or registered facility that meets at least one of the following requirements:
- o Is accredited by the National Association for the Education of Young People (NAEYC), the National Early
- o Childhood Program Accreditation (NECPA) or the National Association of Family Child Care (NAFCC)
- o Serves at least 25 percent low-income families
- o Participates in the Child and Adult Care Food Program
- o Work at least 25 hours a week (40 for directors) with at least one year of continuous employment in the same facility
- o Earn less than \$14.45 per hour
- o Employed for one continuous year in same licensed child care center or registered family child care home that is nationally accredited and/or serves at least 25% DFCS subsidized families or participates in CACFP

Supplements:

- annual supplement paid in two installments after successful completion of programs or award of credentials

Illinois Great START (www.ilchildcare.org)

The program is funded and administered through the Illinois Department of Human Services and contracted through the Illinois Network of Child Care Resource & Referral Agencies (INCCRRA).

Eligibility:

- Must be employed in a full day/full year program
- Must average no less than 15 hours per work week, and earn no more than \$15 per hour
- Must have been employed with the same employer for a minimum of 1 year
- Must be employed in an IDCFS licensed child care home or center and work in Illinois

Tiers & supplements:

- Wage Supplements will be pro-rated if you work 15-29 hours per week.

Appendix B: Occupational Employment Categorizations

Child Care Worker

Minimum qualifications: Varies by state, HS diploma is common.

Job Description: Nurture and teach pre-school children in child care centers, nursery schools, preschools, public schools and family child care homes.

BLS Description for Child Care Workers (39-9011): Attend to children at schools, businesses, private households, and child care institutions. Perform a variety of tasks, such as dressing, feeding, bathing, and overseeing play. Exclude "Preschool Teachers" (25-2011) and "Teacher Assistants" (25-9041).

National Annual Wage: \$18,060; \$8.15 mean hourly

Preschool Teachers

Minimum qualifications: Vary by state and by employer; public schools require BA and teacher certification.

Job Description: Nurture and teach pre-school children in child care centers, nursery schools, public schools, and family child care homes.

BLS Description for Preschool Teachers, Except Special Education (25-2011): Instruct children (normally up to 5 years of age) in activities designed to promote social, physical, and intellectual growth needed for primary school in preschool, day care center, or other child development facility. May be required to hold State certification. Exclude "Child Care Workers" (39-9011) and "Special Education Teachers" (25-2041 through 25-2043).

National Annual Wage: \$24,560; \$10.36 mean hourly

Human Services Worker

Minimum qualifications: AA or certificate in social work/related fields.

Job Description: Various job titles; usually work under the direction of professionals from a variety of fields (e.g., nursing, psychiatry); provide direct/indirect client services.

BLS Description for Social and Human Service Assistants (21-1093): Assist professionals from a wide variety of fields, such as psychology, rehabilitation, or social work, to provide client services, as well as support for families. May assist clients in identifying available benefits and social and community services and help clients obtain them. May assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, or adult daycare. Exclude "Rehabilitation Counselors" (21-1015), "Personal and Home Care Aides" (39-9021), "Eligibility Interviewers, Government Programs" (43-4061), and "Psychiatric Technicians" (29-2053).

National Annual Wage: \$26,300; \$12.64 mean hourly

Social Worker

Minimum qualifications: BSW minimum; MSW for clinical practice; many health/mental health settings require MSW.

Job Description: Help people function the best way in their environment; deal w/ relationships & solve family & personal problems. School social workers diagnose students' problems and arrange needed services.

BLS description for Child, Family and School Social Workers (21-1021): Provide social services and assistance to improve the social and psychological functioning of children and their families and to maximize the family well-being and the academic functioning of children. May assist single parents, arrange adoptions, and find foster homes for abandoned or abused children. In schools, they address such problems as teenage pregnancy, misbehavior, and truancy. May also advise teachers on how to deal with problem children.

National Annual Wage: \$38,280; \$18.40 mean hourly

Elementary School Teachers

Minimum qualifications: public schools require BA, approved teacher education program, and licensed

Job description: Introduce children to numbers, language, science and social studies

BLS Description for Elementary School Teachers, Except Special Education (25-2021): Teach pupils in public or private schools at the elementary level basic academic, social, and other formative skills. Exclude "Special Education Teachers" (25-2041 through 25-2043).

National Annual Wage: \$46,350; mean hourly not reported by BLS - Hourly wage rates for occupations where workers typically work fewer than 2,080 hours per year are not available.

Source: U.S. Department of Labor, Bureau of Labor Statistics, November 2004 National Occupational Employment and Wage Estimates (<http://www.bls.gov/oes/>)