

Washington State Child Care Career and Wage Ladder Pilot Project

PHASE 2 FINAL EVALUATION REPORT

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Washington State Child Care Career and Wage Ladder Pilot Project

Executive Summary

Results of Evaluation

Background

Previous Washington Department of Social and Health Services (DSHS) child care studies have demonstrated very low average wages and high turnover rate of Washington child care staff (Miller and Schrager, 2000). However DSHS has also noted that the education and continuity of child care providers (workers) is linked to the quality of child care... [and] paying child care workers higher wages, based on their experience and education... [would] be an incentive for these workers to remain in their jobs longer and obtain more education, thus improving the quality of child care provided (DSHS RFQ, Research and Evaluation Component, Washington State Child Care Career and Wage Ladder Pilot Project, January 5, 2000, Exhibit B, p.1).

Addressing these assumptions and data, in 1999 Washington State Governor Gary Locke provided four million dollars, from the Temporary Assistance to Needy Families (TANF) reinvestment funds, to support the Washington State Child Care Career and Wage Ladder Pilot Project (duration of Pilot July 2000-June 2001). In the summer of 2001, the Governor allocated additional TANF funds to extend the Pilot through June of 2003 (thus the Pilot duration was three years).

The Pilot Project was a collaboration between a sub group of licensed or certified child care centers across Washington (originally 126 centers, approximately 6% of the total number of licensed centers in Washington) and DSHS. DSHS developed a career and wage ladder establishing specific job titles and related wages based on teacher education and experience. Participating Pilot Project child care centers agreed to adopt this career ladder. The state appropriation paid for teacher wage increments based on educational milestones completed, typically milestones beyond the minimums required for these positions. The Pilot Project child care centers paid for teacher wage increments based on experience. DSHS paid a portion of the experience increments, if the center had DSHS subsidized children in 25% or more of the center's licensed child care slots. Centers paid the \$.25/hour experience wage increments, if the center had less than 25% of their children receiving DSHS subsidized tuition. Further, the centers were required to provide minimum specified health and leave day staff benefits. In addition, the state paid a 15% administrative fee to participating centers.

Results of the Evaluation

The overall design of the evaluation was a comparison of two groups including centers selected by DSHS to be in the pilot project (originally 126 centers), and a matched comparison sample of centers, selected by the WSU research team (originally 126 centers). A multi-method approach to data collection was used. The main data collection method was 7 mail surveys completed by the administrators from pilot and comparison centers. A combined sample of 173 centers completed all three surveys, reporting on their center and on a combined 3839 individual employees. Data was gathered regarding center descriptions, employee demographics, staff employment details, employee education, and director perceptions on the implementation of the pilot. In addition, a sub group of pilot centers completed telephone interviews at the end of year one to provide a more detailed and intensive view of administrator perceptions of the project. Finally, an observational study was conducted in the spring of year three in which child care quality in 25 pilot and 25 comparison centers was assessed, and teacher attitudes measured.

The research questions used to guide the evaluation study are listed below. Following each question are the findings.

RETENTION: Is the *degree of retention greater* for pilot than comparison centers?

A. *Were the pilot and comparison groups similar in retention rates prior to implementation of the pilot project?*

- In order to assure that any differences (if found) in retention between the pilot and comparison groups were related to the implementation of the pilot, instead of a pre-existing difference, retention rates the year previous to pilot start up were estimated. Because data was not collected prior to CWL implementation, in order to calculate previous retention the mathematical assumption was made that the same total number of eligible employees were at the centers in October of 1999 as were employed in October of 2000 (when data collection began). One year retention rates for the pilot and comparison groups, prior to CWL implementation rates, were then calculated as the percentage of employees whose start date was October 1999 or earlier, who were still employed by the centers in October of 2000. The data suggests that the **retention rates of the comparison and pilot centers were very similar in the year prior** to the implementation of the CWL. Retention from October 1999 to October 2000 was estimated to have been 60% for the pilot group and 59% for the comparison group.

B. *Is there a higher employee retention rate at pilot centers than at comparison centers?*

- **Yes and no:** Pilot and comparison groups' retention rates varied, depending on the hire dates of employees. Examining all employees, regardless of hire date, there were no statistically significant differences in retention rates between the pilot and comparison centers; however differences in retention with newly employed staff was statistically significantly higher for pilot employees.
- **Retention of all employees:** Examining all the employees employed at Wave 1 (September 2000) and still employed at Wave 7 (May 2003) of data collection, the retention rates of the pilot and comparison groups were very similar; 40% of pilot employees and 42% of comparison employees were retained.
- **Retention of employees who were hired at the start of the Pilot:** Comparing the retention (defined as employed at Wave 1 and still employed at Wave 7) of pilot versus comparison employees who had been *hired in the first three months* of the pilot, the picture looked quite different. Nineteen percent of new pilot employees and 11% of new comparison employees were retained. The difference between the groups was statistically significant ($p=.0306$).

C. *Are there effects on retention due to title/position, wages, or staff education?*

- **Retention by position:** For both pilot and comparison centers, there were highly **significant differences ($p<.0001$) in which employee positions were retained** or turned over by the level of the role. The pattern was the same in both groups. Aide positions turned over the most frequently (and had the lowest retention), teachers the next frequently, program supervisors the next, site coordinators the next, and directors and assistant director positions turning over the least frequently (and having the greatest retention).

- **Retention by wages:** For both pilot and comparison centers, wages and retention were positively related. The higher employees' wages, the greater likelihood that they would be retained. The lower the wages the greater the likelihood that they would leave.
- **Retention by Education in Early Childhood:** Retention rates were much higher for those with education in early childhood, than for those without such education. This finding was true for both pilot and comparison groups, but pilot employees were more likely to have higher levels of early childhood education. Whereas, overall retention rates of employees from the start of the pilot to the end of the pilot were 40% for the pilot and 42% for the comparison group, for those who had completed 15-45 quarter credit hours of early childhood education, the much higher percentage of 59% of pilot employees and 58% of comparison employees were retained. For those who had completed an AA or BA in early childhood or a related field, retention rates were 62% for the pilot and 70% for the comparison.

*D. Is the **average length of employment greater** at pilot centers, than at comparison centers?*

- Yes and no; Differences between pilot and comparison groups varied in average length of employment, depending on the hire dates of employees. When comparing all employees reported on, regardless of start date, there were no significant differences in average length of employment between the pilot (average, 28.7 months) and comparison centers (27.5 months). The employees of both groups had worked for their centers on average approximately 2.5 years. However for the sub group of **employees who were hired from July to October 2000 (at the beginning of the Pilot) pilot employees worked 3.5 months longer than comparison employees, a difference that is statistically significant ($p=.0027$)**, than comparison employees hired during the same period. Overall, pilot centers had fewer employees with very short term employment, and more employees with mid or long term length of employment, than did the comparison centers.

*E. Do pilot child care centers tend to have employees **who stay longer**, even though they leave, than the leaving employees at comparison centers?*

- Yes, in examining all employees, regardless of hire date, **pilot leaving employees stayed significantly longer than comparison leaving employees; about 18 vs. 15 months ($p=.0131$)**. In examining the length of employ of leaving employees hired during the start of the CWL, again pilot employees stayed longer (about 15 vs. 11.5 months), and the differences between groups were statistically significant ($p=.0027$).

2. EDUCATION: Is there a difference in attainment and pursuit of education between pilot and comparison center employees?

*A. Is the average **educational status** (attainment) of employees greater at pilot group child care centers than at centers in the Comparison group?*

- Yes, the **average educational level was higher in pilot** than comparison centers. The number of employees with early childhood education credits from institutions of higher education in the pilot group was higher at a statistically significant level. Comparison group centers reported a larger number of employees in the lower educational levels of the ladder (high school diploma or less) to a degree that was statistically significant ($p=.0007$).

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- Additionally, examination of educational attainment level of employees of different hire dates indicated that the educational level of employees already in positions at the beginning of the CWL project was NOT significantly different in the two groups. However, the pilot center employees hired after the start of the project had an **average educational level statistically higher than the comparison group ($t=2.63$, $p=.0024$).**

B. Is there a change in the educational level from the beginning to the end of the study?

- **Yes, about 50% of employees moved from one educational level to another.** The number of employees who move up in educational level was similar in the pilot and comparison groups.

C. Does participation in the pilot increase the likelihood that employees will pursue additional education/training? That is, even if they do not move to the next milestone or ladder “rung” do they take more courses, attend more workshops, etc. in the pilot vs. the comparison groups centers?

- **Yes, there were highly significant differences in the pursuit of educational endeavors.** Significantly more employees in the pilot group centers took ECE college courses, completed STARS workshops and worked toward a CDA. In the case of STARS approved workshops, about 72% of the employees from pilot group were reported as taking workshops, while only about 63% of the comparison group were. Twenty-eight percent of the pilot group employees were identified as taking early childhood courses, in comparison with 21% in the comparison group centers. Fifteen percent of pilot and 10% of comparison employees were working towards a CDA. These differences are all highly significant ($p<.0001$).

3. WAGES: Is there difference in wage paid to employees of centers who participated in the pilot project and those who did not?

- **Yes, the average wage was higher in the pilot than the comparison centers.** Moreover, the wages were hierarchical by position, with lower responsibility/education positions making lower wages. Wages increased from the beginning to end of the pilot project for both the pilot and comparison groups, and increases were not significantly higher for the pilot than the comparison group, suggesting that the change happened in the initial wage improvements, not over the course of the pilot.
- The average hourly wage was higher for pilot employees, \$9.68, than for comparison employees, \$8.94. The differences between the group averages are highly statistically significant ($p=<.0001$). In addition, for each position pilot employees earned more than comparison employees, and most of these differences were also statistically significant. Participation in the pilot project wage ladder improved the wages of pilot group center employees. The mean wage figure for pilot employees for 2001, 2002, and 2003 were all higher than the 2002 Bureau of Labor Statistics report of average hourly wages for child care workers nationally (\$8.32), and in Washington state (\$8.27) (U.S. Department of Labor, Bureau of Labor Statistics, 2002 figures are the most recent available at the time of this report).

4. **BENEFITS:** Is there a difference in the benefits offered to employees of centers who participated in the pilot project and those who did not?

A. *Did more centers that participated in the pilot offer a greater number of benefits both at the beginning and the end of the pilot project than centers, which did not participate in the pilot project?*

- At every data collection point a considerably **higher percentage of pilot centers offered each of the Career and Wage Ladder required benefits than did comparison centers** (differences between groups were statistically significant) and the percentage of centers providing benefits increased from the beginning to the end of the project. This included not only the benefits required for participation in the project (paid sick and vacation days, partial contribution to health insurance) but also other benefits (comp or overtime paid, maternity/paternity leave, release time for training, etc.).
- In addition, inspection of the percentage of centers in the pilot and comparison groups for which each benefit was new suggests that participation in the pilot project increased the benefits employees of pilot group centers received.

5. **PILOT EFFECTIVENESS:**

A. *How do center administrators assess the burden of the implementation of the wage and career ladder?*

- **Pilot center administrator report of burden of administration:** On average, across the four points in time that directors were asked to assess the burden of administering the CWL, they indicated that it was less than they expected. On a scale from 1 to 5 the average perception of burden was scored 2.65 indicating that administration had been “somewhat less than expected.”

B. *What are their perceptions of the relationship between the CWL and the morale and professionalism of staff?*

- **Contrast of pilot and comparison groups on reports of morale and professionalism:** [Only asked Wave 2 & 3] Pilot center administrators were much more likely than comparison center administrators to report improvement in employee morale. Moreover, morale was attributed to participation in the project, or to work conditions related to the project (wage, opportunities for promotion, etc.). Also, across 4 waves of data collection, the degree of improvement in commitment to professional ethics, as well as a commitment to the field of ECE and improvement in skill reported by administrators was significantly higher in the pilot than the comparison group.

C. *What recommendations do they have for changes in implementation, should the pilot be continued?*

- **Recommendations for change in the Pilot:** Directors had suggestions regarding the structure of the pilot. The most common suggestions included more educational steps, increasing all wages, making wage increases for degrees (AA and above) larger than increases for lesser educational attainments, and adding a \$.25 per hour raise each 6 months in a position. Directors stated that these changes were necessary to increase retention and motivate staff to obtain more education. Regarding administration of the pilot, directors suggested that all qualified centers be included, that ongoing training meetings would be useful and that reporting via on-line forms might improve efficiency.

6. **QUALITY OF CARE:** Is the care received by children in pilot centers of higher quality? Is either process or structural quality better in pilot than comparison centers?
- **Yes, scores on measures of quality of care were significantly higher in the pilot than the comparison centers observed.** The overall average on the Early Childhood Environment Rating Scale (revised), which primarily measures structural quality, was 5.30 (slightly above the “good” level) while the comparison classrooms observed scored just below the good level, on average (4.80). This difference was statistically significant ($p=.036$). In addition, the scores on the Caregiver Interaction Scale, which measures process quality, were significantly higher ($p=.013$) with the pilot teachers observed (3.78 vs. 3.58), indicating more positive interactions between children and teachers in the pilot classrooms.

Discussion and Recommendations by Researchers

The findings from the full three years of the evaluation study indicate that the pilot project was often successful in reaching its objectives. Further, findings reveal a great deal of inter-relationship among the variables, e.g. wages affect retention, a sense of professionalism affects educational pursuit, etc. The remainder of this summary primarily presents the researchers’ analysis of the main findings of the basic evaluation components (retention, wage and education). In addition, we have commented on the effect of the CWL on morale and professionalism, in which we have relied not only on the quantitative data from our study, but also our experience with the respondents of the survey as they participated in this project.

Retention: Improved retention of staff was a goal of the Pilot. Although overall retention was not better in the pilot than the comparison group, retention of newly hired staff was higher in pilot centers, as was the length of employment of these new hires. Low retention of new employees, compared to retention of the full child care workforce, is typical in child care centers. Improvements in the retention for this group would be significant for centers, and for the stability of care provided to children.

A large proportion of employees in the sample were very short-term employees (2-3 months) who negatively affected retention rates. Many of these short term employees were also the lowest paid employees. While further research is necessary to explain why this phenomenon exists in the child care field, it seems logical that limited entry requirements allow many people into jobs that they are neither trained for nor have a desire to learn about. These employees may not be “retainable” and perhaps should not be a goal of retention increasing endeavors.

Further, retention was higher for employees who were more educated, suggesting that this group is more amenable to retention efforts, and as educated professionals should be a focus for retention efforts. Additionally, the greater educational attainment of the pilot employee group was the result of hiring more educated new employees, not the result of current employees attaining educational milestones. These findings suggest that increasing the educational requirements for entry into the field may yield improvements in retention.

Education: Improved education of staff was a further goal of the Pilot. Although pilot center staff did not achieve new educational milestones at a greater rate than comparison staff, pilot centers did add new staff with higher educational levels, creating a more educated staff in pilot than comparison centers. This finding suggests that increasing the educational requirements for entry into the field, along with increasing wages, may be more likely to yield improvements in educational attainment, than efforts to encourage already hired staff to increase their educational attainment.

The fact that the incumbent pilot employees did not improve their education to a greater degree than did comparison employees is interesting. When examined together with the low percentage of employees pursuing college credits, receiving time off to do so, or financial support for tuition, this result brings into question the assumption that it is possible to substantially change the educational level of current child care workers. Wage incentives may not be sufficient to encourage child care workers to take classes after their work hours. Directing resources to programs such as TEACH, which provides release time and scholarship funding, may be necessary to make realistic the goal of improving the education of the incumbent workers. However, it should be noted, that regardless of the feasibility of obtaining a degree, it stands to reason that without increased educational requirements for entry into the field, poorly educated personnel will continue to regularly enter and leave the field with little cost to themselves, but considerable cost to the programs and the children they serve.

Wages: The Pilot clearly achieved its goal of improving the wages of employees. These higher wages in turn appear to have had modest impacts on Pilot centers' ability to retain staff and more significant impacts on centers' ability to hire staff with higher educational attainment levels. It is important to note however, that the wage difference between pilot and comparison employees seems to have been made in the initial increase in wages to a baseline level, not in greater improvements over the course of the pilot. Further, it should also be noted that overall, the wages were still quite low and retention was worst for employees at the low end of the wage scale. Thus, without higher wages overall, retention may be difficult to improve.

Staff morale, professionalism, etc.: Although the wage improvements provided by the Career and Wage Ladder were not large (pilot wages averaging about \$.75 higher than the comparison), pilot center employees were reported to have greatly improved morale and sense of themselves as child care professionals. This is thought to be important because morale may translate into improved retention or duration of employ. A sense of professionalism may also translate into improved educational pursuit.

Moreover, in examining the factors identified as important influences on morale, it was interesting to note the difference in perceptions in pilot and comparison center directors. Pilot center directors were much more likely to point to wage, support for educational pursuit, and benefits as important for positive morale, while comparison center directors talked about the support of the director, team work, and relationships as important for positive morale. The comparison centers did not identify the compensation factors as important in low morale, but pilot centers did. It is possible that this difference represents a "halo" effect, in which the pilot centers were sensitized to these issues by virtue of their involvement in the CWL. However, the comparison centers, while not being subsidized to improve wages, were similarly being asked to track and reflect on their employees' wages, benefits and educational endeavors. It could be argued that this process should create a similar sensitivity.

Alternatively, this difference may be explained as an "unintended result" of the CWL. That is, discussion of compensation has perhaps been "off-limits" for discussion because without attempts to change these factors, it was too discouraging to discuss. Or perhaps the long-standing tension between reasonable compensation for workers and the hardship that it would bring to the families they serve made these difficult issues to openly discuss. Perhaps the willingness to identify these issues as important to morale was only made possible for workers with the presence of the wage ladder project. The frequency and intensity of additional comments on our surveys, together with the telephone interview comments, suggest this is a work force which desires an open discussion of the issues of compensation. Such a discussion would not occur instead of attending to improved quality, but as a means of improving quality.

Thus, policy makers wishing to impact child care quality, must recognize that low wages and the subsequent low status experienced by these workers are important factors to consider.

In conclusion, the results of this study can be examined simply and straightforwardly; did wage, education, and retention improve with participation in the Career and Wage Ladder? The answer to this simply stated question is yes, participation in the CWL relates to beginning stages of improvement in these areas. The more complicated analysis of these results attempts to determine which aspects of the Career and Wage Ladder are distinctly important in improving the quality of care received by children. This question is a more difficult one to answer and it appears likely that an interaction of multiple factors will ultimately be shown to explain improvements. The success of the CWL may ultimately be traced to its multiple interventions (improvements in wage AND benefits AND educational requirements AND attention directed to child care workforce issues and to the participants).

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**CHAPTER I
INTRODUCTION
Washington State Child Care Career and Wage Ladder Pilot Project**

Background

Based on previous research findings, Washington State Governor Gary Locke and the Washington Department of Social and Health Services (DSHS) concluded that “The education and continuity of child care providers (workers) is linked to the quality of child care... [and] paying child care workers higher wages based on their experience and education ... [would] be an incentive for these workers to remain in their jobs longer and obtain more education, thus improving the quality of child care” (DSHS RFQ for the Research and Evaluation component of the Washington State Child Care Career and Wage Ladder Pilot Project, 1/5/00, Exhibit B, p.1). Further, previous DSHS child care studies had demonstrated the very low average wages and the very high turnover rate of Washington child care staff (Miller and Schragar, 2000).

Addressing these assumptions and data, in 1999 Governor Locke provided four million dollars, from the Temporary Assistance to Needy Families (TANF) reinvestment funds, to support the Washington State Child Care Career and Wage Ladder Pilot Project. The goal of the Pilot Project was to “...enhance the quality of child care through wage incentives for child care workers based on education and experience” (DSHS RFQ No. 993462 for the Washington State Child Care Career and Wage Ladder Pilot Project, 2/1/00, p.1).

In the early summer of 2001, Governor Locke allocated \$4 million for continuation of this project for the 2001-2003 biennium.

The Washington State Child Care Career and Wage Ladder Pilot Project was a collaboration between a sub group of licensed or certified child care centers across Washington, and the Washington State Department of Social and Health Services (see Chapter 2, Evaluation Study Design, Description of Sample Selection). DSHS developed a career and wage ladder establishing specific positions and related wages based on teacher education and experience. Participating Pilot Project child care centers agreed to adopt this career ladder. The state appropriation paid for teacher wage increments based on educational milestones completed; milestones typically beyond the minimums required for these positions. The Pilot Project child care centers paid for teacher wage increments based on experience. The state also paid for part of the experience increments for those centers enrolling more than 25% of their children with tuition subsidized by DSHS. Further, the centers were required to provide minimum specified health and leave day benefits. The state also paid a 15% administrative fee to participating centers.

EVALUATION STUDY PARAMETERS: GENERAL OVERVIEW

A portion of the Child Care Career and Wage Ladder Pilot Project included funding a research and evaluation component. Early in the project, the purposes of the research and evaluation were to: (1) gather data regarding the pilot and (2) determine if the Pilot Project achieved its purpose, specifically to determine if increases in wages and benefits, based on experience and education, resulted in greater retention and educational attainment of child care workers. With the continuation of the pilot in 2001, it was requested by DSHS that the evaluation broaden to include measurement of child care quality. Because quality is best assessed through

observation, but this is a labor and cost intensive undertaking, observations were completed in a sub-sample of pilot and comparison classrooms.

Over the three years of the evaluation, seven mail surveys were used to collect descriptions of centers and employees. Specific data was collected at every wave of survey collection in order to determine whether there were changes (either positive or negative) or maintenance, as a result of implementation of the Pilot Project. These data included child care workers' wages, benefits, education, retention, perceptions of professionalism and morale. Data were also collected on perceived successes, goal achievement, problems, degree of administrative burden, unintended results of and recommendations for change in the Pilot Project.

These data were gathered from two groups: (1) all the centers participating in the Pilot Project (the Pilot Group was initially 126 centers, and became 124 centers within three months), and (2) a comparison sample of licensed centers, selected by the WSU research team (the comparison group was comprised of 126 centers). Comparison Centers requested the original Pilot Project RFQ, but did not submit applications to be in the Pilot Project. Those Comparison Centers selected matched the Pilot Centers on descriptors provided in the initial Child Care Career and Wage Ladder Pilot Project center applications.

In addition to the survey data, telephone interviews were conducted once during the 3 years; at the end of the first year, when it was unclear whether the pilot would be continued. A sub-sample of pilot and comparison center directors were interviewed via telephone to obtain more detailed information than that available from the mail surveys.

Finally, in the spring of the third year, observational data were collected from a sub-sample of pilot and comparison centers, and the teacher observed also completed a questionnaire, thus providing information directly from the child care staff, rather than through the perspective of the director, as our other data had been.

EVALUATION STUDY RESEARCH QUESTIONS

The research questions of the Washington State Child Care Career and Wage Ladder Pilot Project research and evaluation study were as follows:

RETENTION: Is the *degree of retention greater* for pilot than comparison centers?

- A. *Were the pilot and comparison groups similar in retention prior to implementation of the pilot project?*
- B. *Is there a higher **employee retention rate** at pilot centers than at comparison centers during pilot implementation?*
- C. *Is the **average length of employment greater** at pilot centers, than at comparison centers?*
- D. *Do pilot child care centers tend to have employees **who stay longer**, even though they leave, than the leaving employees at comparison centers?*

EDUCATION: Is there a difference in attainment and pursuit of education between pilot and comparison center employees?

- A. *Is the average **educational status** (attainment) of employees greater at pilot group child care centers than at centers in the comparison group?*
- B. *Is there a change in the educational level from the beginning to the end of the study?*
- C. *Does participation in the pilot increase the likelihood that employees will pursue additional education/training? That is, even if they do not move to the next milestone or ladder “rung” do they take more courses, attend more workshops, etc. in the pilot vs. the comparison groups centers?*

BENEFITS: Is there a difference in the benefits offered to employees of centers who participated in the pilot project and those who did not?

- A. *Do more centers which participate in the pilot offer a greater number of benefits both at the beginning and the end of the pilot period than centers which do not participate in the pilot project?*
- B. *Is there an increase in the number of pilot centers which offer specific benefits over the course of the pilot project?*

WAGES: Do wages of pilot and comparison center employees differ? Does the change in wage during the pilot project differ in pilot and comparison employees?

ATTITUDES: Do teachers from pilot group centers report differences in attitudes toward their work and differences in a philosophy of best practice than teachers from comparison group centers?

- A. *Do teachers from pilot group centers report a greater belief in developmentally appropriate practice than teachers from comparison group centers?*
- B. *Do teachers from pilot group centers report a weaker intention to leave their current positions than teachers from comparison group centers?*
- D. *Do teachers from pilot group centers report greater job satisfaction than teachers from comparison group centers?*
- E. *Do teachers from pilot group centers report higher levels of professional identity than teachers from comparison group centers?*

CHILD CARE QUALITY: Does child care quality differ in pilot and comparison classrooms?

- A. *Do teachers from pilot group centers score higher on measures of interaction with children than teachers from comparison group centers?*
- B. *Do pilot classrooms score higher on global measures of quality than comparison classrooms?*

PILOT EFFECTIVENESS: How do center administrators assess the burden of the implementation of the wage and career ladder? What are their perceptions of the likelihood of increased educational attainment and retention due to implemented wage and benefit increases? What recommendations do they have for changes in implementation, should the pilot be continued.

CHAPTER 2 EVALUATION STUDY DESIGN

Introduction

This chapter will describe the process as of the evaluation study including the:

1. Human subjects review process (DSHS and WSU);
2. Description of sample selection;
3. Mail survey content;
4. Mail survey design; and
5. Mail survey distribution and follow up.

Telephone survey development, design and findings are described in Chapter 10. Observation development, design, process and findings are described in Chapter 11.

The design of the Washington Child Care Career and Wage Ladder Pilot Project Evaluation was a comparison of two groups: (1) all the centers participating in the Pilot Project, selected by the Washington Department of Social and Health Services (DSHS), and (2) a sample of matched licensed centers, selected by the WSU evaluation research team.

The rationale for the design was to answer the questions described in Chapter 1 of this report: were the wages, benefits retention, educational pursuit, educational attainment, and professional attitudes of employees improved through participation in the Pilot. Further questions were asked to determine if specific aspects of centers affected employee retention, wage, education or benefits.

To gather data on these groups 7 mail surveys, a telephone interview (conducted Summer 2001), and center observations (conducted Spring 2003) were completed. Most of the data summarized in this report was gathered through the 7 mail surveys. The timing of the mail survey distribution is depicted in Table 2A.

Table 2A Timing of Survey Distribution							
	Survey 1	Survey 2	Survey 3	Survey 4	Survey 5	Survey 6	Survey 7
Date	Oct. 2000	Jan. 2001	May 2001	Oct. 2001	May 2002	Oct. 2002	May 2003

The data collected from these instruments:

1. **Center level** data including licensed capacity and number of children served, location, employee benefits, NAEYC accreditation, etc.;
2. **Employee level** data including job title, employment start date (and end date, if appropriate), wage, educational attainment level, and educational pursuits throughout the year;
3. **Director decisions and perceptions** including why the director chose to apply or not apply to join the Pilot project; director perceptions of staff professionalism, morale, etc.

HUMAN SUBJECTS REVIEW PROCESS (DSHS, WSU)

As with any research conducted by faculty at Washington State University, this project proposal underwent WSU Institutional Review Board examination for protection of human subjects. In addition, all protocols and instruments were reviewed and approved by the Washington State Institutional Review Board (formerly known as the DSHS/DOH Human Research Review Board). This protocol was originally reviewed and approved in May 2000 by WSU and in August and September of 2000 by the State of Washington. At the time of this approval, the survey instrument and other aspects of the protocol were still under development, requiring that finalized instrumentation, etc. be submitted as study modifications. Several such modification requests were submitted and approved throughout the course of the project as surveys were revised (see Appendix for memoranda).

SAMPLE SELECTION

As stated above, the design of the Washington Child Care Career and Wage Ladder Pilot Project Evaluation was a comparison of two groups: (1) all the centers selected by the Washington Department of Social and Health Services (DSHS) and participating in the Pilot Project, and (2) a sample of matched licensed centers, selected by the WSU Pilot Evaluation research team.

Selection of Pilot Group

In February 2000 the Washington Department of Social and Health Services (DSHS) circulated a Request for Qualifications (RFQ) for Washington licensed or certified child care centers to apply by February 29, 2000 to be considered for participation in the Child Care Career and Wage Ladder Pilot Project.

To be eligible for participation a center was required to (see DSHS RFQ no. 993462 for further details):

- Be licensed or certified through the state of Washington;
- Be a for-profit or not-for-profit organization (or individual) - not owned or operated by a governmental entity if the employees were government employees;
- Not currently subject to a licensing corrective action (through DSHS);
- Not currently under an active Child Protective Services (CPS) investigation;
- Been in operation for at least two years;
- Have a Washington business license;
- Meet criteria regarding restrictions on current or former Washington state employees.

Staff in the DSHS Children's Administration (project later moved to the DSHS Division of Child Care and Early Learning DCCEL) reviewed all applicants on these criteria and deemed them "Qualified" or "Not Qualified."

In addition to basic qualification data, centers also provided data on descriptors of their center (licensed capacity, percentage of DSHS enrollment, city, county), and on their employees (wages, position title, education level, months at the center, hourly wage, average hours working weekly). Of those centers which were "Qualified," DSHS used a "random, stratified" (see DSHS RFQ for the Research and Evaluation component of the Washington State Child Care Career and Wage Ladder Pilot Project, 1/5/00, Exhibit B) selection process to determine centers to offer acceptance into the pilot project. These decisions were based on the data

collected in the applications and the state calculation of dollar amounts projected to be spent by the state.

The complex process of selection of centers took DSHS several months longer than expected. The selection of pilot centers was in flux throughout the late spring and summer of 2000. A number of centers modified their data on wages and employees after submitting their applications, creating the need to recalculate costs to DSHS, and therefore recalculate the total number of centers the state could fund in the Pilot. Additionally, some centers offered acceptance into the Pilot chose not to participate, or became ineligible, after their selection. Finally, some selected centers determined they could or would not, meet the participation requirements of the Pilot, and opted not to sign contracts to be in the Project. Other selected centers chose not to participate for unknown reasons. As of the end of August 2000, 126 centers were selected, had signed contracts, and were beginning their participation in the Pilot Project. Within three months, two centers were no longer in the Pilot due to one closing and one being deemed ineligible by DSHS, reducing the Pilot group to 124 centers (see Table 2C below regarding characteristics of the Pilot group).

Selection of Comparison Group

The comparison group centers had also requested the original Pilot Project RFQ, but did not submit applications to be in the pilot project. Those comparison centers selected by the researchers matched the pilot centers on descriptors provided in the initial pilot and comparison center applications.

The goal in the comparison group selection was to have groups of comparison and pilot centers matched as closely as possible in center characteristics and size, at the start and end of the study. This would allow researchers to have confidence that these characteristics were not confounding causes of any differences between the groups found in the course of the evaluation.

In determining the initial sample size for the evaluation study, a comparison group was selected that was of the same size as the pilot group (initially 126 centers). (See Comparison Group Sample Size Rationale below.) Both groups were also closely matched on known characteristics (see Characteristics Match Decision Rules below). Following is a description of the recruitment and selection process for the Comparison Group.

Sample Characteristics, Match of Comparison/Pilot Groups, Decision Rules

Both comparison and pilot groups consisted of centers that had requested the original DSHS RFQ for the Career & Wage Ladder Pilot Study. The pilot group was selected by DSHS from those centers that returned completed applications to DSHS. The comparison group was selected by the evaluation researchers from the centers that did not return applications to DSHS.

The researchers obtained a list from DSHS of all the organizations that had requested the RFQ, but did not submit applications. From that list, the programs which were obviously not child care centers were deleted. However, for some organizations, it was not immediately evident whether or not they were child care centers. A list of these “questionable” organizations was sent to DSHS. The DSHS staff then helped in categorizing these programs. Research staff also contacted centers to clarify their status. The resulting child care centers were sent a letter explaining the Washington Child Care Career and Wage Ladder Pilot Project, and the

associated evaluation. They were invited to apply to be in the comparison group for the study by submitting a brief application comprised of the same core questions used in the pilot project application (see Appendix for a copy of the letter and application for comparison group recruitment and selection). Questions included city and county where the center was located, whether the center was licensed or certified by the state of Washington (and license/certification number), whether the center was subject to a DSHS corrective action or under a CPS investigation, licensed capacity of the center, number of children enrolled, and number of DSHS subsidized children (% of DSHS children was also derived from number of DSHS children enrolled divided by number of enrolled children).

In August of 2000 letters and applications were sent to 349 programs that had requested the Career and Wage Ladder Pilot Project application, but had not applied to be part of the Pilot Project. Of these, 247 centers returned applications. Applications were categorized into two groups: those that were eligible to be considered for selection (161) using the same criteria as DSHS used to determine whether centers "Qualified" for the Pilot Group, and those that were considered ineligible for selection (86). The criteria that the researchers used to determine *ineligibility* were as follows (some centers were determined to be ineligible for a combination of reasons below):

1. Not a child care center, a not yet operational child care center, a center that had closed down, or center which returned a blank application (5 programs)
2. Center was already part of the Pilot Project (3 programs)
3. Family Home Day Care program (2 programs)
4. Not Licensed (1 program)
5. Less than 10% DSHS funded children (43 programs)
6. Under Licensing Corrective Action Plan (2 programs)
7. Under an active CPS investigation (1 program)
8. Returned late (after August 28, 2000) (33 programs)
9. Program employed state employees (8 programs)

Among the centers that were considered to be eligible for selection, a different set of criteria was used to determine which centers would be selected, and which would not be selected to be in the comparison group. The goal in selection was that the comparison group should match the pilot group as closely as possible.

The decisions about which programs to drop were based on six criteria: licensed capacity, percentage of multiple sites, percentage of DSHS funded children enrolled in the program, size of community, east/west side of Washington, DSHS region of the state. The Pilot group was analyzed using these criteria, to establish the averages and percentages of centers in each category. The Comparison Group applications were then summarized and analyzed by the same categories. Comparison Group Centers were then selected using a random, stratified method whereby centers were randomly selected from the group while matching the percentages on these six variables as closely as possible.

The categories were analyzed as follows.

Licensed Capacity. It was determined that the first, and most important criteria, would be size of center. The size of the center was measured using the reported "licensed capacity." As the Pilot Project is focused on staff, having similar numbers of staff in the Pilot and Comparison centers was desired. Center staff numbers are determined as state law mandated minimum ratios of staff to children. It was determined that by matching on licensed capacity, the number

of staff reported in the surveys by the pilot and comparison groups would match most closely. To match on licensed capacity, researchers looked both at the average capacity of the comparison and pilot groups, and the range in capacity by groupings of 25 (how many with a capacity of 1-29, 30-59, etc.). See Table 2C for licensed capacity data.

Percentage of Multiple Site Centers. Applications from both the pilot and the comparison group included organizations that asked for multiple sites of their program to be accepted into the study. It was decided that the percentage of multiple site centers, and the average number of sites from a particular company, should match between the two study groups. Researchers hypothesized that a multi site program would tend to look uniform across sites, and if there were an unusually high number of multi site programs in one group, and not the other, this could result in differences between the groups that were not due to participation in the pilot project. See Table 2C for multiple center data.

Number and percentage of DSHS Funded Children in Program. To be eligible to be considered for either the pilot or the comparison group, a center was required to have at least 10% of enrolled children funded by DSHS. The selection of comparison centers included selection of sites to allow for a close match in the average number and percentage of DSHS funded children across all centers in each group. See Table 2C for DSHS funded children data.

Metro/Small Urban/Rural Designation. Using a guideline provided by DSHS (Licensed Child Care in Washington State: 1998), the researchers categorized the applicants as being from either a metropolitan, small urban, or rural county. Designation codes were assigned to all applicant centers from both groups. The researchers selected programs for the comparison group that resulted in distributions of centers in these three categories similar to that of the pilot group. See Table 2C for degree of urbanization data.

East/West Geographic Designation. The researchers used two different geographical variables. The first was east/west designation. All applicants were coded as being on the west side or the east side of Washington state (centers located in counties to the east or west of the Cascade Mountains - a common location distinction made in Washington state). Then, comparison group centers were selected to best match the east/west proportions of the pilot group. See Table 2C for east/west geographic designation data.

DSHS Geographic Region. The second geographical variable considered was by DSHS region. This was the most difficult variable to match, while maintaining a close match on other variables. There are six different DSHS regions within the state of Washington. Applicant centers were coded as being from one of the six regions. Researchers matched as closely as possible the comparison group to the pilot group by region; however since eastern Washington has only one county designated as "Metro" (Spokane), it was not possible to perfectly match by size and eastern-western designation, as well as by DSHS region. See Table 2C for DSHS geographic region data.

Table 2C Washington Child Care Career and Wage Ladder Selected Pilot and Comparison Groups Contrast Information			
	Pilot Group 8/15/00	Updated Pilot Group 11/15/00	Comparison Group 9/15/00
Total in Sample	126	124	126
Average Licensed Capacity	56 range 11-154	55 range 11-154	58 range 12-147
Average # DSHS (%)	25 (48%)	25 (48%)	25 (46%)
# Multiple Site Corporations (# of sites) (% of total sites)	6 (19) (15%)	6 (19) (15%)	8 (17) (13%)
# Metro (%)	73 (58%)	74 (60%)	71 (56%)
# Small Urban (%)	28 (22%)	26 (21%)	32 (25%)
# Rural (%)	25 (20%)	24 (19%)	23 (19%)
# East (%)	38 (30%)	38 (31%)	37 (29%)
#West (%)	88 (70%)	86 (69%)	89 (71%)
# DSHS Region 1 (%)	16 (13%)	16 (13%)	24 (19%)
# DSHS Region 2 (%)	18 (14%)	18 (15%)	10 (8%)
# DSHS Region 3 (%)	25 (20%)	24 (19%)	20 (16%)
# DSHS Region 4 (%)	29 (23%)	28 (23%)	31 (25%)
# DSHS Region 5 (%)	16 (13%)	17 (14%)	19 (15%)
# DSHS Region 6 (%)	22 (17%)	21 (17%)	22 (17%)

Comparison Group Sample Size Rationale

In determining the initial sample size for the evaluation study, researchers selected a comparison group that was of the same size as the original pilot group (n=126). Our goal was to have, at the end of the study, comparison and pilot groups matched both in size and characteristics. This close match would be important for meaningful statistical analysis of the data. To reach the goal of similar sizes between the groups at the end of the study, we estimated the likelihood of attrition with each group throughout the study. In making the comparison group size decision, we examined a number of possible factors.

1. **Monetary Incentive and Interest - Comparison Group:** We expected that after initially applying to be in the comparison group, some comparison group participants might decide not to return one or more surveys (busy schedules, etc.). However, it was concluded that

the monetary reimbursement of \$250.00 (provided to comparison centers at the completion of each survey) was sufficient incentive for most of these programs to stay in the study, and therefore their attrition rate would be low. Furthermore, these centers demonstrated some interest in and knowledge about the pilot project by initially requesting the DSHS RFQ (even though they did not submit an application to be part of the pilot), and may also have been motivated to be part of the pilot at least through participation in the evaluation study. It was hypothesized that even with these strong motivators, a small number of comparison centers would drop out of the evaluation.

2. **Non-monetary Incentives - Pilot Group:** Although the pilot group did not receive specific payment to participate in the evaluation study, they also had incentives for participation in the evaluation. They agreed to participate in the evaluation as part of their contract to be in the pilot group. They received a 15% administrative fee from DSHS to administer the pilot project. These centers, it was believed, had a high motivation to be included in the pilot group, and to gain increased wages for their staff would be willing to do what was asked of the project (including participating in the evaluation) in order to continue to be in the pilot. In addition, it was presumed that many of these centers, as active participants in the pilot, would want to provide feedback regarding the project. It was hypothesized that even with these motivators, a small number of pilot centers would drop out of the pilot, and a small number of those which continued with the pilot, would not return surveys.
3. **Motivation-Professionalism Level:** It was proposed that perhaps the comparison group might have a lower level of professionalism (financial stability, staff training) or motivation, which could explain their decision not to apply to be part of the pilot group. If this were true, the comparison group centers, might be at a greater risk for dropping out of the study. The researchers considered making the comparison group larger than the pilot group to allow for this possibility, however, it was ultimately decided that the monetary incentive would serve to retain these participants. Moreover, it could be argued that because the comparison group centers actually DID request the pilot study RFP, they were more motivated and professional than the hundreds of centers that did not, and might in fact match more closely with the pilot group on these professionalism variables.
4. **Conclusion:** Finally, the researchers concluded that there did not appear to be a good rationale for expecting increased attrition from the evaluation study for either group, nor reason to expect increased retention of either group. Therefore, a comparison group that was of equal size to the pilot group (n=126) was selected. Upon completing this process those centers that had applied to be in the comparison group, but were not accepted, were sent a “regrets” letter (see Appendix for copy of this letter). Centers selected to be in the comparison group were informed of this in a letter that accompanied Survey I.

MAIL SURVEY CONTENT and DEVELOPMENT

The main method of data collection for the evaluation of the Career and Wage Ladder Pilot were mail surveys. (Telephone interviews and center observations were also completed. See Chapters 10 and 11 for descriptions of the design, content, and findings of the telephone interview and center observations.) Center directors completed the mail surveys. Directors were asked to provide information about the center as a whole, and also about all individual employees who met the criteria for participation in the wage ladder. Directors were presumed to be the most knowledgeable source of data on the overall center. However, while directors were an accurate source of some specific employee data (such as employment start date, wage,

position title, age group assigned to), other employee data, for instance employee educational pursuits and how those were paid for, were considered potentially problematic to ask directors to report on. They might or might not have comprehensive information in these areas. However, the problem remained that tracking an estimated 3000 – 4000 individual employees would be very costly and difficult.

It was therefore concluded that in order to maintain a high return rate, and stay within the budget allocated for the evaluation component of the pilot project, a single data collection source (the director) at each center under study would be the strongest design. Consequently the development of surveys involved much planning of survey format in order to facilitate the directors' reporting of data on employees. Whereas the questions asked in each survey varied, this same format was used for the employee sections of all surveys.

In addition to developing a format that would allow for accurate reporting on each employee, content of survey questions was also carefully crafted. Previous survey and interview studies on the child care workforce were reviewed to refine and expand on the questions we had identified in our proposal to DSHS. For example, the interview schedule and report from the study of Licensed Child Care in WA: 1998 (Miller & Schrager, 2000) the Cost, Quality and Outcomes Study (Helburn, 1995), and materials published by the Center for the Child Care Workforce (Whitebook, Howes, & Philips, 1998; Whitebook & Philips, 1999) were reviewed.

Survey Content

Over the course of the three years of the evaluation, directors completed seven mail surveys. (See the Appendix for copies of each survey.) The data collected on the surveys is described in Tables 2D, 2E, and 2F below.

Table 2D: CENTER DESCRIPTIVE Survey Data Collected							
Survey Number and Date	1 Oct. 2000	2 Jan. 2001	3 May 2001	4 Oct. 2001	5 May 2002	6 Oct. 2002	7 May 2003
Who completed survey (name, position)				X	X	X	X
Geographic region (zip code, county)	X						
Auspices (Profit/non-profit status)	X						
Multiple or single site corporation	X	X	X	X	X	X	X
Number of Years in Operation	X						
Number of directors since July 2000							X
Month and year current director hired							X
NAEYC accredited	X	X	X	X	X	X	X
Licensed capacity (children)	X	X	X	X	X	X	X
Total # children served (by age group)	X	X	X	X	X	X	X
Total # DSHS subsidized children served	X	X	X	X	X	X	X
Total # of newly enrolled children during period		X	X				
Child care tuition			X		X		X
Hours of operation			X		X		X
Total \$ received from CWL			X		X		X
Percentage of staff wage expenditures represented by CWL wage subsidies					X		X
Number of employees in labor union			X		X	X	X
Benefits provided by (or subsidized by) center	X		X	X	X	X	X
Number of sick days for new employees (categories)						X	X
Staff raises provided	X						
Quality Care Committee (established, participants, frequency of meetings success)		X	X	X	X	X	X
Ethnicity of employees	X		X	X			X

Table 2E: EMPLOYEE Survey Data Collected
(provided for each eligible individual employee)

Variable	When collected		
	Initial reporting only	Last reporting only	All waves employee reported on
Staff position (assistant, lead teacher, etc.)			X
Age group assigned to			X
Educational level completed (high school, etc.)			X
Hourly Wage			X
Ed. Pursuit: STARS (Y/N, hours taken, time off given, fees, how paid)			X
Ed. Pursuit: CDA (Y/N, stage, time off given, fees, how paid)			X
Ed. Pursuit: courses (Y/N, hours taken, time off given, fees, how paid)			X
Still employed by center (Y/N)			X
Month, year of hire	X		
Age (<i>categorical</i>)	X		
Gender	X		
Month, year of termination		X	
Reason for leaving		X	

Table 2F: DIRECTOR DECISIONS/OPINIONS/PERCEPTIONS Survey Data Collected							
Survey Number and Date	1 Oct. 2000	2 Jan. 2001	3 May 2001	4 Oct. 2001	5 May 2002	6 Oct. 2002	7 May 2003
Reasons center chose to participate, or not, in CWL	X						
Staff work morale		X	X		X		X
Professionalism, skills/knowledge of ECE of staff		X	X		X		X
Perceptions of changes in staff retention or ed. Pursuit			X				X
Parental choice of center & CWL			X				
Suggestions for changes in CWL			X		X		X
Administrative burden of CWL			X		X		X
Perception of changes to CWL (i.e. improvement?)				X			
Provide prospective employees with CWL information?							X
Perceptions of \$.25 and \$.50 raises							X

Pretest of Survey I (Protocol, findings, & survey adjustment)

In order to identify questions or format complications respondents might find in completing Survey I, prior to finalization of the survey, a pre-test was completed on the survey instrument and its accompanying letter. The goal was to pretest the instruments and then, based on the results of the pretest, if needed, modify the letters, or survey questions or format, prior to sending the survey to the sample. However, time for this process was quite limited. The amount of time between when the final draft of the survey would be ready, and when the survey needed to be sent was just days.

Thus, it was decided to pretest the survey with a small (n=4) convenience sample of child care directors, who the researchers were personally familiar with, and who would guarantee a quick completion and review of the survey. These were also child care centers who were not eligible to participate in the comparison group because: (1) two were located in the state of Idaho, (2) one was a state-run center, and (3) one, though meeting all Pilot center criteria, had not asked for information on the Pilot Project, thus eliminating her center from consideration for the pilot or comparison groups. However all four participating pretest centers met the following pilot and comparison group criteria: child care centers licensed in their state, not under a corrective action or CPS investigation, enrollment size within accepted range, percentage of state subsidized children (DSHS subsidized in Washington, comparable program in Idaho) within accepted range, and in operation at least two years.

The pretest centers were contacted by telephone and asked to participate in the pretest. After each verbally agreed to participate, a research assistant personally delivered and picked up the surveys and cover letters (see Appendix). In addition, a cover letter was provided to the pretest

center directors explaining the Career and Wage Ladder Pilot project goals and the evaluation process. Pretest child care center directors agreed to complete the surveys as if they were actual respondents, noting in the draft survey margins any confusing questions, and responding to the following questions regarding the survey:

1. Was the cover letter easy to understand? Do you have any suggestions for ways it could be re-worded for better understanding? If so, please write your suggestions directly on the cover letter.
2. How much time did it take for you to fill out this survey? _____
3. As you answered the survey, were any of the questions unclear to you? If so, please mark them directly on the survey form.
4. If you found any portions of the survey that could use editing, either for clarity of understanding, or as a result of incorrect grammar/spelling, please mark them directly on the survey form.
5. If you have any other comments, suggestions, etc. regarding ways we can make this survey more “user-friendly” to center directors like yourselves, please list them on a separate sheet.

After the completion of the pretest, the comments of the pretest directors were summarized and the cover letters and surveys were modified to address their concerns. The cover letters were generally considered clear with minor edits suggested. The time taken to complete the draft survey averaged 40 minutes. Suggestions for changes in the surveys included: clarifications to the multiple site question; questions about child enrollment categories (full and part time); modifications to the education categories for employees (clarifying definitions of categories and additions); and additions to the reasons centers opted to, or not to, apply to be in the Pilot Project. All areas noted by respondents were reviewed, and clarifying edits and additions to the cover letters and surveys were made. We believe these editorial changes suggested by child care center directors improved the understandability of the final survey.

As subsequent surveys were similar in design and content to Survey 1, pretests were not completed on these instruments.

Outside Reviewer Feedback on, and Revision of, Survey I

In addition to pretesting the instrument and accompanying letters with 4 center directors, feedback was sought from Dr. Marna Miller, Research and Analysis, DSHS, and her assistant, Laura Schrager, and Denise Halloran, DSHS Project Manager for the Career and Wage Ladder Pilot Project. These individuals are intimately involved with the population to be surveyed and were well aware of the goals of the evaluation project. Consequently, Survey I and all accompanying materials were sent to these individuals for their review and comment. The results of this review were several changes to the survey.

Many of the comments referred to possible confusion regarding the reporting of numbers of children enrolled in centers and the numbers of DSHS subsidized children served. Both Ms. Halloran and Dr. Miller indicated that the use of “full-time equivalent,” (which researchers had chosen to minimize confusion over full- and part-time children) would be problematic for respondents, and they recommended that we simply ask about numbers of children rather than

full-time equivalents. We modified the final version to ask about actual numbers, not full time equivalent enrollment. Dr. Miller also indicated that asking about the number of children licensed for, by age group, was problematic and we ultimately asked just for a total licensed capacity number.

Other comments from these reviewers led to clarification of position titles (e.g., site coordinator, not director), and clarification over multiple versus single site operations, and “eligible” employees. Additionally, comments were made regarding the authorship of the study (i.e., DSHS vs. WSU) and an additional reason for participation in the pilot project was offered. All of these comments resulted in editorial changes to the survey, which we believe, ultimately improved the understandability of the survey and the accuracy of the data reported by respondents. Finally, Ms. Halloran commented on the burden of completing the tables of employees (see Appendix for Survey 1–Q15 and 16). She cited concern over the feasibility of respondents completing data on all employees. This concern was noted. In reviewing initial applications of centers and using licensed capacity to estimate number of employees, it was estimated that about 10% of the sample (smallest centers) would be expected to have as few as two to three eligible employees, and about 10% (largest centers) would most likely have more than fifteen employees. It was determined that reporting on all employees would not be an undue burden, and would provide us with the richest data. Therefore, directors were asked to provide data on all their eligible employees.

Surveys 2 and 3 were similar in design and content to Survey 1. Prior to finalizing these surveys Denise Halloran (DSHS Project Manager for the Career and Wage Ladder Pilot Project) again reviewed the questionnaires, and had minor editorial suggestions that were incorporated in the final drafts of the surveys. The format of the remaining surveys (4-7) followed the revisions made to early surveys, and thus were not sent to Ms. Halloran for review prior to data collection.

Mail survey distribution methods

The principle investigators contracted with the Social and Economic Survey Research Center at WSU to manage the mail survey data collection process. This center has developed a procedure of survey data methodology that has consistently produced high return rates. This process was followed in the CWL data collection endeavor. A first mailing of a single survey, along with a cover letter, informational brochures for employees, and A-19 forms to the comparison group centers (for the purposes of DSHS paying the center for completion of its survey) were mailed to centers via priority mail and included a self addressed, stamped return envelope. A follow-up post card was sent to the centers from which we had not yet received a response (see Appendix for various correspondence accompanying surveys). A second mailing that included a second survey was sent to centers from which we had not yet received a response.

In addition to this intensive process typically used by SESRC, evaluation research assistants spent numerous hours calling all centers with non-returned surveys to check whether they had received surveys, and to answer any questions they might have. If appropriate, assistants sent a third survey to these non-respondents, and stated deadlines for return of the survey. In addition, the DSHS Program Manager stressed the importance of returning surveys in her cluster meetings with participating pilot centers and in her written communications with these centers.

This multi-pronged process (priority mail delivery, stamped return envelopes, post card follow-up, second mailing, phone follow-up, and DSHS support) though time consuming, resulted in very high return rates, as seen in the following chapter, Table 3A (Chapter 3 Results Mail Survey: Descriptive).

Process to Facilitate Accurate Survey Data

This was a complex survey, with much detailed information on employees. To assist in the accuracy of the information provided, for each of the seven surveys collected, centers with missing data were called by the evaluation project research assistant to assure any omissions of data were deliberate, clarify confusions, and make data corrections if needed. For each of the seven mail surveys distributed, this process took approximately 60 hours of calling over 4 weeks with calls to centers, and call backs to centers where the respondent was unavailable at earlier calls.

Since our research assistant had made phone contact with almost every center in the comparison group as part of the selection process, and with many of the pilot centers as well, it was determined it would be best to continue having her be the primary telephone contact regarding the survey completion. In addition, she has had numerous years of experience in the child care field, and was familiar with what directors meant by responses. Prior to coding, she made calls to any centers that had sent in a survey that was obviously incomplete (had forgotten page 1, etc.). Later, when coding began, several issues needed clarification and additional calls were made. For example, a completed survey that had listed 21 staff on Q15 and 14 staff on Q16 needed to receive a clarification call. A handout was prepared that explained the issues that could be problematic, and coders placed color-coded tabs on the relevant surveys that would signal particular issues. For instance, if the person who filled out the survey didn't include himself or herself on the staff list, there was a pink tag, and a call would be made to determine whether this was an inadvertent or deliberate omission.

In summary, the processes used to increase return rate included: (1) direct financial incentive to comparison group centers and payment of an administrative fee to Pilot centers; (2) surveys priority mail delivered, stamped return envelopes, post card follow-up, second mailing, (3) intensive phone follow-up, and (4) DSHS reminders. Assuring data accuracy was accomplished through phone follow-up. These processes together, though intensive and time consuming, created a high overall return rate of 69% (173 of the 250 centers identified to participate) as well as highly accurate and complete data.

Payment of Comparison Group

In the packets of materials comparison centers received were the DSHS forms (A-19, see Appendix) that they needed to complete in order to receive reimbursement. Upon receipt of completed surveys the evaluation research assistant verified inclusion and completeness of A-19 forms. Weekly she submitted bundled A-19 forms to DSHS accompanied by a memo listing submitted A-19 centers alphabetically by name.

While this process was designed to insure timely payment to comparison centers, partly to insure continued participation in the study, some difficulties with this process occurred along the way, which may explain some of the attrition in the comparison group.

For example, after A-19s were sent to DSHS for processing in November of 2000, it was ascertained by DSHS that some of the centers also required a W-9 form before their payment

could be processed. It became necessary for the evaluators to request more documentation from several comparison centers (see Appendix for letter regarding W-9 form), to make follow up phone calls to further explain the request for a completed W-9, and to remind centers to submit their W-9 forms to facilitate payment by DSHS. Additional mailings were sometimes required to insure that the W-9 was filed, and much interaction between DSHS and the research assistant was required to insure that the W-9's were received before A-19s were subsequently filed.

Thus, some centers were not paid until many months after they submitted their surveys. Over the course of the study, fewer and fewer payment issues occurred. The slow payment to some comparison group centers may have increased their attrition from the study.

CHAPTER 3 RESULTS: MAIL SURVEY DESCRIPTIVE

Introduction

This chapter will present descriptive results from the mail survey data, including information about the centers (e.g., location, size, auspice) and the employees (e.g., number in each position, age, gender ethnicity).

Return Rate

A significant portion of the information used for the evaluation of the Washington Child Care Career and Wage Ladder Pilot Project has been the collection of the data through 7 surveys sent to Pilot and Comparison centers. In order to insure the validity of the data reported on individual employees, we chose to limit analyses to data from centers that completed all 7 surveys (173 centers), thus providing continuity of reports and improved validity.

Survey I was sent to 124 Pilot centers and 126 Comparison centers. Each subsequent survey was sent to all of the remaining pilot centers because this was a contractual requirement of participating in the pilot (numbers below 124 indicate the loss of some pilot center participants from the project). In most instances surveys were only sent to comparison centers that completed the previous survey. In some instances fewer comparison surveys were sent in a subsequent survey than had returned the previous survey. This was because comparison centers had closed in the interim. In May 2002 several surveys were sent to centers that had not completed the previous survey due to a coding error. Table 3A below indicates the number of surveys sent at each wave and the percent of surveys which were returned. Of the original 250 centers, 173 (or 69%) completed all 7 surveys. Of the 124 Pilot centers, 95 (or 77% of the 124) completed all 7 surveys. Of the 126 Comparison centers, 78 (or 62%) completed all 7 surveys.

Receiving 89 to 100% of the distributed surveys increased substantially our confidence in the ability of the data to describe the entire population of pilot participants and comparison centers, and not some anomalous result. It must be noted, however, that while the return rate at each individual wave of data collection was high, not all centers who returned data in one wave provided data at all three waves. Consequently, our final sample, which includes centers from who we received all three surveys is 173 of 250 centers represents a return rate that is still quite acceptable for survey research, 69%.

Table 3A Surveys Sent and Returned						
Survey # & Date	Pilot		Comparison		Return Rate	
	Sent	Returned	Sent	Returned	Pilot	Comparison
1 September 2000	124	116	126	112	89%	94%
2 January 2001	124	114	112	112	92%	100%
3 May 2001	124	110	112	103	89%	92%
4 October 2001	119	117	100	90	98%	90%
5 May 2002	119	117	97	91	98%	94%
6 October 2002	118	116	87	84	98%	97%
7 May 2003	116	111	84	80	96%	95%

Match of 173 Responding Centers with Original 250 Center Pool

A high return rate is important to insure that the data collected is representative of the entire group under study. In this case, the moderate return rate was still successful in providing a great deal of similarity between the final sample of 173 and the original 250 centers, as can be seen in the table below. The data from the initial application for Pilot or Comparison involvement, (location, licensed capacity, and percentage of DSHS subsidized children) allowed us to compare our 173 respondents to the total sampling frame. The following table compares the characteristics of the groups, which indicates a great deal of similarity between the final sample and the total sampling frame. In analysis, none of the differences were found to be statistically significant. (Figures in Table 3B are based on those provided in spring of 2000 on initial applications. Note that figures in later tables in this chapter represent responses to the actual 7 surveys, and vary from Table 3B.)

Table 3B Comparison of Respondents and Full Sampling Frames					
Characteristics	Full Pilot Group number (%)	Pilot Respondents number (%)	Full Comparison Group number (%)	Comparison Respondents number (%)	Total Respondents
Total in Sample	124	95	126	78	173
Average Licensed Capacity	55 range 11-154	54 range 11-152	58 range 12-147	52 range 17-120	53 range 11-152
Average % DSHS	48%	45%	46%	46%	45%
Metropolitan counties	73 (59%)	52 (55%)	71 (56%)	39 (50%)	91 (53%)
Small urban counties	27 (22%)	21 (22%)	32 (25%)	24 (31%)	45 (26%)
Rural counties	24 (19%)	22 (23%)	23 (18%)	15 (19%)	37 (21%)
Eastern half of state	37 (30%)	31 (33%)	37 (29%)	24 (31%)	55 (32%)
Western half of state	87 (70%)	64 (67%)	89 (71%)	54 (69%)	118 (68%)
DSHS Region 1	16 (13%)	11 (12%)	24 (19%)	15 (19%)	26 (15%)
DSHS Region 2	17 (14%)	14 (15%)	10 (8%)	6 (8%)	20 (12%)
DSHS Region 3	24 (19%)	22 (23%)	20 (16%)	10 (13%)	32 (18%)
DSHS Region 4	29 (23%)	18 (19%)	31 (25%)	17 (22%)	35 (20%)
DSHS Region 5	16 (13%)	12 (13%)	19 (15%)	13 (17%)	25 (14%)
DSHS Region 6	22 (18%)	18 (19%)	22 (17%)	17 (22%)	35 (20%)

Match of Pilot and Comparison

The function of a comparison group (to test for a true treatment effect) can only operate if the two groups are well matched on key characteristics. As can be seen in table 3B when considering factors such as size and location, the match between comparison and pilot centers in the final 173 centers remained quite good. This match provides a degree of control over potential “extraneous” factors, which if pilot and comparison centers had differed upon, might be argued as responsible for results, rather than participation in the pilot project.

Sample Description: Centers

Location. Table 3B indicates the locations of the 173 centers across the state. Slightly more than half of the centers were in metropolitan counties, with approximately one-quarter in small urban and less than one quarter in rural counties. About two thirds of the centers were located in the western half of the state, with roughly one-third located in the east of the state. These geographic distributions remain essentially the same when the sample was divided into pilot and comparison groups, with slightly more of the pilot group located in metropolitan counties while the comparison group had somewhat more in the small urban counties. The largest groups of centers (20%) were located in DSHS Regions 4 (Seattle area) and 6 (southwest corner), with 12-18% in each of the remaining regions. Again, the distribution of centers across the DSHS regions was similar to this when the sample was divided into pilot and comparison groups. The pilot group had more centers in Regions 2 and 3 while the comparison group had more centers in Regions 1 and 5.

The participants were asked in the first survey (Fall 2000) to report the number of years their centers had been in operation. Examining the sample of 173 centers revealed that pilot centers reported being in operation, on average, about 12.5 years (12.49, $n=94$) while comparison centers reported a length of time in operation of 10.55 ($n=78$). This difference was not significant.

In the spring of 2003, most centers (80%) were single site operations, but that distribution was slightly different for the two groups, though this difference was not statistically significant (84% pilot, 75% comparison). Some centers did change from single to multiple-site operations, or the reverse, over the course of the study. Twelve percent of pilot centers and 6% of comparison centers reported going from 1 to 2 sites. Two percent of pilot centers and 4% of comparison centers reported going from multiple sites to 1 site. Surprisingly, in some cases reports of site numbers were rather erratic over the 7 waves. It is unclear how to explain confusion over the number of sites a center maintains.

At each wave of data collection, centers were asked to report on their accreditation by the National Association for the Education of Young Children (NAEYC). In the fall of 2000, 9% reported that they were currently accredited. This included more pilot (14%) than comparison centers (4%) and this difference was statistically significant ($\chi^2=4.83$, $p=.03$). However, the number of comparison centers accredited increased such that by May of 2003, 8 centers (10%) reported being accredited. Conversely, the number of accredited pilot centers decreased over the 3 years, with only 10 of these centers (10%) reporting being accredited in May of 2003. None of the differences in the six final waves of data collection were statistically significant, as was the difference in the first wave of data. As with the number of sites, in some cases the report of NAEYC accreditation was quite erratic. Confusion in reporting accreditation status may come with different respondents in different waves and a lack of clarity in what NAEYC accreditation actually is.

Center auspices. Table 3C presents results regarding the way centers reported their auspices. Ninety-two percent of the participating centers identified themselves as “private,” with 45% “not for profit” and 47% “for profit.” When examined across the two groups, more comparison group centers identify themselves as “for profit” and more pilot group centers identify themselves as “not for profit.” This difference was not statistically significant ($\chi^2=3.63$, $p=.1621$).

Table 3C Center Auspices			
Variable	Pilot n=95	Comparison n=78	Total N=173
Private not for profit	49 (52%)	30 (38%)	79 (46%)
Private for profit	41 (43%)	40 (51%)	81 (47%)
Other	5 (5%)	8 (10%)	13 (8%)

Children served. Table 3D presents the results of the data regarding the children being served in the participating centers. As shown in the table, the average licensed capacity of the participating centers was about 56 children, with similar numbers reported by the pilot and comparison groups. This number is quite similar to the average capacity of licensed child care centers in Washington, which was 57 children (Schrager & Miller, 2002).

Enrollment reported was quite similar to licensed capacity and quite similar in the pilot and comparison groups. The average number of children receiving DSHS subsidies was calculated to be about 25 children, or about 41% of the children served in all participating centers. The percentage of DSHS subsidized children was slightly higher in pilot (43%) than comparison (39%) centers, but this difference was not statistically significant.

Table 3D Children Served (averaged across 7 waves of data collection)			
Variable	Pilot	Comparison	Total
Licensed capacity	57 range = 13-152 n=95	55 range = 17-168 n=78	56 range = 13-168 n=173
Number enrolled	57 range = 15-130 n=95	57 range = 20-154 n=78	57 range = 15-154 n=173
Number of DSHS subsidized children	26 range = 4-108 n=95	24 range = 4-93 n=78	25 range = 4-108 n=173
Percentage DSHS subsidized children out of total enrolled	43% range 8-88% n=95	39% range 12-94% n=78	41% range 8-94% n=173

Enrollment: Centers were asked to report enrollment by age group, using categories identified in previous research on child care centers in Washington (Schrager & Miller, 2002); these enrollment numbers can be seen in Table 3E. The percentages reported indicate the average proportion of the total number of children a particular age group represents. Because some centers do not have all age groups in their programs, the percent total is not equal to 100%.

Preschool aged children represent the largest group of children served in the centers overall, and in the pilot and comparison groups separately. School aged children represent the next largest groups of children served followed closely by toddlers. It is important to remember that these are numbers of children enrolled, rather than full-time equivalent “slots.” Both kindergarten and school aged children may be enrolled only part-time and may not represent as many actual hours of attendance at the center as do preschool aged children, infants or toddlers. Kindergartners represented the fourth largest group of children enrolled and infants were the smallest group. As with previous descriptors, the distribution of centers across these categories remained quite similar when the sample was divided into pilot and comparison centers. No statistical differences were found in group size by age group across pilot and comparison centers.

Table 3E Average # Children Enrolled by Age Group and % of Total Enrolled (averaged across 7 waves of data collection)			
Age group	Pilot	Comparison	Total
Infants	7 (11%) range=1-22 n=41	7 (9%) range=3-18 n=26	7 (10%) range=1-22 n=67
Toddlers	15 (26%) range=5-41 n=70	14 (23%) range=4-35 n=54	14 (24%) range=4-41 n=124
Preschoolers	29 (47%) range=6-77 n=76	27 (46%) range=6-91 n=64	28 (46%) range=6-91 n=140
Kindergartners	9 (11%) range=1-27 n=53	7 (10%) range=1-24 n=49	8 (11%) range=1-27 n=102
School age	18 (29%) range=2-46 n=48	15 (29%) range=1-41 n=45	18 (29%) range=1-47 n=93

Comments regarding reasons for participating (or not) in pilot project

The pilot group was asked to identify reasons why they chose to participate in the pilot project. Table 3F presents the responses regarding this decision. Note that respondents could choose all or none of these reasons. As a follow-up, pilot group centers were asked to select a single best reason why they chose to participate in the project. Table 3G reflects the response to this question. Both of these tables illustrate that the reasons to participate focused on improving the working conditions of employees (wages and benefits). In fact, a desire to improve wages or benefits was chosen as the single best reason for participation by 78% of the respondents. Of these about a quarter noted that even though they might not be able to afford to continue the wage increases (should the pilot end), it was better to increase wages for some time period than not at all.

Table 3F Reasons for Participating in Pilot Project	
Reasons	Number (%)
Wanted to increase wages of current staff	94 (99%)
Time required seemed reasonable	85 (89%)
Process easy	83 (87%)
To better recruit and retain employees	82 (87%)
Difficult to continue increases, but better for short time than not at all	79 (83%)
To increase benefits	57 (62%)
Already met wage baseline but wanted to increase salary for education increases and retention	23 (25%)
Because center would continue with wage increases at end of pilot	22 (24%)

Table 3G Single Best Reason for Participating in Pilot	
Reason	Pilot
Wanted to increase wages of current staff	38 (43%)
Difficult to continue increases, but better for short time than not at all	22 (25%)
To better recruit and retain employees	19 (22%)
Already met wage baseline but wanted to increase salary for education improvement and retention	5 (6%)
To increase benefits	4 (5%)

The comparison group was asked to identify reasons why they chose *not* to apply to participate in the Career and Wage Ladder Pilot Project. Note that respondents could choose all or none of these reasons. Table 3H presents the distribution of responses to this question. The most frequently listed responses for not applying to participate in the pilot (1st-5th responses) had to do with concerns about funding. Either the participant did not believe the center could afford the requirements for the project (wage and benefit increases) or they reported that variability in the number of DSHS subsidized children they served would make their budgets unpredictable under the CWL project. About one-third of respondents did not like the structure and lack of flexibility in the wage ladder. Because such a large number (36%) selected “other” reasons, an analysis of these individually specified responses was conducted. This analysis revealed no particular category of reason for choosing not to apply. That is, the responses were idiosyncratic and did not indicate any particular barrier to application. Table 3I reflects the distribution of responses to our request for a **single best** reason for choosing not to apply. The responses to this question were spread across the possible choices, but 50% fell into two categories (“other” and not being able to afford the higher wages at the end of the pilot).

**Table 3H
Reasons For Not Applying to Participate in the Pilot Project**

Variable	Number (%)
Could not maintain higher wage at end of pilot	49 (68%)
Could not afford increases to salary required	36 (51%)
Could not afford health care costs	34 (48%)
Could not afford 10 days paid leave	34 (47%)
Varying % of DSHS kids would make budget unpredictable	24 (34%)
Wage ladder too structured to allow for individual center wage variations	22 (32%)
Too much time to administer	16 (23%)
Application too time consuming	15 (21%)
Did not think my center would be selected	13 (19%)
Wages would not be changed by participation	12 (17%)
Could not provide assistance with health plan	11 (15%)
Other	27 (36%)

Table 3I
Single Best Reason for Choosing Not to Apply

Reason	Number (%)
Other	21 (27%)
Could not maintain higher wage at end of pilot	20 (26%)
Could not afford increases to salary required	9 (12%)
Could not afford 10 days leave	5 (6%)
Did not think my enter would be selected	5 (6%)
Could not afford health care costs	4 (5%)
Too much time to administer	4 (5%)
Wages would not be changed by participation	4 (5%)
Application too time consuming	2 (3%)
Wage ladder too structured to allow for individual center wage variations	2 (3%)
Missing	1 (1%)
Total	78

Description of sample: Employees reported

Number of employees total. Table 3J provides information regarding the employees represented in the 173 centers. A total of 3839 employees were reported by the participating centers, across all 7 waves of data collection, with slightly more in the pilot than the comparison group (pilot=2115, comparison=1724). It is important to note that this number of employees reported does not indicate the number of care-giving staff positions in these 173 centers. Some of the 3839 represent employees who did not remain employed the entire project period, and some who were hired to replace individuals who left.

Table 3J Number of Employees			
Variable	Pilot	Comparison	Total
Total employees reported across all 7 waves of data	2115 (55%)	1724 (45%)	3839
Number of employees who quit or were fired, between Sept. 1, 2000 and June 1, 2003	1192 (56%)	942 (44%)	2134 (57%) (108 missing)
Number of employees working in For Profit centers	873 (42%)	746 (43%)	1619 (42%)
Number of employees working in Not For Profit centers	1106 (53%)	799 (46%)	1905 (50%)
Missing re Profit/Not for Profit	115 (5%)	179 (10%)	293 (8%)
Number of employees working in Metropolitan centers	1056 (50%)	960 (56%)	2016 (53%)
Number of employees working in Small Urban centers	645 (31%)	511 (30%)	1156 (30%)
Number of employees working in Rural centers	414 (20%)	253 (15%)	667 (17%)
Number of employees working in Western WA centers	1543 (73%)	1229 (71%)	2772 (72%)
Number of employees working in Eastern WA centers	572 (27%)	495 (29%)	1067 (27%)

Age, gender and ethnicity of employees. Age of employee was collected the first time an employee was reported (wave 1 for employees hired prior to the beginning of the pilot project and in subsequent waves for employees hired during the course of the project). Almost half (45%) of the employees reported on were in a single ten-year age category (21-30 years). The employees reported on across all 7 waves of data collection are almost entirely female (93%) and are more likely to be Caucasian than any other ethnic group. (See tables 3K and 3L for specifics of age and ethnicity.) None of the differences in distribution across these variables for pilot and comparison employees were statistically significant.

Table 3K Number and Percentage of Employees by Age			
Age group	Pilot	Comparison	Total
Age 18-20 years	350 (17%)	310 (19%)	660 (18%)
Age 21-30 years	947 (46%)	718 (43%)	1665 (45%)
Age 31-40 years	394 (19%)	308 (19%)	702 (19%)
Age 41-60+ years	382 (18%)	318 (19%)	700 (19%)

Table 3L Employee Ethnicity (Percentage of employees in a category)			
Ethnic group	% Pilot	% Comparison	% Total
Caucasian	75%	78%	76%
African American	7%	6%	7%
Latino	7%	6%	6%
Other	8%	8%	8%

Job titles. Table 3M presents the percentage of employees in the four job titles identified in RFQ for the pilot project (along with director/owner, which was identified by some respondents). The majority of the employees reported were lead teachers (46%), followed closely by assistants (44%). Only 2% of the employees were identified as site coordinators and 3% as program supervisors. Another 5% were identified as director or director/owner. When examining positions by pilot and center groups, a significant difference was revealed ($p < .0001$). Although the distribution appears fairly similar, close examination showed that the comparison group had a larger proportion of directors, which may reflect on the need for the pilot group to actually use the job title categories provided for determining wage enhancements, while this constraint did not exist for the comparison group.

Table 3M Job Titles			
Title	Pilot	Comparison	Total
Assistants	910 (44%)	684 (43%)	1594 (44%)
Leads	926 (46%)	726 (45%)	1652 (46%)
Site coordinator	33 (2%)	23 (1%)	56 (2%)
Program supervisor	75 (4%)	50 (3%)	125 (3%)
Director/Assistant Director/Owner	62 (3%)	102 (6%)	164 (5%)
Missing	89	119	208

Age groups assignment. Respondents were asked to identify the age group that employees were usually assigned to during their work hours. Table 3N presents the results of this data collection. The largest group of employees (35%) were identified as assigned to preschool aged children, followed by toddler teachers (25%) and multi-age grouping (11%). The fact that almost 1/5 of the employees were assigned to more than one age group may have implications for children's experience of a stable caregiver. There was a statistically significant difference in the distribution across these age group assignments within the pilot and comparison groups (chi-square = 28.02, $p = .0002$). The difference seemed to be related to the fact that the comparison group had a higher percentage of staff assigned to multiple age groups, while the pilot group had more employees assigned to toddler age groups. There was a good deal of variability in the number of employees assigned to particular age groups across the 7 waves of data collection (see appendix for table specifying this variability), suggesting that employees were moved around a good bit in terms of the children they were assigned to. This issue would require further investigation to determine its potential influence on the stability of care experienced by children.

Table 3N
Age Group Assignment of Employees
 (At final wave of reporting for each employee)

Age group assignment	Pilot	Comparison	Total
Infant	189 (9%)	135 (8%)	324 (9%)
Toddler	547 (27%)	385 (24%)	932 (25%)
Preschool	725 (35%)	570 (35%)	1295 (35%)
Kindergarten	55 (3%)	34 (2%)	89 (3%)
School age	184 (9%)	129 (8%)	313 (9%)
NA (supervisor)	12 (1%)	18 (1%)	30 (1%)
All age group	156 (8%)	153 (9%)	309 (9%)
Multiple age groups	177 (9%)	208 (13%)	385 (11%)
Total	2045	1632	3677 (162 missing)

Unionization. Centers were asked to report on unionization of employees at the end of the first year and final year of data collection. In the spring of 2001, 4 of the 95 pilot centers and 1 of the 78 comparison centers reported employing individuals who belonged to labor unions specifically for their child care work. Three pilot centers reported the number of employees belonging to unions (13-18 employees) and a single comparison center reported 14 employees belonging to a union.

In the spring of 2003, 4 of the 95 pilot centers still reported union member employees, but no comparison centers did. At this wave of data collection, 3 of the 4 pilot centers reporting union member employees indicated the number of such employees (from 10-28 employees).

CHAPTER 4 RESULTS: MAIL SURVEY EMPLOYEE RETENTION

Introduction

One of the primary goals of the Career and Wage Ladder (CWL) was to increase the retention of child care staff. A premise of the CWL was that increased staff retention would improve the stability of care for children, resulting in improved quality. In order to determine whether retention rates increased during pilot implementation, the evaluation study measured retention in several ways.

- Retention rates during the year previous to project implementation were examined.
- Retention rates during project implementation were compared for comparison and pilot groups.
- Length of employment of staff of the pilot and comparison groups were analyzed.
- Potential effects on retention of factors outside the CWL were examined (employee positions, education, wages, size and location of center).
- Reasons reported for staff leaving the employ of centers were examined.
- Directors' beliefs regarding what most influenced staff retention was also analyzed.

Respondents (directors) were asked to report a hire date (and leaving date, if appropriate) for each employee identified in any of the seven waves of data collection. Consequently it was possible to calculate the duration of time that each employee had been with the center (number of months of employ), and to calculate the number and percentage of employees who had been retained at the end of the pilot project (May 2003).

For purposes of the evaluation, only employees which met the criteria of the CWL (working 15 or more hours weekly in an after school program, or 20 hours or more weekly in a full day program, and also meeting the position definitions of the CWL) were included in the study. Centers might have had other employees who worked shorter hours or who served in other capacities. These other employees were not counted for purposes of the evaluation; inclusion of these employees could potentially inflate or deflate reported retention rates. In addition, as throughout this report, the retention analyses describe the results for the employees at centers which completed all seven waves of data collected over the three years of the pilot (173 total centers, 95 pilot and 78 comparison). Most of the following retention analyses utilize the pool of employees who were present at the first wave of data collection (1577 employees). Some of the analyses, for instance length of employ, utilize the pool of employees who were present at any wave of data collection (3839 employees). Because of missing data, for any particular analysis, the numbers may vary somewhat from these totals.

Retention Rates Prior to CWL Implementation

Were the pilot and comparison groups similar in retention rates prior to implementation of the pilot project?

In order to assure that any differences (if found) in retention between the pilot and comparison groups were related to the implementation of the pilot, instead of a pre-existing difference, we were interested in knowing what retention rates were the year previous to pilot start up. Because data was not collected prior to CWL implementation, in order to calculate previous

retention it was therefore necessary to make mathematical assumptions. It was assumed that the same total number of eligible employees were at the centers in October of 1999 as were employed in October of 2000 (when data collection began). One year retention rates for the pilot and comparison groups, prior to CWL implementation rates, were then calculated as the percentage of employees (of the total) whose start date was October 1999 or earlier, who were still employed by the centers in October of 2000.

The data suggests that the **retention rates of the comparison and pilot centers were very similar in the year prior** to the implementation of the CWL. Retention from October 1999 to October 2000 was estimated to have been 60% for the pilot group and 59% for the comparison group. (See Table 4A). It is possible that these retention rates reflect turnover rates of 40% or 41% respectively. That is, this data could suggest that the centers in this sample lose about 40% of their employees annually. However, to actually measure turnover, it would be necessary to follow positions over time to see how often a position was filled. In this case, we estimate that about 40% of the positions had to be refilled at least once, which would indicate a 40% turnover rate. It is expected that at least some positions probably were filled several times, resulting in a turnover rate higher than 40%. Thus, 40% is a conservative estimate of turnover here. It should be noted that 40% is within the range of annual turnover reported across a variety of types of centers and positions in the U.S. (20%-59%, Whitebook, Howes, & Phillips, 1998).

Retention Rates During the Three Years of CWL Implementation

*Was there a higher **employee retention rate** at pilot centers than at comparison centers during the CWL implementation?*

Data provided in Table 4A (graphically on Chart 4A) answer this question. In order to calculate retention, we took two points in time and determined what percentage of employees who were there at the first time were still employed at the second point in time. Comparing retention during the first year of the pilot (Oct 2000-Oct 2001) with rates estimated for the year prior to the with the retention, retention improved slightly for both pilot and comparison groups with the increase slightly more for the pilot: pilot retention 63%, comparison retention 61%. The differences between the pilot and comparison were not statistically significant.

Examining retention of employees present in the fall of 2000 (hired at any date) and still present in May of 2003, about 2.5 years later (our definition of retention for the remainder of this chapter), revealed that 40% of pilot and 42% of comparison employees were retained – demonstrating no statistical difference between the pilot and comparison groups on overall retention. Thus as in retention in the year prior to the pilot, and the first year of the pilot, **the pilot and comparison groups had very similar overall retention rates** over the duration of the pilot. When considering the entire group of employees the CWL project did not appear to effect retention (see later sections of this chapter for subgroups where retention rates were different between groups).

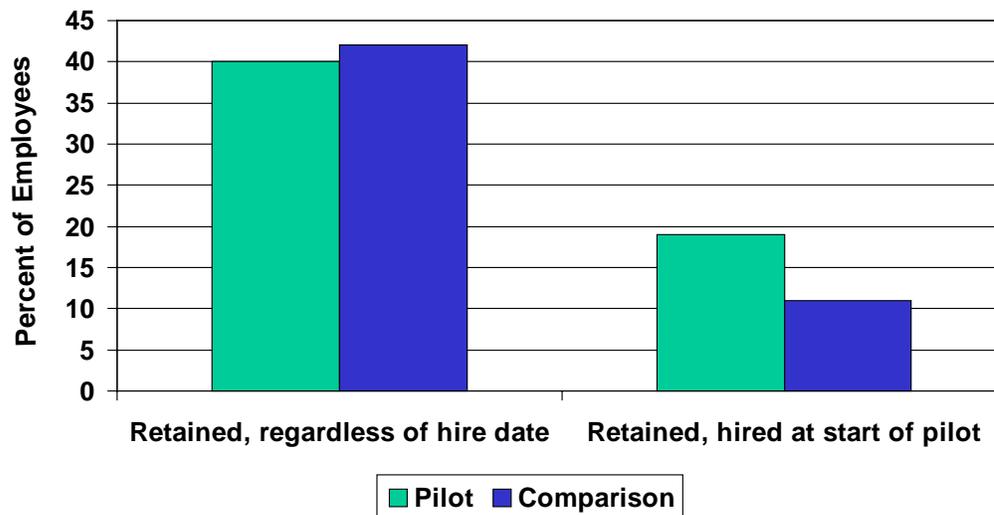
There were a number of characteristics about the employees (see remainder of this chapter) that may explain the lack of difference in retention between the overall pilot and comparison groups. Of those, an extremely important feature is how long employees had been at the centers. As explained in detail later, about 17% of the employees for both the pilot and comparison groups had been at their centers for seven years or more (some as long as 34 years). These very long term employees in both groups were not affected by the pilot project. They had clearly already made the decision to stay at their center, prior to CWL implementation.

However because of the presence of these long term employees smaller retention changes in shorter term employees were harder to detect.

To control for the effects of long term employ, we also examined the retention rates of shorter term employees separately. When we analyzed the retention from the beginning until the end of the project of pilot versus comparison employees who had been hired in the first three months of the pilot, the rates look quite different, than the rates of the entire group of employees. For this group, **19% of new pilot employees were retained and 11% of comparison new employees. The differences between the groups of new employees was statistically significant.** Thus for more recently employed staff, the CWL appeared to have increased retention rates. The lower retention rate for new employees (for the pilot, 19% for new employees, versus 42% for the entire pilot workforce combined), compared to retention of the full workforce, is typical in child care centers. Many new employees tend to stay less than six months. Thus these very short term employees negatively effect overall retention.

Table 4A Employee Retention Rates					
	PILOT row %, #		COMPARISON row %, #		Significance of Chi Square**
	Left	Retained	Left	Retained	
Retention previous to pilot Retention Oct. 1999-Oct. 2000 (retained 1 year)	40% 354	60% 523	41% 278	59% 393	p=.67245
Retention Oct. 2000-Oct. 2001 (retained 1 year)	37% 328	63% 556	39% 272	61% 421	p=.3837
<u>Employees regardless of hire date</u> Retention Oct. 2000-May 2003 (retained ~2.5 years)	60% 519	40% 351	58% 388	42% 285	p=.4280
<u>Employees hired during start of CWL</u> <u>July-Oct 2000</u> Retention Oct. 200-May 2003 (retained ~2.5 yrs.)	81% 163	19% 39	89% 145	11% 18	p=.0306
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance					
**If differences statistically significant (.05 or smaller), significance noted in bold/italics					

Chart 4A
Retention Rates
All employees present Oct 2000, still retained by May 2003



Length of Employment

*Is the **average length of employment greater** at pilot centers, than at comparison centers?*

In addition to considering longer term overall retention rates, it is also important to consider how long each staff member stayed, regardless of whether they were retained or not. It is not unusual for child care centers to move children into a new age classroom with a new teacher at the end of a year. It follows then, that it would be important for teachers to remain for the full year, but less important that teachers remain for the following year when those same children have moved to a new group.

Whether there were differences between the groups in length of employment depended on hire dates. When examining the average number of months of employment of all employees by pilot and comparison groups, there were no statistically significant differences between groups. Both groups had similar average length of employment: pilot group 28.7 months, comparison group 27.5 months. However, it is important to note the wide range of months of employ (leading to large standard deviations) which effected these means. Thus, although on average employees had worked almost 2 1/2 years, about 17% of the employees in both groups had been employed by their center for about 7 years or more (in fact some as long as 34 years). Thus the duration of these much longer term employees lengthened the average number of months of employ (and increased the standard deviation for this statistic).

It is also very instructive to examine the mode and median length of employment for the overall group. The median is that point where half of the group is above this number and half below. For instance, whereas the average length of employ for the pilot was 28.8 months, the median

was 15 months. Likewise the mode (the most common figure) for length of employ in the pilot employees was only 3 months. Thus the mode and median demonstrate the large number of very short term employees in the pilot pool. Examining the median and mode for the comparison group demonstrates even shorter durations of employ for this group. Whereas the average comparison months of employ was 27.5 months, the median was only 12 months, and the mode only 2 months. Thus, as with the pilot, the comparison group has a large number of employees with very short duration of employ, but the mean is inflated by those with a very long length of employ. See Table 4B for details.

Thus to examine the effect of the CWL, without the confounds of the longer term employees, we also examined the sub group of **employees who were hired from July to October 2000 (during the start of the pilot)**. For this group, pilot employees worked longer than comparison employees hired during the same period. The difference between these groups is highly significant. See Table 4B for details.

Table 4B			
Average Length of Employment (Total Months of Employ)			
		Number of employees	Significance of T Test**
ALL employees, regardless of hire date			
N=3689			
Pilot	28.7 months or ~2.4 years Range: 0-368 (~0-34 years) Median: 15 months Mode: 3 months	n= 2057	p=.3509
Comparison	27.5 months or ~2.4 years Range: 0-401 (0~31 years) Median: 12 months Mode: 2 months	n= 1632	
Employees (present at Oct. 2000), hired during start of CWL (July-Oct. 2000)			
N=364			
Pilot	15.1 months Range: 0-35	n=201	<i>p=.0027</i>
Comparison	11.6 months Range: 0-35	n=163	
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance			
**If differences statistically significant (.05 or smaller), significance noted in bold/italics			

Because averages were skewed by long employment duration of some employees, and the very short duration of others, we also examined different ranges of duration. See Table 4C and Chart 4B which show that the **differences between the groups were highly significant, statistically**. Pilot centers had:

- fewer employees who were very short term;
- more employees with mid term length of employ;
- and more employees with long term length of employ.

This result has important implications for quality and stability. Pilot centers had no better overall retention than did comparison centers; however, they were not dealing as often with the inevitable confusion created by short term staff. Short term employees have less time to develop relationships with children, less time to understand the routines of a program, and typically require more staff supervision.

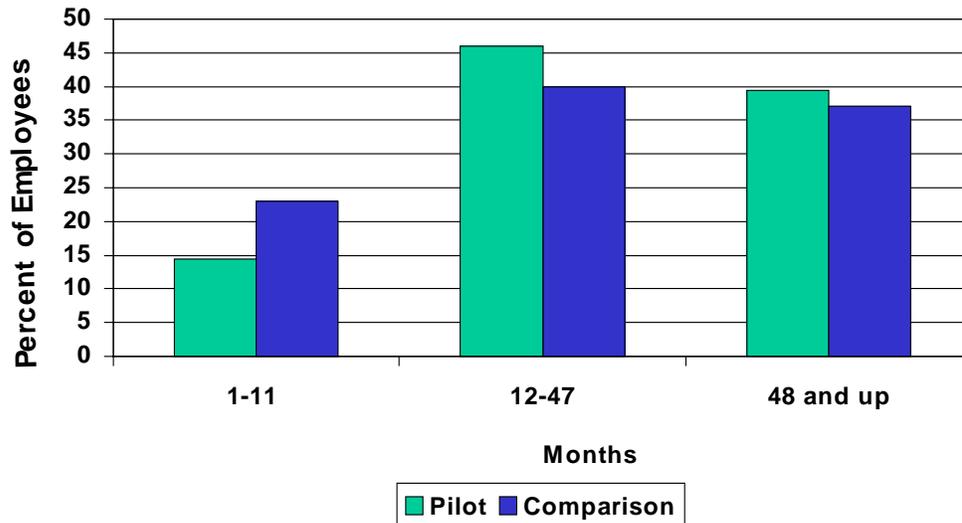
Table 4C Length of Employ by Range for all employees present at October 2000 (start of pilot) N=1577			
Number of months of employ	Pilot n=884	Comparison n=693	Significance of Chi Square**
1 - 11 months	128 (15%)	157 (23%)	<i>p=.0001</i>
12 - 47 months	407 (46%)	280 (40%)	
48 months & up	349 (40%)	256 (37%)	
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italics			

Duration of employ of those who left:

We also examined the set of employees **who left** to determine whether pilot child care centers tend to have employees **who stay longer**, even though they leave, than the leaving employees at comparison centers. In examining all employees, regardless of hire date, **pilot leaving employees stayed significantly longer** than comparison leaving employees (18.2 vs 15.5 months). In examining the length of employ of leaving employees hired at the start of pilot project, again pilot employees stayed significantly longer. See Table 4D for details.

Table 4D Average Length of Employment of <i>THOSE WHO LEFT</i>		
<i>ALL LEAVING</i> employees, regardless of hire date N=2099		Significance of T Test**
Pilot	18.2 months ~1 ½ years Range: 0-369 months n=1181 employees	<i>p=.0131</i>
Comparison	15.5 months ~1 1/3 year Range: 0-310 months n=918 employees	
<i>LEAVING</i> employees, hired during start of CWL (July-Oct. 2000) N=364		
<i>Pilot</i>	15 months Range: 0-36 months. n=201 employees	<i>p=.0027</i>
0Comparison	11.6 months Range: 0-36 months n=163	
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italics		

Chart 4B
of Months of Employ
All employees present Oct. 2000, length of employ by May 2003, n=1577



Other Factors Potentially Effecting Retention

The potential effects on retention of factors outside the CWL were also examined (positions employees held, staff education, staff wages, size and location of center).

Retention by position: For both pilot and comparison centers, there were **highly significant differences in which employee positions were retained** or turned over by the level of the role. The pattern was exactly the same in both groups. The higher the level of position the greater the retention of staff. Aide positions turned over the most frequently (and had the lowest retention), teachers the next frequently, program supervisors the next, site coordinators the next, and directors and assistant director positions turning over the least frequently (and had the greatest retention). See Table 4E for details.

Table 4E Staff Retention by Position <u>Pilot & Comparison Combined</u> - pattern same for both groups for all employees present at October 2000 (start of pilot)				
	Left by May 2003 #, row %	Still Retained by May 2003 #, row %	Total N=1522	Significance of Chi Square
Assistant/Aide	420 (73%)	151 (27%)	571	<i>p=.0001**</i>
Lead Teacher	394 (56%)	310 (44%)	704	
Site Coordinator	25 (54%)	21 (46%)	46	
Program Supervisor	47 (35%)	86 (65%)	133	
Director, Asst. Director	8 (12%)	60 (88%)	68	
Percentage is based on total number of employees reported with that position				
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italics				

Retention by Wages: Wages of staff were also found to be highly related to retention. Regardless of pilot participation, wages and retention were positively related. The higher employees' wages, the greater likelihood that they would be retained. The lower the wages the greater the likelihood that they would leave. However, pilot employees were much less likely to stay (1% retention) if they were paid in the lowest pay range (below \$7.71 per hour) than were comparison employees in this pay range

Table 4F Retention by wages of employees for all employees present at Oct. 2000 (start of pilot)					
	PILOT N=870		COMPARISON N=673		Significance of Chi Square**
	Left by May 2003 #, row %	Retained by May 2003 #, row %	Left by May 2003 #, row %	Retained by May 2003 #, row %	
\$0-7.70/hr	141 (99%)	2 (1%)	207 (82%)	47 (18%)	<i>p<.0001</i>
\$7.71-8.99/hr	193 (73%)	73 (27%)	96 (57%)	73 (43%)	
\$9.00+/hr	185 (40%)	276 (60%)	85 (34%)	165 (66%)	
Percentage is based on total number of employees with that wage					
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italics					

Retention Increase by Wage Thresholds: We also examined retention by wage and position, in order to determine if there were any specific wage cutoff thresholds where retention increased. This information could be of particular interest to policy-makers considering re-development of a career ladder designed to increase retention. In our analysis we used a 50% retention rate as a standard, as this was slightly above the current retention rate of 40% for the full sample over the course of the pilot project, and thus a potentially attainable improvement in retention. For the administrative positions of Site Coordinator, Program Supervisor, or Assistant Director or Director, the variance in wages by position were very wide, and the size of groups small. Furthermore, from the open-ended data it was clear that centers used these position titles differentially, often depending on the size of their center. Thus, determining thresholds was less meaningful for these administrative positions, and this analysis was completed only for aides and lead teachers.

Examining the results of this analysis revealed that when aides were paid below \$8.25 per hour retention was below 50%. However when aides' wages were between \$8.26 and \$14.76 per hour, retention exceeded the 50% rate. The threshold point for lead teachers was higher than the wage for aides, which supports the notion of a wage ladder based on job responsibility. The wage range in which retention exceeded 50% for lead teachers was between \$9.71 and \$19.45. It is important to note that in each case, retention increased with a range of wages. Thus, simply meeting and not exceeding threshold wages identified here may not necessarily improve retention. The statewide wage ladder, utilized at the end of the project, identified wages for Aides beginning at \$7.01 per hour. The statewide wage ladder, in place at the end of the project, identified wages for Lead Teachers beginning at \$8.20 per hour. This analysis reveals that wages at the low end of the Wage Ladder for Aides and Lead Teachers would not tend to result in improved retention rates.

Retention by Education in Early Childhood: Retention rates were much higher for those with education in early childhood, than for those without such education. This finding was true for both pilot and comparison groups, but as explained elsewhere, pilot employees were more likely to have higher levels of early childhood education. As you will recall, overall retention rates of employees from the start of the pilot to the end of the pilot were, 40% for the pilot and 42% for the comparison group. For those who had completed 15-45 quarter credit hours of early childhood education, the much higher percentage of 59% of pilot employees and 58% of comparison employees were retained. For those who had completed an AA or BA in early childhood or a related field retention rates were 62% for the pilot and 70% for the comparison. Clearly, having education in early childhood greatly increased the likelihood that employees would be retained. See Table 4G for details.

Table 4G					
Retention by Education of Employees					
for all employees present Oct. 2000 (at start of pilot)					
	PILOT N=801		COMPARISON N=616		
	Left by May 2003	Retained by May 2003	Left by May 2003	Retained by May 2003	Significance of Chi Square**
All employees regardless of education level	60%	40%	58%	42%	
Less than high school - STARS	322 (71%)	133 (29%)	246 (65%)	131 (35%)	<i>p=<.0001</i>
15-45 ECE credits or CDA	86 (41%)	122 (59%)	58 (42%)	79 (58%)	
AA-BA	53 (38%)	85 (62%)	31 (30%)	71 (70%)	
Percentage is based on total number of employees with that education					
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance					
**If differences statistically significant (.05 or smaller), significance noted in bold/italics					

Retention by Location: There were statistically significant **regional differences in retention** for the pilot group. Whereas there were numerical differences by region for the comparison group, none of these reached statistical significance. For the pilot, location of centers in the east/west side of the state, particular DSHS region, and urbanicity of the center's county made a difference in levels of retention. For the pilot group, a statistically larger number of employees were retained who were employed on the west side of the state (42%) than on the east side (35%). Regarding DSHS region, pilot employees in DSHS Regions 4 (King County) and 6 (Vancouver, Olympia, Olympic Peninsula areas) were more likely to be retained than employees in other regions. Considering urbanicity, pilot employees in small urban areas were less likely to be retained than in metropolitan or rural areas. Whereas differences existed between the pilot and comparison regarding retention and location of center, patterns related to the Career and Wage Ladder were not obvious. See Table 4H for details.

Table 4H
Retention by Location of Center
for all employees present Oct. 2000 (at start of pilot)

	PILOT		COMPARISON	
	Left by May 2003 # (%)	Retained by May 2003 # (%)	Left by May 2003 # (%)	Retained by May 2003 # (%)
	Pilot N=870		Comparison N = 673	
Center on West side of Washington state	371 (58%)	272 (42%)	285 (57%)	219 (43%)
Center on East side	148 (65%)	79 (35%)	103 (61%)	66 (39%)
Significance of Chi Square (by East/West)	<i>p=.0477</i>		p=.3165	
	Pilot N = 857		Comparison N = 673	
DSHS Region 1	46 (58%)	33 (42%)	80 (65%)	44 (35%)
DSHS Region 2	129 (70%)	54 (30%)	21 (52%)	19 (48%)
DSHS Region 3	108 (62%)	66 (38%)	61 (55%)	51 (45%)
DSHS Region 4	89 (56%)	71 (44%)	100 (63%)	59 (37%)
DSHS Region 5	68 (58%)	49 (42%)	61 (59%)	42 (41%)
DSHS Region 6	75 (52%)	69 (48%)	65 (48%)	70 (52%)
Significance of Chi Square (by Region)	<i>p=.0155</i>		p=.0703	
	Pilot N = 870		Comparison N = 673	
Center in Metropolitan County	250 (56%)	198 (44%)	212 (60%)	139 (40%)
Center in Small Urban County	171 (68%)	79 (32%)	119 (52%)	111 (48%)
Center in Rural County	98 (57%)	74 (43%)	57 (62%)	35 (38%)
Significance of Chi Square (by Urbanicity)	<i>p=.0037</i>		p=.0790	
Percentage is based on total number of employees in that row (separated by Pilot/Comparison)				
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance				
**If differences statistically significant (.05 or smaller), significance noted in bold/italics				

Retention by size of center: The size of centers (measured by their licensed capacity) was not related to retention or length of employ for either the pilot or comparison group.

Reasons Reported for Staff Leaving

In examining why employees were reported by directors to have left the employ of their center, the same core reasons were given by both groups: there were differences in the percentages for each reason given. For this analysis all employees who left the 173 centers were examined, regardless of employee start or leaving date. The differences between the groups were statistically significant. For instance, pilot employees were more likely to leave to attend school. Pilot employees were also more likely to have been fired or laid off (21%) than comparison employees (18%). This seems counter intuitive, but one explanation may be that because pilot centers were paying higher wages, they had a better qualified pool of applicants (the data supports this) than did the comparison group. Thus if employees had poor performance, pilot directors perhaps were more willing to fire them. Conversely, perhaps comparison centers were unable to hire more qualified staff than their poorly performing employees, so they would retain those employees. See Table 4I for details regarding why employees left their positions.

Table 4I Why Employees Left (Includes all employees, regardless of hire or leaving date)			
Categories	% Pilot	% Comparison	Significance of Chi Square**
Fired, poor performance	17%	14%	<i>p=.0178</i>
Laid off	5%	4%	
Quit to go to school	11%	9%	
Quit, moved to new early childhood job	8%	10%	
Quit, moved to non early childhood job	14%	15%	
Quit, other work related	6%	9%	
Quit, personal reasons	31%	33%	
Other	8%	7%	
Total N	1336	1079	
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance			
**If differences statistically significant (.05 or smaller), significance noted in bold/italics			

Director Perceptions: What factors influenced retention?

Directors were asked their perceptions regarding what factors were most influential in keeping those staff members who were retained. Whereas both groups identified the same core factors, the emphasis on particular categories was significantly different. Pilot directors were more likely to mention factors related to CWL (higher wages, staff knowing they would get a raise if they completed an educational step, opportunities for promotion, benefits): 47% of pilot directors mentioned these factors and only 25% of comparison directors did so. Comparison directors were much more likely to mention the environment of work as influential to retention (positive atmosphere, flexibility of center to employee need, job security): 45% of comparison directors

mentioned these factors, whereas only 29% of pilot directors did so. See Table 4J for details regarding factors influencing retention.

Table 4J Factors Influencing Positive Retention			
Categories	% Pilot	% Comparison	Significance of Chi Square**
Pay higher wage, staff know would get raises if completed educational step, moved to higher position, or reached anniversaries	33%	10%	<i>P=t<.0001</i>
Good staff benefits	14%	15%	
Positive atmosphere, teamwork	19%	28%	
Dedication to children	17%	25%	
Have career goal of ECE	7%	5%	
Flexibility of center to individual staff needs	6%	11%	
Job security	4%	6%	
Total N	N=209	N=129	
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italics			

Summary. Examining retention, a critical outcome for assessing the effectiveness of the CWL, provided complicated, but interesting results. The complicated nature of these results suggest that a “one-size-fits-all” approach to reducing turnover may not be successful. The results of this study suggest that the childcare work force cannot be characterized as a single homogeneous group. For example:

- Long-term employees may be less influenced by turnover interventions. For a variety of reasons these employees have already been retained under the current wage, benefit, etc. situation.
- A large proportion of employees in our sample were very short-term (2-3 months). While further research is necessary to explain why this phenomenon exists in the child care field, it seems logical that limited entry requirements allow many people into jobs that they are neither trained for nor have a desire to learn about. These employees may not be “retainable” and perhaps should not be a goal of retention increasing endeavors.
- Employees who are educated were more likely to be retained in this study, suggesting that this group is more amenable to retention efforts, and as educated professionals should be a focus for retention efforts.

CHAPTER 5 RESULTS: MAIL SURVEY BENEFITS

Introduction

A goal of the Washington Child Care Career and Wage Ladder Pilot Project was to improve the staff benefits of child care workers. As a requirement for participation in the project, all pilot centers contracted to provide certain employee benefits, including the following:

1. A minimum of 10 days (increased to 12 days after the first year) total paid leave per year (combination of sick, vacation, holiday, and/or personal leave days);
2. Payment of each ladder eligible employee's full monthly health insurance premium, if less than or equal to \$25 per month. If an employee's monthly health premium was greater than \$25, pilot centers were required to pay a minimum of \$25 per month per employee.

Pilot centers had six months to fully implement the employee benefits requirements; however, pilot centers did not receive funds from the Career and Wage Ladder project to provide these benefits. Pilot centers did receive an Administrative Fee from DSHS to cover all administrative costs they incurred due to pilot participation. The Administrative Fee equaled 15% of each center's total yearly Career and Wage Ladder wage enhancement. Thus, if a center received \$10,000 in wage enhancements, they received \$1,500 in administrative fees. Pilot centers were permitted to use dollars from the 15% administrative fee to pay for staff benefits.

In six of the seven waves of mail survey data collection, respondents were asked to report the employee benefits they provided to their child care staff. They reported both benefits required of centers participating in the pilot, and other benefits, not required for pilot participation. At Wave 1, centers also reported whether each benefit was a new or revised benefit as of fall 2000. The rationale for this question was to determine how benefits had changed as a result of participation in the pilot, and to compare those changes (if any) with changes reported by the comparison group.

OVERALL RESULTS

Overall, considerably more pilot centers than comparison centers offered both the benefits required of the pilot, and additional benefits. Further, in many cases these benefits had not been offered prior to pilot implementation. Finally over the three years of the project, at each wave of data collection more pilot centers were offering most of the benefits which they reported on. This was not true of comparison centers for many of these benefits.

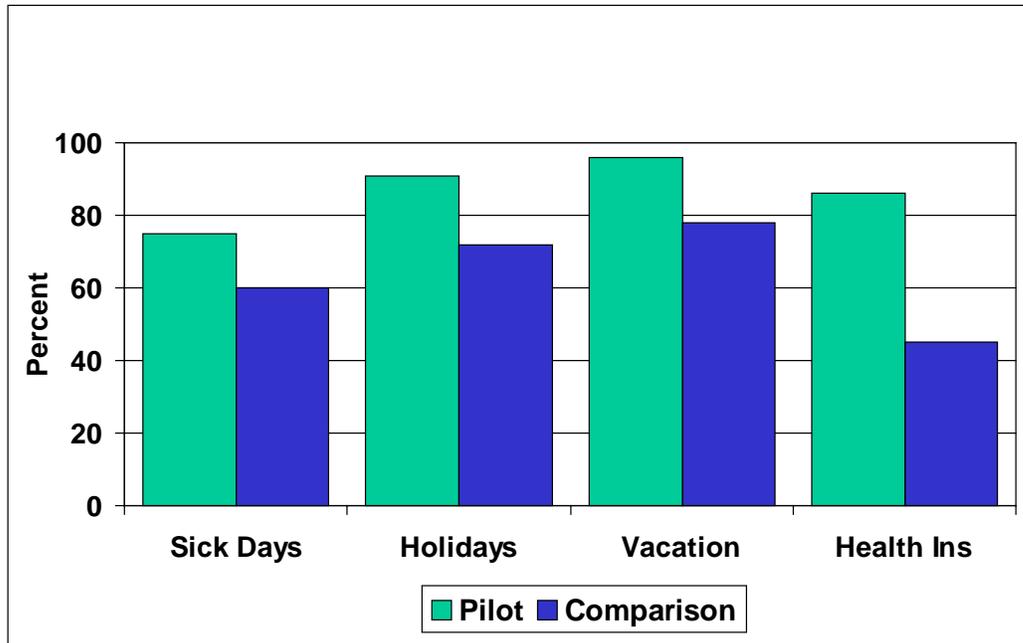
As throughout this report, the benefits analysis describes the results for the centers which completed all seven waves of data collected over the three years of the pilot (173 total centers, 95 pilot and 78 comparison). On occasion data from 170-172 centers is reported when a few centers did not provide an answer to a particular question.

Career and Ladder Benefits Required for Participation

Table 5A compares the benefits provided by pilot and comparison centers, for all benefits required for participation in the pilot project (minimum 10 days of paid sick, holiday, and/or vacation days; and \$25 per month contribution to each employee's health insurance premium). Chart 5A shows this same data graphically. At every data collection point a considerably **higher percentage of pilot centers offered each of the required benefits than did comparison centers** (differences between groups were statistically significant). Furthermore, at each succeeding wave of data collection, an increasing percentage of both the pilot and comparison centers offered each required benefit. For instance, in the fall of 2000, 79% of pilot and 42% of comparison centers offered paid health insurance (partially or fully paid). By the end of the pilot project (June 2003), percentages increased to 86% of pilot and 45% of comparison centers reporting offering the health benefit. For paid leave days (sick, holiday or vacation days), by the end of the pilot between 75% and 96% (depending on benefit) of pilot centers offered these benefits, while 60% to 78% (depending on benefit) of comparison centers offered these same benefits.

Table 5A: Benefits Received by Child Care Staff Summary of Benefits Required to be Provided by Pilot Centers				
		Number (%) reporting offering this benefit		
Benefit		Pilot	Comparison	Significance of Chi Square*
Paid Sick Days	Wave 1	67 (71%)	42 (54%)	W1: p= .0182
	Wave 7	71 (75%)	47 (60%)	W7: p= .0418
Paid holidays	Wave 1	86 (91%)	49 (64%)	W1: p= <.0001
	Wave 7	86 (91%)	56 (72%)	W7: p= .0014
Paid vacation days	Wave 1	86 (91%)	57 (74%)	W1: p= .0041
	Wave 7	91 (96%)	61 (78%)	W7: p= .0004
Health insurance	Wave 1	75 (79%)	33 (42%)	W1: p= <.0001
	Wave 7	82 (86%)	35 (45%)	W2: p= <.0001
*If difference between groups is statistically significant (.05 or smaller), significance level noted in bold/italics				

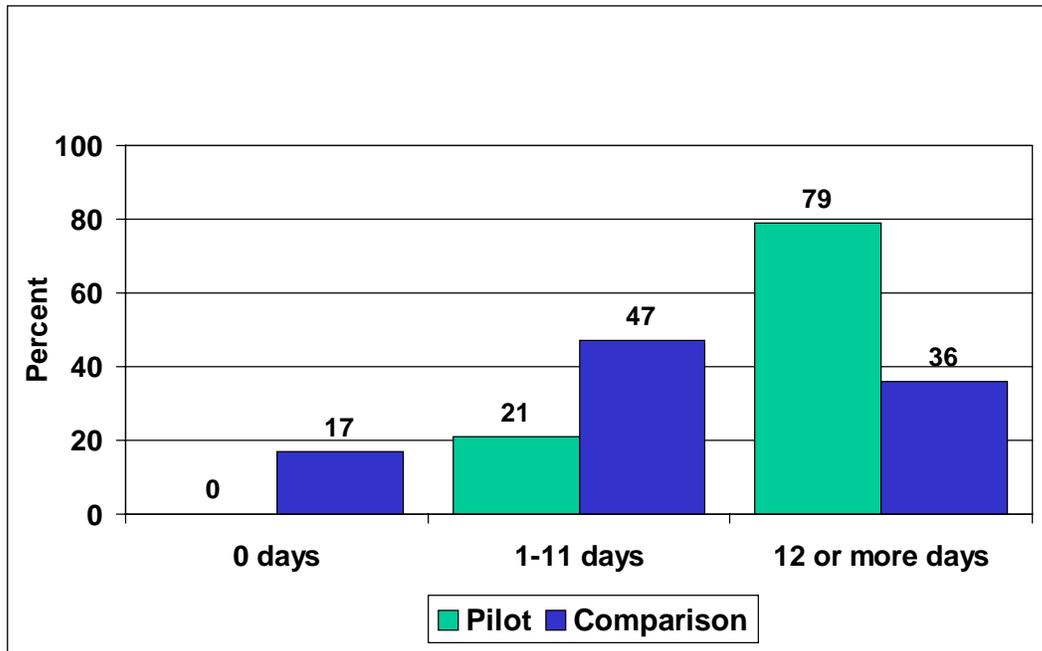
Chart 5A: Benefits Required of CWL Participation
May 2003, significant differences



Number of Leave Days Provided

In addition to knowing whether centers provided **paid sick, holiday, and vacation days**, we were interested in learning how **many days they provided**. In earlier waves of data collection we asked the specific number of paid days offered of each type, and then combined the data. In the fall of 2002, in order to assure we had an unduplicated count, we provided respondents with choices of different ranges of leave days combined. In May of 2002 the total number of combined paid holidays, sick and vacation days was considerably larger for pilot centers (differences significant at the $<.0001$ level). On average, pilot centers offered 28 days of combined leave, whereas comparison centers offered only 17 days of leave. Furthermore, whereas the mode (most commonly reported response) for number of combined leave days for the pilot centers was 10 days of leave, the mode for the comparison centers was 0 days. These quite different responses by group persisted, and by May 2003 the differences remained significant (at $<.0001$) with 79% of pilot centers offering 12 or more combined leave days, whereas only 36% of comparison centers did so (see Chart 5B for a graphic representation of these percentages). Clearly, pilot centers were not only more likely to provide leave days, but when they did so, they provided more actual days of leave.

Chart 5B: Number of Leave Days
 May, 2003 Differences significant at $<.0001$



CWL Required Benefits Offered for the First Time Fall 2000 (at start of pilot)

Inspection of the percentage of centers in the pilot and comparison groups providing the CWL required benefits for the first time in the fall of 2000 (at the start of the pilot project) demonstrates that much higher percentages of pilot than comparison centers were providing these benefits for the first time (see Table 5B.) These results suggest that participation in the pilot project increased the benefits employees of pilot group centers were receiving.

Table 5B: Percentage of Centers Providing a Benefit for the First Time Fall 2000 (at start of Pilot)			
	Number (%) reporting offering this benefit for the first time		
Benefit	Pilot	Comparison	Significance of Chi Square*
Paid Sick Days	26%	0%	<i>p=.0007</i>
Paid holidays	28%	7%	<i>p=.0060</i>
Paid vacation days	15%	2%	Test not appropriate
Health insurance	28%	7%	<i>p=.023</i>
*If difference between groups is statistically significant (.05 or smaller), significance level noted in bold/italics			

Benefits Not Required of Career and Wage Ladder Centers

Table 5C compares pilot and comparison centers on provision of employee benefits not required for pilot participation (7 benefits were reported, such as paid education or training fees, release time for training, reduced child care fees, etc.). For two benefits **the difference between the groups is significant: paid education fees/tuition and provision of compensation or overtime pay. In both of these cases pilot centers were more likely to provide the benefit. Furthermore, over the course of the pilot project, the percentage of pilot centers providing each benefit increased.** Conversely, in comparison centers, for many benefits the percentage of centers providing a particular benefit stayed the same, or declined over the three year period.

In all but one of the seven additional benefits a considerably larger percentage of pilot than comparison centers were offering the benefit for the first time in the fall of 2000, at the start of the pilot. For instance, 12% of pilot centers which offered paid education or tuition fees were doing so for the first time in the fall of 2000, whereas only 2% of the comparison centers were offering this benefit for the first time. (Completing statistical analysis of these differences was not valid, due to missing or small cell values.) Thus, as with required benefits, this data suggests that participation in the pilot project increased the additional staff benefits employees were receiving.

Table 5C: Benefits Received by Child Care Staff
Benefits provided, but provision not required for pilot participation

Benefit	Wave	Number (%) reporting offering this benefit		Significance of Chi Square*
		Pilot	Comparison	
Paid maternity /paternity leave	Wave 1 Wave 7	11 (12%) 13 (14%)	5 (7%) 11 (14%)	W1: no significant diff. W7: no significant diff
Retirement plan	Wave 1 Wave 7	23 (24%) 27 (28%)	19 (24%) 21 (27%)	W1: no significant diff. W7: no significant diff
Life insurance	Wave 1 Wave 7	13 (14%) 11 (12%)	13 (17%) 11 (14%)	W1: no significant diff. W7: no significant diff.
Comp time/overtime paid	Wave 1 Wave 7	88 (94%) 93 (98%)	61 (80%) 58 (75%)	W1: p=.0085 W7: p=<.0001
Reduced child care fees	Wave 1 Wave 7	77 (82%) 81 (85%)	66 (85%) 65 (84%)	W1: no significant diff. W7: no significant diff.
Release time for training	Wave 1 Wave 7	77 (84%) 83 (87%)	61 (79%) 62 (79%)	W1: no significant diff. W7: no significant diff.
Education or tuition fees paid	Wave 1 Wave 7	78 (82%) 78 (83%)	58 (74%) 49 (63%)	W1: no significant diff. W7: p=<.0027
*If difference between groups is statistically significant (.05 or smaller), significance level noted in bold/italics				

CHAPTER 6 RESULTS: MAIL SURVEY WAGES AND WAGE CHANGES

Introduction

A goal of the Washington Career and Wage Ladder Pilot Project was to improve the wages of child care workers. As a requirement for participation in the project, all pilot child care centers contracted with DSHS to pay their eligible employees in accordance with the Washington Child Care Career and Wage Ladder scale. All early childhood care givers working at least 20 hours per week, and all school age care givers working at least 15 hours per week were required to be paid on this scale (two separate scales were utilized: one for King County and another for the remainder of the state at lower rates than King County).

The prescribed scale provided required minimums and increases based on employees' level of responsibility (position), years of experience, and level of education. Wages increased by a minimum \$.50/hour per level of responsibility, \$.25/hour for each year of experience (at that center), and originally \$.50/hour per educational step. In the last 2 years of the pilot, additional educational steps were added to the Ladder, which led to less than \$.50/hour increases for some educational steps. Three increases in state minimum wages occurred during the project, necessitating increases in the pilot wage amounts from the original requirements.

Centers paid the wage increments for level of position. DSHS paid increments of \$.50/hour for educational levels beyond those required in the Washington Administrative Code (WAC) for that position. DSHS paid a portion of the experience increments, if the center had DSHS subsidized children in 25% or more of the center's licensed child care slots. Centers paid the \$.25/hour experience wage increments, if the center had less than 25% of their children receiving DSHS subsidized tuition. See the Appendix for copies of Ladders, effective at different points in time.

RESULTS: HOURLY WAGES

The Washington state Child Care Career and Wage Ladder pilot was successful in improving the wages of child care workers. At all seven waves of data collection, the average wage of eligible pilot employees (directors' wages were not subsidized by the pilot) was significantly higher than the average wage of comparison employees. Each year of the project wages increased for both pilot and comparison groups. Both pilot and comparison centers also showed increases by position (assistant teachers earned the least, next teachers, next site coordinators, and the highest wages were those of program coordinators). However, steps were smaller in the comparison group, and the averages for each position were higher for the pilot.

As throughout this report, the wage analyses describe the results for the employees at centers which completed all seven waves of data collected over the three years of the pilot (173 total centers, 95 pilot and 78 comparison). On occasion data from 170-172 centers is reported when a few centers did not provide an answer to a particular question. Individual data was collected for each of the eligible employees at the 173 centers (3839 employees). For most of the following analyses employee data is divided by pilot and comparison groups.

Table 6A presents the average hourly wage reported by centers in the pilot and comparison groups based on all reported employees' wages in May of 2001, 2002, and 2003. Wages were consistently less for the comparison group, and more for the pilot group. In 2003 the pilot group average hourly wage was \$9.68 whereas the comparison group average hourly wage was \$8.94. Each year the differences between the group averages were statistically significant. Taken together, these results clearly illustrate the success of the CWL in improving pilot center wages in a way that the comparison centers did not experience. Furthermore, these average figures were higher than the average or child care workers reported by the 2002 Bureau of Labor Statistics, \$8.32/hour nationally, and \$8.27/hour for Washington (figures not available for 2003 as of printing of this document).

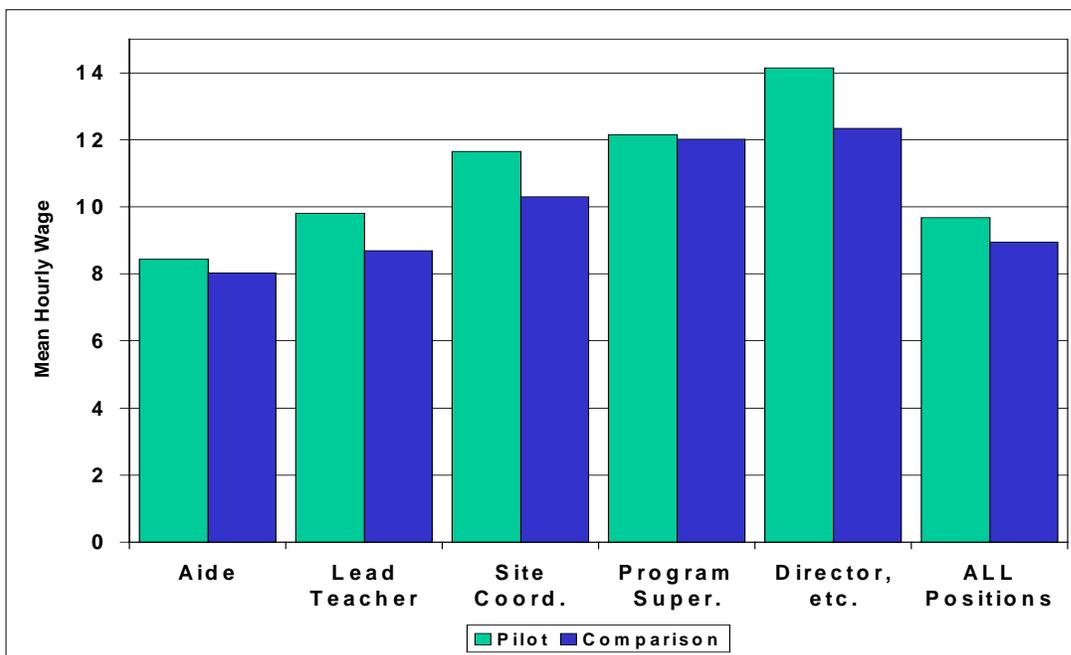
Because the range in employee wage is wide, it is important to look beyond the mean to other measures of central tendency. To that end, the median and mode wages are also reported for each time period. The median is the mid point wage, with half of the employees earning above this wage and half below it. The mode represents the most commonly reported wage. For both the median and mode, as with the average wage (mean), the pilot hourly wage is always higher. Interestingly in year 2, while the average wage for comparison centers went up, their median and mode wages were identical to those of the previous year. This may be explained by turnover; replacement employees were perhaps hired at lower, entry-level wages. These data illustrate the importance of examining more than the mean wage because of the complexity of wages in this work force. Average wage for employees who were retained may be higher than for those replacements at entry wages for employees that left and examining just the mean for all employees may deflate the overall mean wage.

Table 6A Average Hourly Wage 2001-2003			
All child care workers employed this date	Pilot	Comparison	Significance of T-Test**
May 2001	\$9.10 n=1025 range: \$6.50-\$23.75 Median: \$8.50 Mode: \$8.00	\$8.47 n=779 range: \$6.00-\$28.94 Median: \$8.00 Mode: \$7.00	<i>p=<.0001</i>
May 2002	\$9.40 n=1112 range: \$6.90-\$24.27 Median: \$8.95 Mode: \$8.20	\$8.70 n=841 range: \$6.72-\$23.00 Median: \$8.00 Mode: \$7.00	<i>p=<.0001</i>
May 2003	\$9.68 n=1113 range: \$7.01-\$25.00 Median: \$9.00 Mode: \$8.20	\$8.94 n=848 range: \$7.01-\$23.33 Median: \$8.14 Mode: \$8.00	<i>p=<.0001</i>
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italic			

Wage by Position. Table 6B and Chart 6A provide data regarding average wage for each position for the final wave of data collected (May 2003). Examining wages by job title shows an overall increase by position across the wage ladder, as one would expect. That is, employees in positions with less responsibility and education are, in fact, on average making less than employees with more education and responsibility, just as the structure of the wage ladder intended. This hierarchy exists in both the comparison and the pilot groups, though the increases from one position to the next are larger in the pilot than the comparison group (except for the case of Site Coordinator to Program Supervisor where the step increase is higher for comparison than pilot centers). Additionally, the average wage for each position is higher in the pilot than comparison. The difference between pilot and comparison is statistically significant for aides, teachers and directors. For other positions, whereas pilot average wages are always larger, group sizes are too small, and standard deviations too large, to show statistical significance.

Table 6B Average Hourly Wage by Position May 2003			
Position	Pilot	Comparison	Significance of T-Test**
Aide/Assistants	\$8.43 N 420 Range \$7.01-18.00 Median \$8.20 Mode \$7.20	\$8.02 N 302 Range \$7.01-\$14.76 Median \$7.56 Mode \$7.01	<i>p=<.0001</i>
Lead Teachers	\$9.80 N 544 Range \$7.20-\$20.00 Median \$9.45 Mode \$8.20	\$8.70 N 408 Range \$7.01-17.27 Median \$8.25 Mode \$8.00	<i>p=<.0001</i>
Site Coordinator	\$11.65 N 24 Range \$9.20-\$17.75 Median \$11.52 Mode \$10.20	\$10.30 N 13 Range \$7.10-\$18.29 Median \$9.10 Mode \$9.10	Difference not significant (p=.1072)
Program Supervisor	\$12.15 N 49 Range \$9.20-\$18.00 Median \$11.90 Mode \$10.20	\$12.02 N 31 Range \$7.25-\$20.00 Median \$11.99 Mode \$10.00	Difference not significant (p=.8027)
Director, Assistant Director, Owner	\$14.15 N 50 Range \$8.45-\$25.00 Median \$13.21 Mode \$12.00	\$12.33 N 70 Range \$7.75-\$23.33 Median \$11.57 Mode \$9.00	<i>p=.0061</i>
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italic			

Chart 6A: Hourly Wage by Position
 May 2003, many differences statistically significant, N=1961 employees



Change in Wage Over Project Duration

See Table 6C for wage change for employees who were retained from the beginning (fall 2000) to the end of the pilot (May 2003). Some of these individuals retained the same job title for the project duration, others changed job titles; therefore, average change is reported for all positions combined. Both pilot and comparison employees had increases in their average wages; however, the increase for the pilot employees (\$1.33) was slightly greater than for comparison employees (\$1.28). Differences between groups are not statistically significant, and the range of change, and therefore the standard deviation regarding change, is very large. Note that both the pilot and comparison group wages were effected by three minimum wage increases that occurred over the life of the pilot project.

Table 6C
Average Change of Wage Over Project Duration
From Fall 2000 to May 2003

	Pilot N=388	Comparison N=265	Significance of T-Test**
Average wage change	\$1.33	\$1.28	Difference not significant (p=.5908)
Range of change	\$0.00-\$9.36	\$0.00-\$9.46	
Median wage change	\$.97	\$1.00	
Mode wage change	\$.95	\$1.00	

**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance

**If differences statistically significant (.05 or smaller), significance noted in bold/italic

CHAPTER 7 RESULTS, MAIL SURVEY EDUCATION

Introduction

Educational attainment was significantly higher in the pilot than the comparison group. The average educational attainment change per employee however, was not different in the pilot and comparison groups. The examination of educational level by hire date suggests that the pilot affected educational level, not by a difference in the number of individual employees actually achieving a higher level during their employment, but through the process of hiring more highly educated employees. Data analysis presented below supports this assertion. In addition, educational pursuit was significantly higher in the pilot group, in terms of taking ECE credits at colleges/universities and in the attendance at STARS approved workshops.

Educational Attainment

Comparing the percentage of pilot and comparison employees in each education level reveals the degree of difference in educational level between the groups. We refer to this as educational attainment to distinguish it from pursuit, or the education that was in progress during the pilot project. The educational levels chosen represent the educational milestones that made up the markers on the Career and Wage Ladder and are itemized separately in the left-most columns in Table 7A. The columns to the right collapse the percentages into two categories: No specialized higher education training in Early Education, or ECE credits/degrees from institutions of higher education. The results in the table below indicate that comparison centers were more likely to have employees with no specialized training in early childhood (69% vs. 63%). Pilot centers had a higher percentage of employees than comparison centers with higher education training specific to early childhood care/education (37% vs. 31%). These differences were statistically significant ($p=.0007$).

Table 7A Educational Attainment At End of Employment or Last Wave of Data Collection				
Educational Level	Pilot # (%)	Comparison %	Pilot Collapsed %	Comparison Collapsed %
Less than High School	25 (2%)	20 (2%)	994 (63%)	809 (69%)
High School/GED	231 (15%)	250 (21%)		
STARS	738 (47%)	539 (46%)		
15 credit Hours in ECE	80 (5%)	64 (5%)	583 (37%)	359 (31%)
30 credit hours in ECE	69 (4%)	46 (4%)		
CDA or 45 credit hours in ECE	172 (11%)	93 (8%)		
AA in Early Childhood Education	135 (9%)	80 (7%)		
135 credit hours in ECE	14 (1%)	2 (<.5%)		
BA in Early Childhood Education (or 180 credits)	95 (6%)	65 (6%)		
M.A./Ph.D. in ECE	18 (1%)	5 (<.5%)		
Other	0	4 (<.5%)		

Further analysis of educational attainment

In addition to the categorical comparison described above, we also created a numerical score that summarized educational level for a center. To do this, we assumed a hierarchy of the categories represented in Table 7A. That is, a score of 1 was given to the category of “Less than high school” and a score of 10 was given to M.A./Ph.D. in ECE. Thus, an individual could have a score ranging from 1 to 10. The average on this score was significantly higher in the pilot group than the comparison group (pilot, 4.01; comparison, 3.80 $p=.0001$), again supporting the notion that the pilot group was more highly educated than the comparison group.

It was important to ascertain if the differences in educational attainment were in place prior to participation in the pilot project. That is, the centers that chose to participate in the CWL project may have already had employees with higher levels of education. To test this possibility, we compared the educational attainment scores of pilot and comparison group employees who were hired prior to the beginning of the pilot project, and after the project started. Table 7B presents the results of this comparison. As indicated by the p levels at the bottom of the table, the only statistically significant difference in educational attainment level of pilot and comparison group employees was found in employees hired during the first two years of the pilot (7/1/00-5/1/02). Whereas the educational levels of pilot employees hired in the last year were higher than those of the comparison employees, the difference was not significant (smaller group sizes the last year may have effected significance). The educational levels of pilot and comparison employees hired prior to the pilot start were not different (hired before 5/1/00). These results suggest that **pilot participation allowed for hiring of more highly educated employees to replace employees who left.**

Table 7B Mean Educational Attainment Scores by Hire Date			
Hire Date	Pilot (mean, n)	Comparison (mean, n)	Significance of t-test
Before July 1, 1999	4.84 (n=455)	4.64 (n=317)	p=.2101
7/1/99 to 5/1/00	3.94 (n=175)	4.03 (n=138)	p=.6621
7/1/00 to 5/1/01	3.61 (n=418)	3.30 (n=337)	p= .0231
7/1/01 to 5/1/02	3.95 (n=371)	3.61 (n=271)	p=.0446
7/1/2002 to 5/1/03	3.81 (n=107)	3.51 (n=99)	p=.2928
<p>**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italic</p>			

Change in Educational Attainment over Project

In order to determine if participation in the CWL actually was related to employees increasing their educational level, we examined the number of employees who moved to a higher level of education during the project year. Examining the educational level at the beginning and end of an employee's tenure revealed that about 27% of the sample moved up 1 educational level (i.e. from 45 ECE credits to an AA degree). About 14% of sample moved more than 1 level. Some problems with this data were apparent, as about 10% of the employees were reported to have *decreased* their educational level, or were reported to have increased anywhere from 5 to 10 steps in education; an increase that is impossible to obtain in the amount of time reported on. This underscores the lack of any educational requirements for holding a child care position. If such requirements existed and were enforced, it seems likely that program directors would be better at reporting the educational level of their staff. Finally, about 50% of the sample maintained their educational level over the course of the project. This pattern was the same for the pilot and comparison groups, indicating that the pilot group did not increase their educational level more than comparison center employees.

Educational pursuits

While employees only received wage enhancements when one of the educational milestones was reached, we were interested in examining how much education was pursued by the two different groups. We hypothesized that educational pursuit (educational endeavors which don't yet meet a milestone but contribute to the attainment of a milestone) would be higher in the pilot than the comparison employees. Possible educational pursuits identified included working on a CDA, attending STARS approved workshops, or enrolling in ECE credits at community colleges or universities. To test this question we combined the reported educational pursuits at all 7 waves of data collection. If an employee was reported as ever having pursued these types of education during the 3 years of the pilot project, they were counted as having pursued that type of education. Examining the difference in the percentage of employees who undertook each of these types of pursuits revealed that more employees in pilot centers pursued all three types of educational pursuit asked about. Table 7C illustrates this pattern. It is interesting to note, that although significantly more pilot employees pursued college credits, this group is still a small proportion of the employees involved. It may be too difficult for fully employed child care providers, even when provided with a wage incentive, to pursue college credits while they are

employed. Moreover, even if providers can sustain the energy to complete course work, the cost of college credits may be prohibitive given the wages being paid to these providers.

Table 7C Educational Pursuits by Employee Group			
Type of pursuit	Pilot Number, (%)	Comparison Number, (%)	Significance of chi square
STARS	1515 (72%)	1088 (63%)	<.0001
ECE	598 (28%)	354 (21%)	<.0001
CDA	318 (15%)	180 (10%)	<.0001
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italic			

Arrangements for Educational Pursuit

We speculated that while pilot participation (i.e. incentive to achieve higher educational levels to increase wage) is the hypothesized cause of increased educational pursuit, the opportunity to be released from job responsibility to take courses (with or without pay) or tuition grants from employers or other sources (TEACH or STARS scholarships, college financial aid) could also be a factor in determining whether or not employees pursued education. We asked respondents, when reporting that an employee had taken a course/workshop or worked on the CDA, to indicate 1) if time off was given and 2) if tuition was paid for the employee.

Time off. Response to the question about release time to pursue education was collapsed across all 7 waves. So, if an employee was reportedly given time off to pursue one of the types of education *at any of the 7 waves* it was counted as a yes. Table 7D reports the percentage of employees that were reported to have received time off for educational pursuits. The analysis reveals that in each case (ECE, STARS, CDA) a higher proportion of pilot than comparison center employees received time off when they pursued education. Again, this may reflect additional monetary resources flowing into pilot centers via wage enhancements and administrative dollars, which may allow centers to hire substitutes and provide time off for educational pursuits. In both pilot and comparison centers, employees were more likely to be given time off to pursue STARS workshops, followed next by taking ECE credits, with the lowest percentage of time off being reported for employees to pursue CDA work.

Table 7D Comparison of Time Off Provided for Educational Pursuits						
Time Off?	ECE		STARS		CDA	
	Pilot	Comparison	Pilot	Comparison	Pilot	Comparison
Yes %	13	7	42	31	7	4
No %	87	93	58	69	93	96
Significance of chi-square	p<.0001		p<.0001		p<.0001	
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italic						

Tuition paid. In waves 2-7, we asked about how tuition or fees for an educational activity was paid: by the employee, center or other sources, including TEACH or STARS scholarships. Very different patterns of tuition payment sources existed both across the three types of educational activities and across the 6 points in time that the question was asked, making a single summary of all of the data difficult. To simplify the complexity of changes across waves of data collection, Table 7E reports the percentage of employees for whom a particular tuition payment source had been reported for STARS, ECE, or CDA fees at ONLY one single data collection point, Wave 7, May of 2003. It is important to note again that there is a great deal of variability from wave to wave in how tuition/fees were paid for in all types of educational endeavors.

Examination of Table 7E indicates several patterns.

- The distribution across tuition sources for Pilot and Comparison employees was significantly different for ECE and STARS, not for CDA. This lack of statistical significance may be accounted for by the small number of respondents reporting on payment for CDA work.
- Differences in ECE tuition sources was due to more comparison employees paying for their own credits AND having centers pay for those credits, while more pilot employees were utilizing TEACH scholarship dollars.
- Differences in STARS fee sources was due to a greater number of comparison employees paying for their own workshops while more pilot employees' centers paid their fees.

Summary

Educational level for this sample of child care providers was low, as has been commonly reported about the child care work force. Pilot center employees were more highly educated because more educated employees were hired during the project, rather than because current employees increased their educational level. Although more pilot center employees pursued education during the project, relatively small proportions of comparison or pilot employees pursued education. Even in the presence of wage incentives, time off and payment of tuition (which were more common in the pilot group), the proportion of employees pursuing education while employed was not high, indicating that other barriers to pursuing education while employed remain. The specifics of these other barriers require further investigation.

Table 7E
Source of Tuition Payment for Educational Pursuits

Payment Source	ECE (wave 7)		STARS (wave 7)		CDA (wave 7)	
	Pilot	Comparison	Pilot	Comparison	Pilot (%)	Comparison
Employee paid	42 (27%)	25 (34%)	57 (9%)	109 (23%)	17 (12%)	8 (23%)
Multiple sources	14 (9%)	3 (4%)	72 (12%)	27 (6%)	13 (16%)	4 (11%)
Center Paid all or part	39 (25%)	26 (35%)	402 (66%)	214 (45%)	26 (32%)	6 (17%)
TEACH scholarship	33 (22%)	3 (4%)	NA		Variety of scholarships	Variety of scholarships
STARS Scholarship	(1%)	0	74 (12%)	112 (24%)	18 (23%)	11 (31%)
College financial aid	23 (15%)	17(23%)	NA	NA	NA	NA
Significance of chi-square	<i>p=.0057</i>		<i>p=<.0001</i>		<i>p=.1431</i>	

**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance

**If differences statistically significant (.05 or smaller), significance noted in bold/italic

CHAPTER 8 RESULTS: MAIL SURVEY QUALITY CARE COMMITTEE

Introduction

The original RFQ for the Career and Wage Ladder required that participants show a commitment to a positive working environment through the establishment of a “quality care committee” (RFQ No. 993462, February 1, 2000). The stated purpose for this committee was to “promote good communication, positive working relationships, and continuing high quality care.” The membership of the committee was also described: it must include members from all job classes.

Questions about these committees were asked in waves 2 through 7. The questions focused on the knowledge of the quality care committee (QCC), the existence of such a committee in a center and the perceived success of the committee. At several waves we also asked about how often the committee met, the number of its membership and who was in the role of leading the committee. These questions were asked of the comparison centers as well as the pilot centers, to test for a difference in the number of such committees in the two groups.

Presence of Quality Care Committees

As seen in Table 8A, the number of pilot centers reporting having a Quality Care Committee increased between the beginning to the end of the pilot from 70% to 86%, but did not reach a 100% compliance rate with this participation requirement. In some cases, it appeared that centers were not even aware of the specifics of the requirement. Interestingly enough, a small group of comparison centers also reported having such a committee, but clearly more comparison centers were unfamiliar with the concept of such a committee. Figure 8.1 indicates the comparative percentages of pilot and comparison centers reporting a Quality Care Committee.

Frequency of Quality Care Committee Meetings

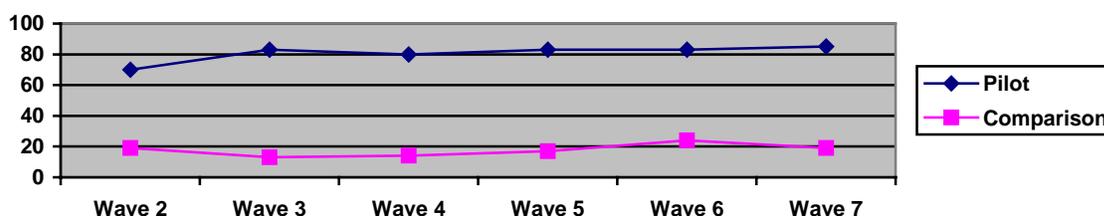
We asked, at waves 2-4 and 6, how often QCC’s met. At each wave, the most common response for both pilot and comparison centers was “once per month” (~50%), and slightly more pilot than comparison centers with QCC’s gave this response. The second most common response to this question across the 4 waves “once per quarter,” again, with slightly more pilot than comparison centers giving this response.

Committee Size

We asked about the size of the committee at waves 2, 3 and 4. The average size across these waves was 6 members for both the pilot and comparison centers. This size did not change substantially from wave to wave.

Table 8A: Quality Care Committee						
Does your center have a Quality Care Committee?	Pilot					
	Wave 2 (n=94) number (%)			Wave 7 (n=95) number (%)		
	Yes	No	Unfamiliar with QCC	Yes	No	Unfamiliar with QCC
	66 (70)	22 (23)	6 (6)	81 (86)	12 (13)	2 (2)
	Comparison					
	Wave 2 (n=72) number (%)			Wave 7 (n=78) number (%)		
Yes	No	Unfamiliar with QCC	Yes	No	Unfamiliar with QCC	
14 (19)	40 (56)	18 (25)	15 (19)	58 (74)	5 (6)	

Chart 8A
Percentage of Centers with Quality Care Committees Waves 1-7



Committee Success

At waves 3, 5 and 7 we asked respondents to rate the success of their Quality Care Committees. They were reminded of the goals of the committee as indicated in the original RFQ and asked to rate their committee on a 4 point scale with 4="very successful," 3="somewhat successful," 2="somewhat unsuccessful," and 1= "very unsuccessful." The mean success score decreased from 3.5 to 3.21 from wave 3 to wave 7, though this decrease did not represent a statistically significant change. This level of satisfaction was true for both pilot and comparison centers. The mean success scores of pilot and comparison centers were not statistically significantly different.

**CHAPTER 9
RESULTS, MAIL SURVEY
RESPONDENT PERCEPTIONS**

Introduction

Center directors from both pilot and comparison centers were asked several questions about their perceptions of staff attitudes (i.e. morale, knowledge about children and families, commitment to ethics) over the course of the three-year pilot project. Pilot directors were also asked their perceptions about any unintended results due to pilot participation. Although response to these items may have been influenced by the knowledge that one was a participant in a project designed to improve the work life of child care providers, respondent perception was originally collected because it was thought to potentially register employee change more rapidly than our less subjective, quantitative measures of change (employment status, increases in educational level) and to provide another perspective on the effects of the CWL. Overall, these results indicate the pilot center directors perceived that participation in the CWL positively effected employee attitudes.

Morale

Perception of morale was assessed in a variety of ways. At waves 2 and 3 (wave is the term we've used to describe each mail survey, thus there were 7 waves of data collected) respondents were asked to characterize the morale of their staff as a whole when compared with a year previous. The response to these items is reported in Table 9A. At both waves, a substantially larger percentage of pilot than comparison centers reported morale had improved since the previous year. Approximately 95% of the pilot centers responding to this question indicated that morale had improved since last year. Only 67% of comparison group centers indicated such an improvement in wave 2, while the percentage increased to 71% in wave 3. In addition, at each wave, a small number of comparison centers indicated morale had decreased over the year, while no pilot center directors reported a decrease in morale. In each case, these differences between groups were statistically significant.

Table 9A Perceptions of Change in Morale Compared to a Year Previous				
	Morale in Jan. 01 (compared with Jan 00)		Morale in May 01 (compared with May 00)	
	Improved	No change or Decreased	Improved	No change or Decreased
Pilot	96%	4%	95%	5%
Comparison	67%	33%	71%	29%
Significance of chi-square	<i>p<.0001</i>		<i>p<.0001</i>	
<p>**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italics</p>				

In waves 5 and 7 respondents were asked to rate their employees current morale on an 8-point scale, with 8=very high morale and 1=very low morale. The mean score for both pilot and comparison centers was around 6.5 at wave 5 (May 2002), and closer to 6 for both pilot and

comparison centers at wave 7 (May 2003). These scores suggest that both pilot and comparison centers experienced fairly high morale, as perceived by directors, and that both perceived a slight decrease in morale from the end of the second year to the end of the third.

At waves 2, 3, 5 and 7, pilot centers were asked to assess to what degree participation in the CWL had affected employee morale. On a scale from 1 to 5, with 1=greatly decreased and 5=greatly improved, the mean value was 4.61, indicating that over the three years, participation in the CWL was perceived to improve employee morale. Examination of these mean morale scores over the 4 waves revealed that morale did fluctuate slightly over the 4 waves. Center reports of morale due to participation in the CWL increased on average by about ½ point (mean=.572, n=91) from May 2001 to May 2002 and this difference was statistically significant ($p<.0001$). Conversely, this score decreased about ½ point (mean=-.436, n=94) between May 2002 and May 2003 and this difference, too, was statistically significant ($p<.0001$). It seems clear that directors perceived participation in this project to have a substantial and positive impact on the morale of their staff and that with its impending end in July 2003, this influence was less positive in May 2003.

In addition to asking directors to quantify their perceptions of staff morale, we asked them to describe (in their own words) to what they attributed their perceptions of high or low morale. As most directors identified morale as high, they presented a larger percentage of reasons for high morale (83% of pilot reasons reported, 81% of comparison). The most frequently mentioned reasons were quite different (highly statistically different) for the two groups. Pilot directors' responses were more likely to be related to elements of the career and wage ladder project. For instance, 32% of pilot directors attributed taking classes and better wages and benefits to their employees' positive morale, whereas only 10% of comparison directors did so. Likewise, 8% of pilot directors attributed lower morale to staff being upset over the ending of the pilot project, whereas none of the comparison directors mentioned this. (See Table 9B for details regarding responses; note directors often identified multiple reasons.)

Table 9B				
Directors attribute morale to...				
	Pilot n=95 Responses	Comparison n=78 Responses	Significance of Chi Square**	
High Morale				
Better wages, benefits than most centers	23%	4%	<.0001	
Taking classes, participating in training	9%	6%		
Teamwork, relationships, atmosphere, enjoy work	21%	37%		
Low staff turnover	4%	3%		
Quality care committee, opportunities for staff input	5%	5%		
Positive supervisor, flexible w/ staff personal needs	11%	17%		
Professionalism of center (NAEYC accredited)	4%	3%		
Staff feel appreciated (by center, parents, state)	7%	8%		
Low Morale				
Upset over CWL ending	8%	0%		
Low wages, low benefits	2%	7%		
Low enrollment, poor economy creating layoffs	6%	2%		
Poor communication, poorly trained staff	1%	6%		
High staff turnover	0%	4%		
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance				
**If differences statistically significant (.05 or smaller), significance noted in bold/italics				

These perceptions of change in morale from center directors, albeit potentially influenced by knowledge of participation in the pilot project, support the comments reported in the telephone interviews of June 2001, and in written anecdotes from respondents, describing large changes in attitudes towards self as professional and attitudes towards ones' work in pilot center employees.

Skill, Knowledge, Professional Ethics, Professional Commitment

Because the educational endeavors pursued by pilot center employees could potentially be of any sort (e.g. courses on curriculum design, to workshops on ages and stages of development), it was difficult to identify a set of specific abilities/dispositions which might be assessed as a result of increased educational pursuits. For these reasons, we chose to ask respondents how their employees' skills, knowledge, commitment to professional ethics and commitment to the field of early childhood care/education (general markers of good practice) had changed over the course of the year. They could respond on a scale of 1-5, with 5 indicating improvement, and 1 indicating decrease in skill, ethics, etc. Table 9C reports means scores across 4 waves of data (waves 2, 3, 5, and 7). In each case, except changes in knowledge, pilot centers reported a greater amount of improvement than did comparison centers, as indicated by statistically significant differences in the mean scores on skill change, change in commitment to ethics and to the field in general.

Table 9C Respondent Perception of Change in Employees				
	Change in Skill	Change in Knowledge	Change in Commitment to Ethics	Change in Commitment to Field
Pilot (n=95)	4.28	3.55	4.28	4.29
Comparison (n=78)	4.04	3.49	3.90	3.89
Significance of T-test	<i>p</i> < .0001	<i>p</i> = .1958	<i>p</i> < .0001	<i>p</i> < .0001
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance **If differences statistically significant (.05 or smaller), significance noted in bold/italics				

Perceived Burden of Project Administration and Survey Completion

Respondents were asked at several waves (2, 3, 5, 7) to characterize the burden of administering the pilot project. They were asked to rate this burden on a scale from 5 “much more than expected” to 1 “much less than expected.” The mean burden scores across these 4 waves was 2.65 indicating that administration had been “somewhat less than expected”. The range in burden scores over these 4 waves was from 2.87 at wave 2 to 2.39 at wave 7.

Respondents were also asked to rate the burden of completing the evaluation surveys on a scale from 1 to 4 with 1=“very easy” and 4=“very difficult”. They were asked this question at waves 3 and 5. The average survey burden for pilot and comparison centers was 2.05 at wave 3 and 2.03 at wave 5, indicating that respondents found the surveys somewhat easy to complete. When the mean evaluation burden was compared for pilot and comparison groups, it was clear that comparison centers had lower burden scores (1.89) than pilot centers (2.19). While this difference was not large, it was statistically significant (***p* = .0176**). Surveys contained some questions that were only for the pilot group, making surveys longer for these participants. Moreover, comparison centers were paid \$250 per survey. Perhaps these two issues explain why more pilot respondents than comparison respondents reported that the survey was somewhat difficult.

Unintended Results of CWL Participation

Finally, we asked pilot directors whether they believed that there had been unintended results of their center’s participation in the CWL project; either positive or negative results. See Table 9D for a summary of their perceptions. Throughout this chapter most of the director perceptions of the CWL have been very positive. To this question, directors reported about half of their unintended results as positive, half negative. The unintended result most frequently mentioned (29%) was a negative one. The ending of CWL was reported to have caused reductions in wages and benefits, severe center financial struggles, and staff angst and quitting over the end of the pilot (29%). The most frequently mentioned positive unintended result reported was the experience of having a larger, more educated applicant pool for job openings, and higher quality of care provided (16%). Interestingly enough, some items mentioned, for instance higher wage providing an incentive for staff to continue their education, was an objective – hoped for result – for the state, but its success was perhaps a surprise to some directors, so noted as an unintended result. See Table 9D for a summary of unintended results reported by pilot directors.

Table 9D Pilot Director Reported Unintended Results N=73	
Positive	
Larger, more educated applicant pool for job openings, and higher quality of care	16%
Higher wage provided incentive for continuing education	13%
Increased sense of team, higher morale	10%
More child care legislative advocacy and communication	7%
Negative	
CWL end led to reduced wages/benefits, center financial struggles, staff angst & quitting	29%
During CWL due to paying higher wages, had higher state, federal & payroll taxes	13%
Couldn't reward high performing staff, sometimes rewarding poor performers	13%

Summary: Self-reported perceptions of the effect of the CWL by pilot center directors clearly indicated that participation increased morale, skill and a commitment to the field. While it could be argued that these results are due to a sort of “halo effect” because they chose to be in the CWL, when some of the same questions about morale, skill, etc. were asked of the comparison directors, their responses indicated consistently lower morale, etc.

CHAPTER 10

RESULTS: PILOT CENTER DIRECTOR TELEPHONE INTERVIEWS METHODS AND FINDINGS

Introduction

At the end of year one (June 2001) of the Washington Child Care Career and Wage Ladder Pilot Project researchers completed a **telephone interview with a selected sample** of pilot project center directors (25) regarding their perceptions and beliefs regarding:

- (1) The Pilot's effectiveness in increasing wages, education and retention of employees;
- (2) Whether they believed employee changes had occurred, and if so, whether these had affected the quality of child care provided or employee professionalism;
- (3) How effective the project was in meeting its goals; and
- (4) The administration of the project.

These telephone interviews were an opportunity to discuss in-depth centers' experiences with the pilot. The following steps and procedures were used to conduct the telephone interviews.

Selection of Telephone Interview Centers

A sample of 25 pilot center directors (20% of the total) were selected to participate in the telephone interviews. A representative sample was selected based on the following criteria:

- (1) Pilot centers which had completed and returned written Surveys 1 & 2;
- (2) Licensed Capacity: Range/percentages as similar as possible to the sample of Pilot Centers which completed written Surveys 1 and 2;
- (3) Region of Washington (East or West side of state) as similar as possible to the sample of Pilot Centers which completed written Surveys 1 and 2; and
- (4) Size of county (Metro, Small Urban, Rural) as similar as possible to the sample of Pilot Centers which completed written Surveys 1 and 2.

Contacting Centers Regarding Participation in Telephone Interviews

A WSU interviewer contacted each director by telephone, explained the purpose of the telephone interview and scheduled an appointment between June 1-21, 2001 to conduct the interview. The interviewer used the following text to describe the telephone interview.

SCRIPT

This is _____, an interviewer for the research and evaluation of the Washington State Child Care Career and Wage Ladder Pilot Project. We want to thank you for your participation in completing written responses to surveys across the year regarding the Pilot. These surveys have given us much information to understand Centers' experiences with the Pilot.

We are also conducting a telephone interview with a sample of 20% of the Pilot centers. We will be discussing in more depth Centers' experiences with the Pilot. Your center matches the characteristics of the total sample, and we would like to schedule an appointment with you to include your center in the telephone survey. Our purpose in the telephone interview is to gather perceptions regarding:

- (1) the Pilot's effectiveness in increasing wages, education and retention of employees;*
- (2) if employee changes have occurred, whether these have affected quality of child care provided or employee professionalism;*
- (3) perceptions of how effective the project was in meeting its goals; and*
- (4) perceptions of administration of the project.*

We would greatly appreciate your participation. The interview will take about 30-45 minutes. If you choose to participate, your responses will remain confidential. Also, your participation is completely voluntary. Would you be willing to participate?

[IF YES:]

- 1. Which of the following dates would work... [schedule date and time]*
- 2. Confirm name of person to call, address, phone number to call, email address*
- 3. [State] I will send you an email message [or letter, if no email] to confirm our appointment, and another closer to the time as a reminder.*
- 4. Thank you again for agreeing to participate in the telephone interview. Your reflections will help provide an in-depth view of the Pilot. I look forward to speaking with you.*

[IF NO:]

Thank you for your time, and again we appreciate the contributions you've already made in completing the written surveys.

The interviewer followed-up with email messages or letters to confirm and then remind participants concerning the purpose, time, and date of the interview.

Completion of Telephone Interview And Data Input

When centers were contacted for their telephone interviews, the interviewer repeated her description of the purpose and structure of the interview. See the Appendix for the complete list of questions and introductory remarks used in the telephone interview. Each interview took between 30 and 45 minutes. During the interview, the Interviewer (a M.A. child development specialist) transcribed participants' responses to each question. Immediately after completion of each interview, the Interviewer typed the actual verbatim responses and corrected typographical errors.

Content Analysis of Responses

Upon completing all telephone interviews, participant identifying information was stripped from responses. A standard qualitative study technique was used to review the responses (constant comparative analysis). The actual text responses for each question were placed in separate envelopes by question. The responses from each question were then placed into response categories which were based on shared ideas or themes. Two researchers completed this sorting process independently. Both researchers coded groupings on the back of each response. The researchers then compared their groupings and came to agreement on the response categories. Researchers then tallied the number of responses for each given category by question. This process continued for all telephone interview questions. Another round of analysis of the categories was performed independently by three researchers for clarification and possible combining of sub-categories. Charts listing the response categories and tallied responses were developed for each of the twenty questions asked. (see Appendix for chart of all questions, and accompanying responses and tallies).

Three researchers then independently reviewed sub-categories of responses to identify larger themes which crossed questions and categories. The researchers then compared and agreed upon a set of larger themes. Researchers finally reviewed all individual responses again and selected quotations which illustrated the most frequently mentioned themes.

Telephone Interview Results

From the content analysis of responses, the major findings of the telephone interview of pilot center directors were as follows.

1. **The overall Pilot was perceived as successful:** The Career and Wage Ladder (CWL) was perceived by the directors to have been successful in achieving its goals. The CWL was described as successful in increasing staff: retention, educational pursuit, and professionalism.

Table 10A Telephone Interview Perceptions of Pilot Success	
Year 1 of CWL	#/% of Directors
Increased staff retention for a subset or all employees	21 (84%)
Increased staff educational pursuit and center emphasis on education	18 (72%)
Increased staff professionalism	23 (92%)

2. **Directors planned to maintain some aspects of the CWL, even if it were not refunded:** In fact the CWL was perceived to be so successful by the center directors surveyed, that most said they would maintain most aspects of the Ladder. They would maintain position steps and wage increments (based on education and duration of employ), even if the CWL were not re-funded. However many directors also stated that whereas they would maintain wage increments, in order to afford increments, all would be at lower levels than those provided by the Ladder.

Most directors also said they would maintain the CWL benefit requirements, were the CWL to be discontinued; however they stated that they had had those benefits prior to the CWL. About half said they would maintain a Quality Care Committee (QCC), and about half stated they would not maintain a separate QCC, stating the committee was unnecessary. Many directors stated they had always talked about the issues expected for a QCC in their regular staff meetings, and they expected to continue to use staff meetings to achieve this purpose.

Table 10B Telephone Interview Pilot Areas Would Maintain	
If CWL were discontinued, what would you maintain?	#/% of Directors
Maintain CWL position titles	21 (84%)
Maintain CWL educational steps	18 (72%)
Maintain wage enhancements - as outlined in CWL - at lower amounts than CWL	17 (68%) - 4 (16%) - 14 (56%)
Maintain benefits - as outlined in CWL (or more) - at lower amounts than CWL	21 (84%) - 16 (64%) - 5 (20%)
Maintain Quality Care Committee	14 (56%)

3. Retention Improvements:

Whereas the majority of directors (84%) thought staff retention had increased due to the combined aspects of the CWL (this was not confirmed by the mail survey results), most thought the \$.25 per hour yearly retention wage increase amounts were insufficient as motivators to increase retention for employees (other than those at the bottom of the pay scale). They recommended a \$.50/hour per year of employment retention wage increase, and a number suggested \$.25 be awarded two times per year.

4. Increased Educational Pursuits:

The directors' perceptions were that the CWL resulted in increased educational pursuits by staff (this was confirmed by the mail survey results). This was especially true for those who were at the lower ends of education (high school, STARS, few college credits). In fact directors believed that CWL was so effective as a motivator for educational pursuits that most center directors stated, should the CWL end, they would maintain the educational wage steps. However due to center financial restraints, they would provide a lower level of wage increases for these educational steps, than those provided in the CWL. To enhance the motivation to pursue education, especially at the lower end, making educational milestones more obtainable, most directors also believed there needed to be more education steps. The most frequently mentioned additional step was 10-15 early childhood college quarter credit hours.

5. **Improved Professionalism and Quality of Care:** The CWL was perceived by directors as having been an important factor in improving the professionalism of staff (92% believed CWL had improved staff professionalism). In fact directors made their lengthiest statements when they discussed increases in professionalism. They attributed improvements to a number of different elements. Increased educational pursuits of staff, and hiring staff with higher educational attainments, had resulted in staff being more knowledgeable about child development and quality early childhood education and care practices (22 directors or 88% believed care quality had improved).

Directors also believed that increased educational pursuits of staff, and hiring staff with higher educational attainments had also resulted in staff implementing more appropriate practices and improved quality of care. Staff were reported as demonstrating more professional skills with children (paying attention to children and developmental stages),

with parents (better equipped to discuss child development issues), and leadership (planning activities and taking on administrative roles). Staff were also perceived as more willing to be advocates for appropriate early childhood practices with parents and policy makers. Directors saw their staff as valuing their own work more, and related this to staff expressing that those in government and the state were valuing their work. Their staff were reported to have seen the CWL as a demonstration of outside validation. Some directors mentioned that staff were now starting to view their work as a career - a profession that provided a living wage and benefits, and required specialized knowledge.

6. **Improved Morale:** According to the directors (24 of the 25 directors, or 96%), as a result of participation in the CWL the morale and motivation of staff was significantly improved at all levels of staff. The morale and motivation of aides and assistants seemed most affected by wage increases. The morale and motivation of lead teachers and supervisors seemed most affected by the Ladder providing them with a sense of being appreciated and seen (by those outside their child care center) as doing important work, i.e. being seen as a professional.

7. **Health Insurance and Quality Care Committee (QCC) requirements did not result in changes to policy for participating centers.** Questions were asked regarding the QCC and benefits; however, respondents did not independently bring up these issues in response to other questions, as they did with the all other above mentioned themes. As described above, the requirements seemed to be perceived as unnecessary because prior to CWL many centers reported they were already providing similar benefits.

8. **Suggestions for Change in the CWL: More steps and greater increases at particular steps in the CWL were commonly suggested.** Responses called for more steps in educational levels of the ladder, greater financial increases for higher levels of education, and more frequent raises for retention. Further, directors recommended more frequent director meetings to discuss CWL procedures and strategies to enhance successes (retention and educational pursuit).

CHAPTER 11
RESULTS: SPRING 2003 OBSERVATIONAL STUDY

Introduction

The ultimate aim of the Career and Wage Ladder pilot project was to improve the quality of care provided to children in licensed child care centers in Washington state. Due to budgetary constraints, the first and second years of the evaluation did not include any direct measure of quality of care. Because observational study is the best way to assess quality, the cost was determined to be prohibitive to include such a component in the early rounds of evaluation. At the request of the Division of Child Care and Early Learning, in the third and final year of the evaluation study, we added a component of the evaluation study that would examine quality directly (i.e. through observation) and directly measure teacher characteristics that could potentially be influenced by participation in the pilot project. The budgetary constraints still existed, and consequently, this component of the evaluation was completed with a sub-sample of both pilot and comparison centers (e.g. 33 teachers from 25 pilot centers and 33 teachers from 25 comparison centers).

Protocol

The subsample of 25 pilot and 25 comparison centers were selected to match as closely as possible the characteristics of each of the groups in its entirety and each other. Table 11A indicates the match of the 25 pilot and comparison centers on a variety of characteristics. This table indicates that the subsamples chosen for the observational study were not substantially different from either the larger sample of centers that completed surveys 1-5 or each other.

Table 11A				
Match of Pilot and Comparison Centers chosen for Observational Study				
(match with centers completing survey 1-5 and with each other)				
Characteristics	Centers completing survey 1-5		Centers chosen for observation study	
	Pilot n=101	Comparison n=86	Pilot n=25	Comparison n=25
Avg. Licensed Capacity	55	54	58	54
Min. Licensed Capacity	11	17	24	22
Max. Licensed Capacity	154	140	120	152
Avg. # DSHS children	24	24	23	23
Avg. % DSHS children	46	46	41	44
% Metro	55	51	56	56
% Small Urban	22	30	24	20
% Rural	23	19	20	24
% East side of state	26	30	32	28
% West side of state	74	70	68	72

Centers selected to participate received letters notifying them of their selection. Included with the letter was information for a teacher selected for observation by the director (focal teacher). Letters were followed with a telephone call from the CWL research assistant to obtain permission to conduct the observation and to schedule the visit. If directors agreed to participate they were asked to select a lead teacher in a preschool-aged classroom for observation and to make sure she also agreed to this visitation. Following the telephone call, more informational flyers were sent to the centers for parents of children in classrooms to be observed and staff other than the focal teachers. (See Appendix for documents related to participation)

Four observers attended a two-day training in Seattle, conducted by the CWL research assistant. This training focused primarily on achieving an acceptable degree of agreement between the 4 observers in use of the two observational measures (the Early Childhood Environmental Rating Scale-Revised, and the Caregiver Interaction Scale, see below for details on measures). In addition, observers received training in confidentiality and ethical treatment of research subjects, calculating reliability, submitting data, and responsibilities related to reporting any suspected child abuse, as required by the Washington State Institutional Review Board. Following this training, observers completed two additional practice observations before they were scheduled to conduct the actual observations.

Upon arrival at the center for the previously scheduled visitation, written consent was obtained from the focal teacher and other non-focal teachers in that classroom. Observers also collected Washington State A-19 and W-9 forms (if necessary) to allow the center to be paid for their participation (pilot and comparison centers were paid \$100 for an observation to cover the cost of a substitute for the time that the focal teacher was completing the survey). The observer(s) spent approximately four hours at a center, completing two observational instruments (described below), administering a survey to the focal teacher and collecting administrative paper work. Observations were completed between March 24 and May 30, 2003. Table 11B describes the sample of teachers observed in this phase of the evaluation.

Table 11B Observational Sample Description		
	Pilot	Comparison
Mean age	34	39
Ethnicity	88% Caucasian	84% Caucasian
Gender	1 male, 32 female	33 female
Mean years in field	10.24 (range 1-30)	11.71 (range 1-30)
Mean years at center	4.40 (range 0-15)	5.38 (range 1-14)
Mean wage	\$10.28	\$9.38

Observation Instruments

The Early Childhood Environmental Rating Scale-Revised (ECERS-R, Harms, Clifford & Cryer, 1998) was used to provide an overall assessment of the classroom environment. (See Appendix for a copy of this instrument.) The ECERS-R assesses multiple aspects of the environment through items on the following subscales: Space and Furnishings, Personal Care, Language/Reasoning, Activities, Interaction, Program Structure, Parents and Staff. Each item is rated on a 7-point Likert scale with 1 indicating inadequate quality; 3, poor quality; 5, good quality; and 7, indicating excellent quality. The rating scale was completed after a three hour observation by the trained observer. Thirteen observations (20%) were conducted by two observers simultaneously to allow for the calculation of inter-rater reliability. These so-called “double-coded observations” were conducted between March 24 and May 22 of 2004, spanning virtually the entire time frame of observational data collection. The percentage of agreement indicates the degree of reliability between two observers and can range from 0 to 100%. The range in percent agreement on the ECERS-R was 86 to 100% with an average of 95% agreement.

The Caregiver Interaction Scale (CIS, Arnett, 1989) was used to assess the quality of caregiver-child interaction. (See Appendix for a copy of this instrument.) The instrument contains 26 items describing the nature and tone of interactions. Each item is rated on a 1 (not at all like this classroom) to 4 (very much like this classroom) scale. The scale is completed after a 45-minute observation by a trained observer. Four factors, sensitive, harsh, detached and permissive, have been identified from the scale, although the permissive scale does not always result in high internal consistency and thus has been sometimes dropped from analysis. The range in observer agreement on the CIS was from 88% to 100%, with an average of 99% agreement.

Survey Instruments

During the same site visit, following the observation, the teacher was surveyed on the following constructs. (See Appendix for a copy of these instruments.)

The Early Childhood Job Satisfaction Survey (ECJSS, Jorde-Bloom, 1985). Nineteen items, representing 2 separate facets from the ECJSS were used to assess satisfaction with (1) the nature of the work itself, and (2) pay and opportunities for promotion. The items are evaluative in nature and were presented in a yes/no (true/false) format. For each item, teachers were asked to indicate agreement with a specific statement. For unfavorable statements, the scoring was reversed resulting in a possible range of scores from 0-10 for each sub-scale. A low score represents a negative attitude toward that job facet, a high score a favorable attitude. This instrument has shown good internal consistency when used with a population of teachers and assistant teachers in child care centers (Stremmel, 1991).

Intention to leave Four items used by Stremmel (1991) to assess intention to leave (e.g. "I intend to work here at least another year," and "I often think of quitting) were included in the survey. These items were rated on a 5 point scale ranging from strongly disagree to strongly agree. These items showed good internal consistency when used with a population of teachers and assistant teachers in child care centers (Stremmel, 1991).

Professional Orientation was measured with 13 items developed by Jorde-Bloom (1991). For example, respondents were asked to indicate if they considered their work "a career" or "just a job," the number of professional books read last year, what professional organizations currently paid dues to. The score could range from 0-19.

The Didactic Belief Scale (Stipek & Byler, 1997). Respondents completed a 31 item questionnaire designed to assess teachers endorsement of practices associated with a basic-skills or a child-centered orientation. Teachers indicated on a 5-point scale the degree to which they agreed or disagreed with statements such as "Basic skills should be the teacher's top priority" (basic skills item) or "Children learn best through active, self-initiated exploration" (child-centered item). Thus, each teacher's responses were used to create a Basic-Skills score and a Child-Centered score. Some items in each subscale were reverse scored and thus a high score indicated a stronger belief in that particular set of practices.

Results

Observational instruments. The average total score on the ECERS-R (average of all subscale scores) was 5.30 for the pilot teachers and 4.80 for the comparison teachers. These mean scores were statistically significantly different ($p=.036$). Recall that a score of 7 on the ECERS-R indicates an excellent rating and a 5 indicates a good level of care. These scores

indicate that the pilot centers were just above a rating of good care, while comparison centers were just below it. Table 11C provides the subscale scores for both pilot and comparison teachers. Note that while the overall score differences were statistically different, the subscale differences were not statistically significant. They approached significance, suggesting that with a larger sample these differences would have been statistically significant.

Table 11C			
ECERS-R Average Subscale Scores			
Subscales	Pilot n=33	Comparison n=33	Significance of t-test
Space/Furnishings	5.43	4.94	.08
Personal Care	5.35	4.96	.22
Language/Reasoning	5.42	4.92	.12
Activities	4.72	4.17	.07
Interaction	6.00	5.42	.06
Program Structure	4.80	4.19	.61
Parents/Staff	5.41	4.95	.07
Overall Average Score	5.30	4.80	.036
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance			
**If differences statistically significant (.05 or smaller), significance noted in bold/italic			

The scores on the CIS present a similar picture to that of the ECERS-R. The average score on the CIS for pilot centers was 3.78 and 3.58 for the comparison centers. These mean scores were statistically significantly different ($p=.013$). The higher score for the pilot centers indicates a more positive interaction style than that of the comparison centers. Table 11D presents the subscale scores for the CIS. Note that in each case, except for the “detached” scale, the scores were statistically significantly higher in the pilot group, and that the detached scale differences approach significance.

Table 11D			
CIS Average Subscale Scores			
Subscales	Pilot	Comparison	Significance of t-test
Sensitivity	3.55 n=33	3.28 n=33	.05
Punitive	3.81 n=33	3.60 n=33	.04
Detached	3.84 n=32	3.65 n=33	.09
Permissive	3.92 n=31	3.78 n=32	.05
Overall Average Score	3.78 n=33	3.58 n=33	.013
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance			
**If differences statistically significant (.05 or smaller), significance noted in bold/italic			

Questionnaire instruments. Table 11E presents the results of teachers report of their work satisfaction, including professional orientation and intention to leave the position. In each case the scores are higher in the pilot than the comparison, but only in the cases of satisfaction with pay and promotion, and professional orientation did the difference reach statistical significance. These results suggest that participation in the CWL increased teachers’ satisfaction with their pay and their professional orientation, but did not effect satisfaction with the work itself or their intention to stay in their current position. The lack of a difference in satisfaction with the work was not surprising. Previous research has indicated that while dissatisfied with pay, child care providers find many other aspects of their work to be highly satisfying. The lack of difference in

intention to leave may be explained by the length of time these employees had already spent at their centers, 4-5 years (see Table 11B).

Table 11E			
Teacher Work Attitude Average Scores			
Subscales	Pilot n=33	Comparison n=33	Significance of t-test
Satisfaction with pay and promotion	35.24	31.48	.03
Possible range = 10-50			
Satisfaction with work itself	36.58	36.52	.97
Possible range = 9-45			
Professional Orientation	8.64	7.03	.04
Possible range = 0-13			
Intention to Leave	7.45	8.45	.33
Possible range = 5-20			
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance			
**If differences statistically significant (.05 or smaller), significance noted in bold/italic			

In order to assess the effects of increased training we measured teachers' endorsements of attitudes that were characterized as either a child centered orientation that is consistent with NAEYC developmentally appropriate practices or more basic skills oriented. We hypothesized that pilot teachers might endorse attitudes that were more child centered, as developmentally appropriate practices are likely to be presented in most trainings or ECE classes. Table 11F presents the average scores on the two subscales related to attitudes toward best practice. The score pattern is in the direction we hypothesized, but the differences were not statistically significant. That is, pilot teachers scored lower on basic skills and higher on child centered scores, and the reverse was true of comparison centers.

Table 11F			
Beliefs About Best Practice Average Subscale Scores			
Subscales	Pilot n=33	Comparison n=33	Significance of t-test
Basic Skills Orientation	40.55	44.37	.16
Child Centered Orientation	45.75	43.58	.12
**p = level of probability that differences between groups are due to chance; p values of .05 or less considered statistically significant: little expectation that differences are due to chance			
**If differences statistically significant (.05 or smaller), significance noted in bold/italic			

CHAPTER 12 RESULTS: MAIL SURVEY PARTICIPANT RECOMMENDATIONS

Introduction

Several questions were asked of directors to learn their perspectives on elements of the career and wage ladder (CWL) that should change or remain the same. At the end of year 1 of the CWL evaluation (May 2001) pilot center directors were asked for their recommendations for changes in the structure and/or administration of the pilot. Based on these recommendations, several changes were made in the CWL for the following two years of implementation (see Tables 12A & 12C noting these changes). Again at the end of the project, in May 2003, directors were asked the same question. They were also asked if they were to design their own program, what they would include. Finally they were asked their perspectives on how much of a wage increase it would take to increase staff retention, and separately how much it would take to motivate staff to seek further education.

As throughout this report, the recommendations' analyses describe the results for the 95 pilot centers which completed all seven waves of data collected over the three years of the pilot. Not all of the directors from these centers answered every open-ended question, thus the N listed for each response or chart varies.

Recommendations for change in the Pilot

Structure

Regarding **structure**, the directors were asked to offer their recommendations concerning the CWL position titles, educational steps, wage increments, benefit package requirements, and quality care committee requirements. See Table 12A for a summary of the specific pilot center director recommendations for changes in the structure of the CWL. Regarding **position titles**, by the end of the project, two thirds of the directors were satisfied with the titles as designed in the CWL. The remainder (about one third) recommended additional positions to be included in the CWL (director, assistant director, additional teacher level, and/or cook were suggested).

By May 2003 about one third of the directors thought no changes were needed in the **educational steps**. However, even though two steps were added to the CWL starting in year two, in May of 2003 44% of directors still recommended more educational steps be added. As they had in May of 2001, they often stated these would make educational advancements on the ladder less daunting to full time working staff. About a quarter of the directors had other suggestions such as, actually reducing the number of steps, stating the ladder had become cumbersome. Others suggested reducing the value of STARS training, stating it was not equivalent to the other educational steps.

More than a third of directors were satisfied with the **wage increment structure** and amounts. Three minimum wage increases and the addition of two more positions, during the three years of the CWL, necessitated revisions in the wage structure. By the end of the CWL, many directors had suggestions for changes. One, which had been suggested after year one, but received a considerably higher percentage of comments by the end of the pilot, was adding larger wage increases for degrees of an AA or above. Directors commented that in order to attract the most educated and qualified staff, they would need to pay them a higher wage.

When asked about whether **the \$.25 per year retention raise, was enough to retain staff**, most directors said “no;” in fact 85% recommended offering a retention raise of \$.25 every six months. Since retention is so difficult to achieve, directors believed staff needed more frequent encouragement to stay. When asked **how much it would take per step to motivate staff to seek further education**, about 60% thought an increased amount was necessary. The most common recommendation was \$.75-\$1.00 per educational step. Some directors also believed the hourly increase should be greater for those achieving an AA or above.

About half of the directors were satisfied with the **benefits requirements** as written. More than a third suggested elimination of the **quality care committee** requirement, stating they thought it redundant to the work they already did in staff meetings.

Table 12A: CHANGES in CWL STRUCTURE Pilot Director Recommendations & DSHS Changes			
	May 2001 Recommendations	Changes made by DSHS	May 2003 Recommendations
Position Titles	N = 32 40% no change needed 60% add positions to CWL: <ul style="list-style-type: none"> • director, asst. director • additional teacher • cook 	No change made	N = 44 70% no change needed 30% add positions to CWL: <ul style="list-style-type: none"> • director, asst. director • additional teacher • cook
Educational Steps	N = 50 10% no change needed 72% more steps needed <ul style="list-style-type: none"> • after STARS • between CDA & AA • between AA & BA 18% define & add majors	2 new steps added after STARS & between AA & BA majors added & defined	N = 64 34% no change needed 44% more steps needed 22% Other <ul style="list-style-type: none"> • reduce value of CDA • decrease # of steps • reduce STARS \$ incr. • add majors
Wage Increments	N = 46 28% no change needed 20% increase all wages 4% increase \$ AA & above 7% offer retention 2X/year 4% go beyond 5 years 30% add steps to match added education steps 7% increases for prior experience or merit	3 minimum wage increases occurred, raising bottom of scale \$ were added between existing amounts for new steps	N = 48 38% no change needed 23% increase all wages 23% increase \$ AA & above 7% offer retention 2X/year 5% reduce \$ for STARS 4% go beyond 5 years
Benefit Package Requirements	N = 29 59% no change needed 17% provide group plan 14% increase 10% more flexibility	No change made	N = 48 49% no change needed 15% provide \$ for benefits or group plan to join 15% increase medical/leave 10% increase leave days 10% other
Quality Care Committee Requirements	N = 33 52% no change needed 39% need more definition 9% delete, use staff mtg.	Additional definition given	N = 24 48% no change needed 16% need more definition 36% delete requirement

Redesign Program

When asked how directors would redesign the program, should it be re-funded, most of their ideas were changes in the structure of the CWL. However, about 15% said they would change nothing. One director went as far as to say, "leave perfection alone." See Table 12B for ideas they recommended in redesign of the program, should it be re-funded.

Table 12B: RE-DESIGNING CWL Pilot Director Recommendations N=48	
No change	29%
Provide scholarships or reduced tuition to community college	29%
Add more education steps	21%
Increase wage increments for AA & above degrees	17%
Increase wage amounts for all positions & steps	15%
Add merit wage increases	15%
Make stable & permanent	13%
Extend yearly anniversary raise beyond 5 years	13%
Increase health benefits, provide \$ or an umbrella plan centers could buy into	10%
Provide substitute program, so can pay them w/CWL	10%
Require higher standards to qualify: NAEYC accredited	8%
Add yearly anniversary \$ for experience at other centers	6%
Increase yearly anniversary raise	6%
Train directors in CWL intricacies	4%

Administration

Regarding **administration**, the directors were asked to comment on their recommendations concerning the CWL forms and information supplied by DSHS, reimbursement process, and communication with DSHS. The questions were open-ended, allowing directors to identify any specific recommendations they had. A high percentage of directors thought no changes were needed in the administration of the CWL.

See Table 12C for a summary of their specific ideas. When asked about **selection of centers** for the project, about 20% thought all qualified centers should be accepted. Regarding **implementation**, about half of the directors thought training in the intricacies of the CWL, and quarterly or yearly meetings, would be helpful. Regarding changes in the **CWL forms or information** supplied by DSHS, some directors suggested the use of on-line submissions of forms. After some early changes in the **reimbursement process**, most were satisfied with the

process by the end of the project. Most of the directors thought **communication with DSHS** was fine or good. The other one third recommended that quarterly or yearly meetings be added.

Table 12C: CHANGES IN CWL ADMINISTRATION Director Recommendations & DSHS Changes			
	May 2001 Recommendations	Changes made by DSHS	May 2003 Recommendations
Center Selection Process	Not asked in 2001	No change made	N =36 61% no change needed 19% include all qualified centers in state 8% select centers with highest DSHS assisted families 6% increase standards to qualify 6% increase DSHS staff to make smoother
Training for CWL Implementation	Not asked in 2001	No change made	N = 38 47% no change needed 53% provide training in intricacies of CWL
Forms & Information Supplied by DSHS	N = 24 88% no change needed 12% new forms are clearer	Refinements made throughout pilot	N = 31 84% no change needed 8% add on-line submission 8% clarification needed
Reimbursement Process	n=42 69% no change needed 14% make CWL invoice separate from child care 12% errors in converting info from report to invoice 5% more definition about rates, process, TA	Refinements made	N = 35 92% no change needed 8% add on-line submission
Communication with DSHS	N = 38 92% no change needed 16% tech assistance, orientation needed 11% need more faster communication 11% DSHS understaffed	Support staff position eliminated Monitoring visits took place Regional meetings took place	N = 37 70% no change needed 30% increase through quarterly or yearly meetings

Chapter 13 Post CWL Research and Evaluation Plans

Introduction

Upon completion of the pilot, the Department of Social and Health Services (DSHS) requested a proposal to evaluate how employees and centers responded to the ending of the pilot. Specifically, DSHS requested that researchers propose methods to determine how pilot centers fared after the completion of the pilot, specifically whether: centers remained open or not, they found outside funding to continue the wage ladder, they maintained or changed their wages and benefits, there were effects regarding the qualifications of those centers hired, the quality of the programming changed, etc. Further, DSHS requested that researchers propose methods to determine how pilot employees fared after completion of the Pilot, specifically, whether: their retention rates changed; their pursuit of early childhood courses or workshops changed; their wages and benefits changed; and if they left the pilot centers, whether their reasons were associated with the discontinuation of the pilot.

Methodology

The One-Year Post CWL Research and Evaluation Study includes three components:

- A. Completion of the same director completed **mail survey** process used in evaluation of the pilot project is repeated two times across the course of the year. Surveys are being completed by all pilot and comparison group directors;
- B. **Telephone interviews** with a sample of about 60 directors at 30 former pilot and 30 comparison centers conducted two times across the course of the year.
- C. A sample of about 25 former pilot and 25 comparison center preschool classrooms are **observed** for assessment of quality, and teachers complete **questionnaires** one time in the spring of 2004.

Research questions to be addressed by Director Surveys and Interviews are:

Center Questions

- 1. **Closure:** Were there changes in the closure rate of former pilot centers, after completion of the pilot project (comparing closure rates during the pilot and the year afterward)? Is there a difference in closure rates of former pilot and comparison group centers? What percentage of centers are considering closure within the next year (comparing pilot and comparison centers)?
- 2. **Finances:** Were there changes in center's financial stability after completion of the pilot? Were there changes in how centers funded their programs, after completion of the pilot?
- 3. **Wages/Benefits:** Were there changes in the wages and benefits offered by centers, after completion of the pilot? Did the wage structure remain the same at pilot centers after completion of the pilot? Did the number of benefits provided to employees at pilot

centers remain the same after the pilot? After the completion of the pilot, were wages and benefits still greater at former pilot centers than at comparison centers?

4. **Career Ladder:** Were there changes in the career ladder (position titles, education and experience requirements for positions) used at centers, after completion of the pilot? Did former pilot centers continue to use the pilot career ladder after the completion of the pilot, or adopt a different system?
5. **Unanticipated Results:** Were there any unanticipated results in pilot center structure and functioning, after the ending of the pilot?

Employee Questions

1. **Retention:** During the school year after the pilot, was the average length of employment greater at child care centers which had participated in the Career and Wage Ladder than those that had not? Were a greater percentage of employees retained at former pilot centers than comparison group centers, over the course of the year following the completion of the pilot project?
2. **Turnover:** During the year after the pilot, were the reasons for leaving former pilot centers associated with ending of the pilot project? Were the reasons for leaving centers different at former pilot centers than comparison centers?
3. **Educational Attainment:** During the year after the pilot, was the average educational attainment level of employees greater at former pilot child care centers than at comparison centers? Were there changes in newly hired employee's educational attainment levels, after completion of the pilot (comparing former pilot and comparison centers)?
4. **Educational Pursuit:** After completion of the pilot, were there differences in percentages of employees pursuing education or training at former pilot centers and comparison centers? Did fewer employees pursue education after the completion of the pilot than during the pilot?
5. **Wages:** Did the wages of employees change after completion of the pilot?

Research Questions Related to Teacher Attitudes/Behavior/Classroom Environment

All questions pertain to lead teachers in classrooms serving 3-4 year-olds, observed in the classroom for which they have primary responsibility for planning and implementing both the curriculum and the classroom environment.

1. **ATTITUDES:** Do teachers from pilot group centers exhibit different attitudes toward children and best educational practices than teachers from comparison group centers?
 - A. Do teachers from pilot group centers report a greater belief in developmentally appropriate practice than teachers from comparison group centers?
 - B. Do teachers from pilot group centers report a weaker intention to leave their current positions than teachers from comparison group centers?

- C. Do teachers from pilot group centers report greater organizational commitment than teachers from comparison group centers?
 - D. Do teachers from pilot group centers report greater job satisfaction than teachers from comparison group centers?
 - E. Do teachers from pilot group centers report higher levels of professional identity than teachers from comparison group centers?
2. **CLASSROOM ENVIRONMENT:** Do teachers from pilot group centers teach in classrooms with higher environmental quality scores?
 3. **BEHAVIORS:** Do teachers from pilot group centers exhibit different behaviors toward children than teachers from comparison group centers?
 - A. Do teachers from pilot group centers score higher on measures of sensitivity toward children than teachers from comparison group centers?
 - B. Do teachers from pilot group centers score lower on measures of harshness toward children than teachers from comparison group centers?
 - C. Do teachers from pilot group centers score lower on measures of detachment toward children than teachers from comparison group centers?
 - D. Do teachers from pilot group centers score lower on measures of permissiveness toward children than teachers from comparison group centers?

Samples

1. **Mail Survey sent to about 185 center directors:**
 ~100 former pilot group centers (those that had supplied all data from the 3 year pilot study);
 ~85 remaining comparison group center directors (those who had supplied all data from the 3 year pilot study).
2. **Telephone Interview with 60 center directors:**
 A sample of 30 former pilot and 30 comparison center directors (those who had supplied all data from the 3 year pilot study) are being interviewed. Centers were selected to match the full sample on location, urbanization, number of children served, and percent of DSHS children served.
3. **Classroom Observations and Teacher Questionnaires with about 50 centers:**
 In the spring of 2004 we are repeating the observation and teacher Questionnaire process we utilized in the spring of 2003. A single site-visit to each center provides the means for collection of both the observational and survey data. We are observing in approximately 60 preschool-aged classrooms in about 25 former pilot and 25 comparison centers. If still employed in a preschool classroom, the same teachers observed the previous year are being observed again, if not, a different preschool teacher are being observed. Teachers are also completing questionnaires assessing

attitude, belief and commitment to the profession at the end of the three-hour observation.

Compensation of Pilot and Comparison Group Centers

1. **Payment Amount:** All former pilot and comparison group centers are being reimbursed for completion of 2 written director surveys (approximately 185 centers paid \$100 per survey, totaling about \$37,000). The subgroup of pilot and comparison centers participating in two telephone interviews are each being reimbursed an additional amount (60 centers paid \$50 per interview, totaling \$6,000). The subgroup of pilot and comparison centers participating in the classroom observations and teacher questionnaires are being reimbursed an additional amount (50 centers paid \$100 per site, totaling \$5,000).
2. **Director Surveys Payment Process:** In the packet of materials with each of the 2 director surveys, centers receive the DSHS form (A-19) to complete in order to receive reimbursement. Centers are instructed to return the completed A-19 with the completed survey. Upon receipt of completed surveys, the WSU evaluation research assistant verifies completeness of the A-19 forms. She submits them weekly to DSHS, accompanied by a memo listing submitted A-19 centers alphabetically by name. DSHS processes these A-19 forms and mails checks to the appropriate centers.
3. **Director Interviews Payment Process:** Upon completion of the telephone interview, the WSU research assistant mails each center the DSHS form (A-19) to complete in order to receive reimbursement. Centers are instructed to return the completed A-19 to WSU. The WSU evaluation research assistant verifies completeness of the A-19 forms. She submits them weekly to DSHS, accompanied by a memo listing submitted A-19 centers alphabetically by name. DSHS processes these A-19 forms and mails checks to the appropriate centers.
4. **Classroom Observations and Teacher Questionnaires Payment Process:** Upon completion of the observations and teacher questionnaires, observers complete, with center directors, the DSHS form (A-19) for reimbursement. The WSU research assistant verifies completeness of the A-19 form. She submits them weekly to DSHS, accompanied by a memo listing submitted A-19 centers alphabetically by name. DSHS processes these A-19 forms and mails checks to the appropriate centers.

Data Collection and Measures

Three types of data are being utilized in the post CWL evaluation and research study.

1. **Mail surveys completed by directors** were collected in October 2003 and will be again in May 2004. Both pilot and comparison center directors are asked to provide similar information in the same format as the first 7 surveys they completed during the period of the pilot project. These surveys contain information about the employees' status (still employed, left, and if left, why) educational attainment and pursuit, position, wages, and demographics. Data will be sought for all continuing and new employees who meet the eligibility criteria originally set in the pilot project. Directors will also supply center demographics (licensed capacity, accreditation status, center auspices). The data collected will allow for the comparison of these factors over a four year period between the two groups as well as changes within both groups.

2. **Telephone interviews completed by a sample of directors** will be conducted two times (September, 2003 and June, 2004). The interviews will provide detailed information regarding center variables including: intention to close/stay in business; how centers have dealt with the elimination of wage enhancement funds from the state (finding other funding, changing their pay structure, etc.); centers' job titles, career, wage, and benefit structure; unexpected results of the discontinuation of the pilot project.
3. In the spring of 2004 we are repeating the **Observation and Teacher Questionnaire** process we utilized in the spring of 2003. A single site-visit to each center provides the means for collecting both the observational and survey data. We are observing in approximately 60 preschool-aged classrooms in 25 former pilot and 25 comparison centers. Teachers observed in these same classrooms complete questionnaires measuring attitude, beliefs and commitment to the profession after completion of the three-hour observations.