

Assembly Bill 579

Nevada Early Childhood Education (ECE) Program

**Building a Foundation for School Readiness and
Success in PreK-12 and Beyond**

**FY 2012-13
Evaluation Report
Executive Summary**
October 2013



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EXECUTIVE SUMMARY

The 2011 Nevada State Legislature passed Assembly Bill (AB) 579 that continued the funding of the Nevada Early Childhood Education (ECE) Program, and appropriated \$3,338,875 in each fiscal year, 2011-12 and 2012-13. The purpose of the legislation is to initiate or expand pre-kindergarten education programs.



Ten school districts and one community-based organization operated a state-funded early childhood education program in 2012-13. These ten school districts are Carson City, Churchill County, Clark County, Elko County, Humboldt County, Mineral County, Nye County, Pershing County, Washoe County, and White Pine County. The community-based organization is Great Basin College in Elko.

During 2012-13, the 11 Nevada ECE projects provided services to 1,364 families, including 1,393 children and 1,475 adults. Using a figure of 1,192 children as an average daily child count and the total grant amount of \$3,338,875, the average cost of the Nevada ECE program per child in 2012-13 was \$2,801. The 1,393 children served in Nevada ECE represent 1.7 percent of the estimated number of three-to four-year-old children in Nevada. Nationally, 16.1 percent of three-to four-year-old children are enrolled in state pre-kindergarten programs (National Institute for Early Education Research, 2012).

The Nevada Department of Education (NDE) conducted an annual and longitudinal evaluation of the Nevada ECE program in 2012-13, as directed by AB 579. NDE has been collecting this longitudinal data since 2003 documenting significant program success. The primary focus of the evaluation is to determine the effectiveness of the program on the developmental progress of children and parental involvement, both short-term and long-term effects.

Research on early childhood education has found that preschool education can improve the learning and development of young children. Studies have clearly shown that participation in quality preschool education programs have short-term effects on cognitive, social, emotional, and physical development. In fact, several analyses calculated that preschool education programs produce a gain of one-half (0.50) standard deviation on cognitive development, which is the equivalent of a move from the 30th to the 50th percentile on achievement tests. In other words, preschool education can significantly reduce the size of the school readiness gap between “at-risk” children, similar to many of the children served in the Nevada State PreK program, and average students nationally.

Key Facts About—

Nevada Early Childhood Education Program:

- ◆ Served 1.7% of the estimated 3-to 4-year-old population in Nevada, compared to other state-funded programs that serve 16% of the 3-to-4 year old population nationally.
- ◆ Had over 1,200 children and families waiting for space to enter the program.
- ◆ Achieved 7 of 10 national, research-based quality indicators of early childhood education programs as determined by National Institute for Early Childhood Research.
- ◆ Served a population which included 44 percent of children learning English as a second language.

An important finding is that teacher effectiveness is among the most important factors in program quality. Preschool teachers who hold a bachelor’s degree and have specialized training in early childhood education, such as the training required by Nevada statute, have a larger positive impact on children than programs administered by non-certified preschool teachers. In fact, requiring that early childhood teachers have a bachelor’s degree and specialized training are two of the seven out of ten national quality benchmarks for early childhood education met by Nevada (*National Institute for Early Education Research, 2012*).

“As a classroom volunteer in kindergarten during the 2011-2012 school year, I could clearly see which children had attended pre-school and which children had not. The effort the kindergarten teacher had to put into the children without experience seriously took away from the education of those students who had previously attended school.”

Testimonial from Parent at White Pine County School District ECE Program

Other studies have examined preschool education’s long-term effects, providing information on its effects into elementary school years and beyond. These studies found that preschool education has significant lasting effects on cognitive abilities, school progress (grade retention, special education placement and high school graduation), and social behavior. The longest recent follow-up of the New Jersey PreK program found test score gains in Language Arts, Math, and Science (*Barnett, Jung, Youn, & Frede; 2013*). The gains for children who participated in the PreK program for two years are equivalent to roughly 20 to 40 percent of the achievement gap between minority and white students.

The outcomes found in national longitudinal evaluations of preschool programs suggest that the positive long-term effects are primarily because preschool children had different experiences in elementary school due to the cognitive gains achieved in preschool. Increasing children’s cognitive abilities early helps them to transition into school, and reduces the likelihood that they will be tracked into low ability groups, placed in special education, or retained in grade.

Findings from Annual Evaluation: Short-Term Effects

The primary purpose of the annual evaluation is to investigate the performance of children and adults on six outcome indicators: three indicators on the developmental progress of children and three indicators on parental involvement. The results show that Nevada ECE children exceeded the expected performance levels for all six indicators, as shown in the table starting below.

Program Indicator	Actual	Status
Developmental Progress of Children		
<p><i>Indicator 1: Reading Readiness – Individual Student Gain</i></p> <p>With a minimum of four months of participation, 80% of ECE children from three years old until they enter kindergarten will show improvement in auditory comprehension and expressive communication as measured by a standard score increase on (a) the Peabody Picture Vocabulary Test (PPVT) and (b) the Expressive One-Word Picture Vocabulary Test (EOWPVT).</p>	<p>a. PPVT- 84.9%</p> <p>b. EOWPVT- 86.7%</p>	<p>a. Exceeded</p> <p>b. Exceeded</p>

<p><i>Indicator 2: Reading Readiness – Average Gain</i></p> <p>With a minimum of four months of participation, ECE children from birth until they enter kindergarten will make an average gain of 8 standard score points in auditory comprehension as measured by (a) the PPVT, and of 10 standard score points in expressive communication as measured by (b) the EOWPVT.</p>	<p>a. PPVT- 10.7 pts. b. EOWPVT- 11.6 pts.</p>	<p>a. Exceeded b. Exceeded</p>
<p><i>Indicator 3: English Language Acquisition – Average Gain</i></p> <p>With a minimum of four months of participation, ECE children from three to five years with limited English skills will make an average gain of 20 raw score points in English acquisition as measured by the Preschool Language Assessment Scale (Pre-LAS).</p>	<p>32.9 pts.</p>	<p>Exceeded</p>
<p>Parental Involvement</p>		
<p><i>Indicator 1: Individual Parenting Goals</i></p> <p>Ninety-two percent (92%) of participating adults enrolled in Early Childhood Education for at least four months will meet at least one goal related to parenting skills (e.g., developmental appropriateness, positive discipline, teaching and learning, care-giving environment) within the reporting year.</p>	<p>99.6%</p>	<p>Exceeded</p>
<p><i>Indicator 2: Time with Children</i></p> <p>Eighty percent (80%) of first-year Early Childhood Education parents will increase the amount of time they spend with their children weekly within a reporting year.</p>	<p>88.9%</p>	<p>Exceeded</p>
<p><i>Indicator 3: Reading with Children</i></p> <p>Eighty percent (80%) of first-year Early Childhood Education parents will increase the amount of time they spend reading with their children within a reporting year.</p>	<p>89.0%</p>	<p>Exceeded</p>

Findings from Longitudinal Evaluation: Long-Term Effects

The longitudinal evaluation followed the Cohort 6 group of children from Nevada ECE: four-year-olds who participated in Nevada ECE during 2008-09 and entered grade 3 in 2012-13. To assess the developmental progress of the children, the longitudinal evaluation collected data on two sets of measures for grade 3: (1) the PPVT and EOWPVT which were the same measures that the children were administered in preschool, and (2) the Nevada Criterion Reference Tests in reading and math which are administered annually to all students in grade 3 through 8. To assess the parent involvement, the longitudinal evaluation measured the parent-teacher conference attendance rate of the parents of the Cohort 6 children in comparison to the parent-teacher attendance rate at the schools that the Cohort 6 children attended.

Developmental Progress of Children. Cohort 6 students made large learning gains on the PPVT and the EOWPVT in 2008-09 while in preschool. Then, Cohort 6 students who were English language learners made additional gains to their level of performance that they had achieved in preschool through the end of grade 3 during 2012-13 in both receptive vocabulary and expressive vocabulary, above expectations.

Cohort 6 ECE students scored higher than a matched group of non-ECE students on the Nevada CRT reading and math, and the difference in reading and math scores between the two groups are significant, $p \leq 0.05$. In addition, a larger percent of ECE students were proficient in both reading and math than non-ECE students.

Parent Involvement. Nevada ECE parents attended parent/teacher conferences at a rate similar to other parents with children in grade 3 at the schools that the Cohort 6 children attended.

Conclusions

The results from the 2012-13 annual evaluation of the Nevada ECE program, as well as all previous annual evaluations, support the national research on the short-term effects of quality preschool education programs. The positive short-term results of the Nevada ECE program can, in part, be attributed to the fact that Nevada state law requires pre-Kindergarten teachers to be highly qualified, either by holding a special license or an endorsement in early childhood education.

Perhaps more importantly, the results from this year's longitudinal evaluation as well as previous years' longitudinal evaluations continue to provide solid evidence that the impact of Nevada ECE is, at the least, consistent with the national research on the long-term cognitive effects of quality preschool education programs.

Developmental Progress of Children

- **Short-Term Effects.** The Nevada ECE Program had short-term effects on the developmental progress of children. Nevada ECE children made large cognitive gains in preschool and were clearly better prepared to enter kindergarten academically than if they had not participated in Nevada ECE. This is an important accomplishment for the largely at-risk student population served in the program because it closed the entire achievement gap in school readiness with average students and will probably help these children avoid some early obstacles that most at-risk student populations face, thus providing them a better chance at early school success.

Key Findings—

Nevada Early Childhood Education Program:

- ◆ Children achieved significant learning gains in preschool, better preparing Nevada children for kindergarten.
- ◆ Met or exceeded all six statewide indicators on the developmental progress of children and parent involvement.
- ◆ Showed positive long-term effects on student academic skills on into elementary school, especially for English language learners.

This year's longitudinal evaluation, like previous years, continues to provide solid evidence that the impact of NV ECE is very positive and highly effective.

It is especially important for the large number of English language learners in the program who, in fact, may have even benefited the most academically from the Nevada ECE Program. These developmental gains during early learning help ease their transition into school, preparing them for future success.

- ***Long-Term Effects.*** After preschool, Nevada ECE students appear to have maintained the significant learning gains they achieved in preschool through grade 3 in elementary school, consistent with the national research results on long-term cognitive effects. In fact, English language learners made additional gains after preschool and have continued to chip away at the initial achievement gap that existed prior to their participation in the Nevada ECE program. The results suggest that participation in the Nevada ECE program may decrease the need for extra services in elementary school, such as participation in English as a Second Language services.

Parent Involvement

- ***Short-Term Effects.*** The parents of the children who participated in the Nevada ECE Program became more involved in the education of their children, including spending more quality time with them, especially in terms of reading with their children. As research has learned, increased parent involvement leads to increased student achievement due, in part, to the value of education that parents convey to their children by their own actions.
- ***Long-Term Effects.*** After preschool, the parents of the children continued to be very involved in their children's learning. In fact, the parents of the Nevada ECE children appear to be as involved in their children's learning as schoolmates' parents.

Recommendations

A long held belief is that a quality education can go a long way in reducing and perhaps even eliminating the achievement gap of low-income and minority students and some of the real life inequalities that result from that gap. Over the many years that the Nevada ECE Program has been evaluated, the program has achieved the status of a quality education program by showing it has both positive short-term and continued long-term effects on participating children. The results from the evaluation suggest that the Nevada State Legislature continue the funding of the Nevada ECE Program and consider increasing the funds to expand the program so that more than the current 1.7 percent of the estimated three and four year-old children in Nevada benefit from this effective program. For comparison, 16.1 percent of three- to four-year-old children nationally are enrolled in state pre-kindergarten programs.

Even though Nevada ECE projects have established sound early childhood education programs, all Nevada ECE projects can still improve the services they provide to children and adults. Below are five recommendations for improvement suggested by the evaluation results.

1. Continue to collect data on student participation in services and student and parent measures on the developmental progress and parent involvement, even in the absence of formal evaluation systems and personnel.
2. Continue to adopt, implement, and provide training to staff in high-quality, research-based

early childhood programs and practices. Train all new staff in Nevada Pre-Kindergarten Content Standards.

3. Examine the project's ratings on the Early Childhood Environmental Rating Scale (ECERS) and the Early Language and Literacy Classroom Observation Tool (ELLCO), and develop program improvement plans for at least two indicators that received lower ratings, i.e., a rating of less than "5" on the ECERS and a rating less than "4" on the ELLCO.
4. Examine the project's ratings on the six statewide outcome indicators and develop program improvement plans for any indicator that the project did not meet.
5. Monitor parents' attendance in the parenting program and develop policies to replace those families whose parents are unable to attend the required parenting program with other families.

The Nevada Department of Education can help projects meet their goals by developing concrete plans to implement five recommendations:

1. Develop a framework and provide guidance to Nevada ECE projects on how and in which areas to collaborate with other early childhood education programs, such as Title I, SB 504 ELL, and Head Start, to improve services to preschool children.
2. Require projects to collect data on student participation in services and student and parent measures on the developmental progress and parent involvement, even in the absence of formal evaluation systems and personnel. Provide guidance and tools to projects so that they can report the data to NDE at the end of the school year.
3. Continue to work with individual projects to improve services in the early childhood education indicators assessed in the ECERS and ELLCO by having projects develop improvement plans for at least two indicators in which projects were rated low, i.e., a rating of less than "5" on the ECERS and a rating less than "4" on the ELLCO.
4. Ensure that all projects that did not meet any of the six outcome indicators develop improvement plans to address the indicator(s) and implement a system of monitoring and review to hold programs accountable for improvement.
5. Provide training to all projects on the indicators that received the lowest ratings in 2012-13, i.e., Personal Care Routines (*snack/meals, toileting/diapering, and safety practices*) from the ECERS and Language Environment (*children's vocabulary and phonological awareness*) from the ELLCO.