Assembly Bill 579

Nevada Early Childhood Education (ECE) Program

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

FY 2011-12 Evaluation Report

Executive Summary

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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 2011-12. 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 2011-12, the 11 Nevada ECE projects provided services to 1,267 families, including 1,288 children and 1,352 adults. Using a figure of 1,120 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 2011-12 was $2,981. The 1,288 program children represent 1.5 percent of the estimated 83,181 three- to four-year-old children in Nevada (2009 American Community Survey). Nationally, 16.1 percent of three- to four-year-old children are enrolled in state pre-kindergarten programs (National Institute for Early Education Research, 2010).

Key Facts About—

Nevada Early Childhood Education Program:

- Served 1.5% 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 1,100 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 50 percent of children learning English as a second language.

The Nevada Department of Education (NDE) conducted an annual and longitudinal evaluation of the Nevada ECE program in 2011-12, 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.

An important finding of the research is that teacher effectiveness is among the most important factors in the quality of the program. 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 education teachers have a bachelor's degree and specialized training/endorsement are two of the seven out of ten national quality benchmarks for early childhood education met by the State of Nevada.

> *The importance of this (program) cannot be over-stressed and has improved the relationship with our children. In short, the program is fantastic. If the program was to be eliminated, it would truly be an injustice to the children in our community."*
>
> Testimonial from Parent at Washoe 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. In a recent study of New Mexico's State PreK program, similar to Nevada's State PreK program, the study estimated that for every dollar New Mexico spent on preschool, five dollars is saved in later social costs to the state (Hustedt, Barnett, Jung, & Goetze, 2010).

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 on the next page.

Program Indicator	Actual	Status
Developmental Progress of Children		
Indicator 1: Reading Readiness – Individual Student Gain 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).	a. PPVT- 82.0% b. EOWPVT- 88.6%	a. Exceeded b. Exceeded

Indicator 2: Reading Readiness – Average Gain 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.	a. PPVT- 10.8 pts b. EOWPVT- 12.0 pts	a. Exceeded b. Exceeded
Indicator 3: English Language Acquisition – Average Gain 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).	33.3 pts.	Exceeded
Parental Involvement		
Indicator 1: Individual Parenting Goals 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.	97.3%	Exceeded
Indicator 2: Time with Children 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.	88.6%	Exceeded
Indicator 3: Reading with Children 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.	89.7%	Exceeded

Findings from Longitudinal Evaluation: Long-Term Effects

The longitudinal evaluation followed three cohorts of Nevada ECE children:

- Cohort 1— four-year-olds who participated in Nevada ECE during 2003-04 and entered grade 7 in 2011-12.
- Cohort 3— four-year-olds who participated in Nevada ECE during 2005-06 and entered grade 5 in 2011-12.
- Cohort 7— four-year-olds who participated in Nevada ECE during 2009-10 and entered grade 1 in 2011-12.

The results indicate that both Cohort 1 and Cohort 3 ECE students scored as high as the matched comparison groups of non-ECE students on the grade 5 and grade 7 Nevada CRT reading and math tests, and an equivalent percentage of students were proficient.

The evaluation used a stronger research design with a sample of Cohort 7 students, providing more conclusive evidence of program effects. While in preschool, Cohort 7 ECE students made large gains on the PPVT (receptive vocabulary) and EOWPVT (expressive communication), and then maintained the gains they achieved through the end of grade 1 in receptive vocabulary and expressive vocabulary. In other words, the Cohort 7 students almost eliminated the initial achievement gap that existed prior to their participation in the Nevada ECE program, and continued to maintain those large grades through the end of grade 1.

The following table summarizes the related results, including data collected, measures used, and outcomes achieved.

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.

Cohort 1 & 3	Measure	Outcomes
Developmental Progress of Children		
Student Learning	Nevada CRT Reading and Math	Cohort 1 and 3 students scored as high as a matched comparison group of non-ECE students in reading and math, and an equivalent percent of Cohort 1 and 3 students were proficient in reading and math.
Cohort 7	**Measure**	**Outcomes**
Developmental Progress of Children		
Student Learning	PPVT and EOWPVT	Cohort 7 students made large gains on the PPVT and the EOWPVT while in preschool, and then continued to maintain those large grades through the end of grade 1.
Parental Involvement		
Parent Involvement	Parent/Teacher Conference Attendance	Nevada ECE parents attended parent/teacher conferences at a rate at least similar to and perhaps greater than other parents at the same grade levels at the schools in grade 1.

Conclusions

The results from the 2011-12 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. As previously mentioned, teacher effectiveness is among the most important factors

in determining program impact. Preschool teachers who hold a bachelor's degree and have specialized training in early childhood education, such as those required by Nevada statute, have a larger positive impact on children than programs with non-certified preschool teachers.

> 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.

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 achievement for the largely at-risk student population served in the program because it closed some of the gap in school readiness with average students and avoided some early obstacles that most at-risk student populations face, thus providing them a better chance at early school success.

  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, at the very least, to have maintained the significant learning gains they achieved in preschool through elementary school, consistent with the national research results on long-term cognitive effects. 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 are at least as involved, if not more involved, in their children's learning as schoolmates' parents.

Recommendations

The results from the 2011-12 annual and longitudinal evaluations of the Nevada ECE program, as well as all previous annual and longitudinal evaluations, continue to demonstrate the success of the Nevada ECE program. Children are better prepared to enter kindergarten academically and clearly have a better chance at early school success. In other words, the bottom line is that Pre-K does produce substantial short-term and long-term gains, particularly when programs are properly designed. The Nevada ECE program is properly designed and many more students would benefit from participation in the program.

Given these demonstrated successes, the evaluation recommends continued funding of the Nevada ECE program and expansion, if funds are available.