VISION STATEMENT

The College of Education will achieve prominence locally, nationally, and internationally as a leading source of significant knowledge and innovative models to inform and affect policy, practice, and research.

DID YOU KNOW?

The College of Education enrolls nearly 1/3 of all academic graduate students at University of Nevada, Las Vegas.

The College of Education has historically been one of the largest producers of Ph.D.s in the University, graduating roughly 1/5 of all academic doctorates.

The College of Education produces more newly licensed teachers than any other institution or agency in Nevada.

98.3% of students who graduate from the College of Education’s teacher preparation programs go to work in the Clark County School District.

College of Education graduates working in the Clark County School District’s highest needs schools are retained by these schools at a rate 2.5 times higher than the district average.

College of Education students completing practicum experiences provided 4,582 hours of unpaid professional services in Clark County during the 2013-14 academic year worth an estimated $8.9 million.
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The College of Education at the University of Nevada Las Vegas is in a particularly unique and promising position to affect and inform education locally, regionally, nationally, and internationally. The College produces more new educators for Nevada’s schools than any other provider - nearly as many as all other providers combined. Situated in the fifth largest school district in the U.S., the College is deeply and collaboratively engaged with the school district in research of and in urban settings. As the largest college of education in the state, the College’s faculty comprises the largest single, non-partisan source of information, models, and new ideas associated with educational practice, research, and policy. This publication is a concrete product that demonstrates these attributes.

The seven papers that constitute this initial volume have been prepared with the intent of informing thoughtful policy development around particularly acute educational issues in Nevada. The faculty who prepared these papers sought to provide policy makers with trustworthy and meaningful summaries on which policy decisions can be made, and legislation can follow that allows for a sustainable, high quality education in Nevada.

You are invited to contact the researchers directly should you seek further information or detail about the issue they have addressed. Understanding the unique needs of education in Nevada is top priority.

We hope that those who develop educational policy, as well as those responsible for implementing educational policy, will find these papers and the availability of the researchers who prepared them to be of benefit. Further, we are committed to producing similar collections of policy papers to inform each subsequent legislative session in Nevada.

Kim K. Metcalf, Ph.D.
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Autism Spectrum Disorders in Nevada

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Executive Summary

Autism Spectrum Disorder (ASD) is a developmental disability affecting 1 in 68 children in the United States. Individuals with ASD struggle with communication, behavioral, and social skills. The demands of addressing ASD present a significant challenge to Nevada; however, the challenges associated with inaction are a staggering cost to individuals, families, and society. Research has identified effective strategies for treating ASD, thereby improving lives and reducing the level of supports required across the lifespan. Nevertheless, there are multiple barriers that prevent families from accessing appropriate levels of treatment for their children. Lack of access is the most critical issue facing families today. Without treatment, most individuals with ASD will require high levels of support throughout their lives at a high cost to families and society. This paper identifies the most significant challenges facing Nevada in addressing ASD and suggests best practice solutions gathered from research, policies implemented in other states, and professional communities that support ASD.

SCREENING AND ASSESSMENT

Key Issue: Nevada lacks standardized policies for assessment and diagnosis of ASD

Strategies to Consider:
1. Increase early surveillance
2. Increase formal screening at minimum for 18 and 24 mos.
3. Immediate diagnostic referral after formal screening failures
4. Encourage medical diagnostic referrals for late symptom presentation cases
5. Increase access to transdisciplinary team evaluations for complex cases
6. Require comprehensive assessment for accurate diagnosis
7. Improve wraparound support and service coordination

BEHAVIORAL INTERVENTIONS FOR ASD

Key Issues:
1. Insufficient early intervention therapy hours
2. Non-standardized behavior management requirements for Nevada Autism Endorsement

Strategies to Consider:
1. Share therapy hours among therapists and trained caregivers
2. Clearly define behavior management requirements for Nevada Autism Endorsement to include positive behavior intervention and supports for class and individual, as well as data collection for functional behavior assessment and basic behavior intervention planning

TRANSITION TO ADULTHOOD

Key Issues:
1. Identification of individuals who need information and support
2. School variability in comprehensive transition programming
3. Lack of parent transition education

Strategies to Consider:
1. Create a registry of individuals who have diagnoses of ASD
2a. Identify a list of vocational/life skill curricula to use across schools and specify the minimum number of off-site community/vocational instruction hours
2b. Create a data collection system for tracking the types of transition supports provided to students in school, number of life or vocational skills acquired during the period of transition, and outcomes in employment, postsecondary education, and independent living
3. Create a state-wide transition education website

WORKFORCE PREPARATION

Key Issues:
1. Insufficient behavioral workforce capacity
2. Non-standardized requirements for teacher training in strategies of intervention for Nevada Developmentally Delayed Endorsement
3. Lack of knowledge among general education teachers about ASD strategies and transition navigation
4. Lack of school support staff training in ASD
5. Job coaches and job developers understanding of vocational implications of ASD

Strategies to Consider:
1. Increase number of behavior therapy professionals
2. Create standardized requirements for strategies of intervention for the Nevada Developmentally Delayed Endorsement using Division of Early Childhood (2014) recommended practices
3. Train elementary and high school teachers on evidence-based instructional strategies for ASD and transition management
4. Train school support staff in evidence-based instructional strategies for ASD
5. Train job coaches and job developers in ASD characteristics
CURRENT BARRIERS TO BEST PRACTICES IN NEVADA

Key Issues:
1. Insurance and funding barriers for ASD services
2. Cost of ASD services is extremely high

Strategies to Consider:
1a. (In Progress); Medicaid Eligibility expansion for ASD services
1b. Amend legislation to modify treatment dollar caps and age limits; require private insurance to include ASD treatment coverage
2. Select the most cost effective approach

Introduction

Autism Spectrum Disorder (ASD) is a developmental disability that causes a range of social, communication, and behavioral challenges in children and adults. It is a neurological disorder that affects more males than females, and the prevalence is growing among all nationalities, races, and socioeconomic classes. As a spectrum disorder, no two individuals are affected in exactly the same way and it is a hidden disability; children and adults with ASD do not look any different from their typical peers. However, their social and communication skills, learning needs, and behavioral challenges are vastly different. Currently, the exact causes of ASD are unknown and there is no cure. The hope for families and individuals with ASD lies in early, accurate diagnosis, and rapid access to research-supported intervention and learning strategies.

In 2014, the Centers for Disease Control and Prevention (CDC) released new numbers indicating that 1 in 68 children in the U.S. under 8 years of age has an autism spectrum disorder (Baio, 2014). In 2000, the rate was 1 in 150. Other studies, including a parent-reported number based on school records, reveal a prevalence of 1 in 50 children (Blumberg, et al., 2013), and a South Korea study using direct assessment and observation found 1 in 38 children (Kim, et al., 2011), of which two-thirds would have been missed using the CDC methods. No matter which
numbers are considered, the number of children diagnosed with ASD is increasing and their needs should be addressed.

In Nevada, more than 6,217 children between 3 and 22 years are identified as having ASD by the Nevada Department of Education (NDE). However, these numbers only include children who are receiving services through Nevada Early Intervention Service (NEIS) or NDE. They also do not include adults over 22, as there are not adequate data systems to monitor those numbers.

Assistance for Nevadans has been arriving piece by piece. On January 1, 2011, Nevada became the eleventh state to pass a specific autism mandate (N.R.S. §689A.0435). Recognizing that families still faced a tremendous financial burden despite insurance reform, in 2011 legislators unanimously passed Assembly Bill 316 and 345 to fund the Autism Treatment Assistance Program (ATAP) within the state’s Aging and Disability Services Division. ATAP provides financial assistance to families toward evidence-based treatment for children with ASD. As of December 2014, ATAP was serving 428 children, but its wait list is over 400. On average, children wait 560 days. Despite progress, there are still significant barriers facing families.

Screening and Assessment

Early intervention and treatment of ASD leads to better prognosis for children (Dawson & Osterling, 1997; Smith, 1999), and the potential benefits of treatment are affected by the age at which a child is diagnosed (Cox, Klein & Charman, 1999). According to the CDC (CDC, 2012), children can be reliably diagnosed as early as 24 months; however, many are not diagnosed until age 4, when pediatricians or parents typically become concerned about delays in child development. These concerns then lead to referrals for assessment and treatment. To facilitate the process of ASD screening, assessment, and diagnosis, a number of states have policies in
place that are informed by best practices based on research and clinical experience (e.g., California Department of Developmental Services, 2002; Virginia Autism Council, 2010).

To date, Nevada has not implemented standardized policies regarding best practices for ASD assessment and diagnosis, and the recommendations made by professional organizations are often not implemented (Belcher, 1996). The lack of standardized policies results in 1) pediatricians not uniformly screening for early signs of ASD; 2) formal screening, such as an M-CHAT, not being used by all pediatricians, which can possibly delay detection and referrals; 3) formal screenings not always resulting in referrals; 4) late presentation of symptoms resulting only in educational eligibility, which is not a medical diagnosis that can lead to insurance coverage for services provided outside of school; 5) an insufficient number of transdisciplinary teams for ASD assessment; 6) medical diagnoses not always using multiple forms of screening to rule out other diagnoses; and, finally, 7) families unsure of and overwhelmed by the next steps in services and treatment.

At well-child checkups, best practices indicate that medical professionals should note deviations from typical development and elicit parental concerns (American Academy of Pediatrics [AAP], 2001), followed by closely monitoring the developmental progress of any child demonstrating atypical development (e.g., not using single words by 16 months, lack of gesture or nonverbal communication by 12 months, or loss of previously acquired skills) (Filipek et al., 1999; Filipek et al., 2000). One potential tool for identifying children at risk for developmental language delay or ASD prior to 12 months of age is the use of sudden accelerated head circumference growth and lack of head tilt reflex as outlined by Samango-Sprouse and colleagues (2014).
All children who are identified as being at-risk should have a formal screening completed at the 12-month (e.g., the Brief Infant-Toddler Social and Emotional Assessment [BITSEA]) or 16-month well-child visit (e.g., Modified Checklist for Autism in Toddlers, Revised [MCHAT-R]; Volkmar et al., 2014). The MCHAT-R is an example of an inexpensive, brief, easily administered and scored measure. All other children should be screened at 18-month and 24-month well-child visits as recommended by the AAP (2007). Any child who is identified as at-risk through formal screening should be referred to a specialist or specialized transdisciplinary team for a diagnostic evaluation (Volkmar et al., 2014; Stewart, Vigil, Ryst, & Yang, 2014).

For some children, symptoms of ASD do not present until later in childhood when social demands increase. These children may be identified by parents or educational personnel as struggling with peer interactions, social skills deficits, and/or exhibiting intense, restricted interests (American Academy of Child and Adolescent Psychiatry, 1999). Once a child has been identified by any of the aforementioned sources as being at-risk for a diagnosis of ASD, a diagnostic assessment should be conducted.

While practical logistics may limit assessment to one highly trained professional, children with multiple conditions should have access to transdisciplinary teams. Research indicates improved accuracy rate in diagnosing ASD when a team approach is utilized (Stewart et al., 2014). Teams are comprised of diverse professionals, such as pediatricians, psychologists, neurologists, psychiatrists, speech-language pathologists, occupational therapists, social workers, geneticists, etc. (Klin, Sparrow, Marans et al., 2000; Robertson, Stafford, Benedicto, & Hocking, 2013; Stewart et al., 2014). It is extremely important that any professionals conducting diagnostic assessment have received extensive specialized training in typical development and assessment of ASD.
A comprehensive evaluation should assess various domains in order to rule-out and/or diagnose other potential disorders (e.g., language disorders, intellectual disability, ADHD, genetic syndromes, sensory impairments, OCD, anxiety disorders, etc.; Volkmar et al., 2014). Domains assessed should include medical, developmental, and psychosocial (Robertson et al., 2013; Volkmar et al., 2014), using parental report, child observation, and assessment.

After diagnosis, feedback should be family-centered and easily understood by parents (Robertson et al., 2013). In addition to using culturally sensitive assessment processes and measures, feedback sessions should also be ethnically and socio-economically sensitive (CDDS, 2002). Post-assessment feedback should provide families with specific, prioritized recommendations, information about services and resources available to them, and should connect families to resources for wraparound services.

Wraparound support is a system of care that provides coordinated mental and behavioral health services. Missouri, Pennsylvania, and New Jersey have created state offices for these purposes to provide a centralized point of contact to help families navigate and easily transition among agencies as children’s needs change through the lifespan. State offices can provide leadership in program development, promote collaboration to leverage additional resources more effectively, and provide technical assistance to other state agencies and programs.

**Behavioral Interventions for ASD**

Children with ASD under age 22 in Nevada are eligible for early intervention services before 3 years of age and school-based intervention until age 22. Challenges are unique to each modality of service, with workforce preparation common between the two.
Early Intensive Behavioral Intervention

Early intensive behavioral intervention (EIBI) typically includes 25-40 hours of one-to-one instruction with a behavior therapist using methods of Applied Behavior Analysis as well as evidence-based strategies identified in a 2014 report by the National Professional Development Center on Autism Spectrum Disorders (NPDC), such as fading, prompting, and discrete trial teaching. Children usually receive services from 1 to 5 years of age. EIBI was first studied and found to be highly effective in creating gains so large that 47% of children after treatment were included in a first grade general education classroom (Lovaas, 1987).

EIBI showed superior gains when compared to a similar number of treatment hours using ASD-specific interventions in a preschool setting or typical developmentally appropriate preschool practices (Howard et al., 2005; Eldevik et al., 2006). Reviews that look at many studies at once indicate that EIBI is effective in producing positive outcomes for children with ASD (e.g., Peters-Schaffer et al., 2011).

The NEIS diagnosed 127 children with ASD in fiscal year 2014 and currently provides a range of 2-5 hours per week of behavior therapy for children with ASD, less than one-fifth of the recommended intervention to produce best outcomes. Previous studies on EIBI observed the best outcomes with a relatively large number of therapy hours (25-40). This can obviously be costly when considering the number of therapist hours required, as well as availability of therapists and other supervising personnel. Use of applied behavior analytic teaching strategies among parents has been found to produce positive outcomes and is also considered an evidence-based practice by the NPDC (NPDC, 2014).

One alternative to reducing the number of hours while still producing positive gains is to train caregivers to implement behavioral protocol, such as in the Early Start Denver Model. This model uses comprehensive instructional approaches based in Applied Behavior Analysis and
also focuses on parent-child interactions as part of therapy for children ages 1-4 (Rogers, 2013). After two years of therapy (average 15 hours of therapist-implemented intervention and an average of 9 hours of parent intervention), the Early Start Denver Model has produced positive increases in IQ, language, and adaptive skills (Dawson et al., 2010) as well as positive neurological changes in response to faces (Dawson et al., 2012).

The number of therapy hours and the age of the child at the start of therapy have been found to correlate with greater positive change (Rogers et al., 2012). In-depth parent training and careful monitoring of their intervention with the child are also important to attaining gains, especially where direct therapist hours are less than the recommended 25 to 40 hours per week.

**School-Based Behavioral Interventions**

For children with ASD, one of the greatest barriers to accessing the general education curriculum are challenging behaviors (e.g., aggression, running out of the room, wandering, etc.) or interfering behaviors (e.g., repetitive movements or vocalizations). Without training, these problems may be inadvertently exacerbated or, at best, remain the same. Special education law (IDEIA, 2004) mandates that positive behavioral interventions and supports are used, as well as functional behavior assessment under certain conditions.

Nevada teacher licensure requirements for an autism endorsement include one class in behavior management. However, teacher training in behavior management is not standardized across institutions; therefore, it is difficult to gauge whether teachers acquire sufficient skills to effectively promote positive behaviors. Often, teachers rely on mentors to help them solve behavior problems, as opposed to having the tools to prevent, assess, and generate solutions. Ideally, an autism endorsement should include curriculum and practice implementing class-wide positive behavior supports, individual positive behavior supports, data collection for functional
behavior assessment, and basic behavior intervention planning such as a competing behavior pathways model (O’Neill et al., 1997). Autism teachers should not be expected to function as behavior analysts; however, teachers need a basic understanding of these tools in order to prevent and more quickly address behavior problems and have vital information prepared for a professional in this area.

**Transition to Adulthood**

Transitioning into the workforce or secondary education can be a challenging process for people with ASD. Some individuals who need help with transition or vocational training may not be identified, or there may be great variability in transition programming among schools, or parents may lack education about how to successfully navigate transition. Currently in Nevada there is no method by which to obtain a count of the total number of adults with ASD, often due to confidentiality protections within agencies who serve them. Although agencies have the ability to communicate with each other using appropriate HIPAA compliance measures, some people with ASD or their families may not actively seek information or services that could improve the quality of adult life.

A registry of individuals who have either an educational eligibility for ASD or medical diagnosis could provide the platform to disperse information about transition and workforce preparation services, which in turn could alleviate some of the high rates of unemployment after high school graduation. Rhode Island and New Hampshire are the only states that actively register and track the number of residents with ASD. New Hampshire issued a legislative mandate that all newly diagnosed individuals are entered into the registry by the professionals qualified to make a diagnosis. New Hampshire records the age of diagnosis, the geographic region, and type of health care professional who made the diagnosis.
Only 53.4% of individuals ages 21-25 who received special education services under an ASD eligibility category were found to either currently hold a job or had a job after graduating high school (Roux et al., 2013), significantly lower than other special education categories. Eighty percent of young adults who had an ASD educational eligibility continued to live at home (Wagner et al., 2005). School districts in Nevada have a wide range of teacher abilities, funding, and time that are dedicated to teaching life skills and transition. Schools are also highly variable in the amount and type of off-campus transition or daily life skill instruction they can provide due to various reasons.

This could be improved with curricula addressing the unique challenges of autism and creation of a list of age-appropriate daily living skills and vocational skills for teachers’ easy reference/use. For example, The Employability Skills for Career Readiness Standards (NDE, 2012) is an existing guide that teachers can use. Adopting a minimum number of community and vocational instruction hours will also help ensure that students are receiving appropriate education to reasonably prepare them for success when they leave the school setting.

Data collection is needed on types of transition supports provided to students in school, number of life or vocational skills acquired during the period of transition, and outcomes in employment, postsecondary education, and independent living. Data can be aggregated for policymakers or mined to look at county or individual school performance. The Nevada Department of Employment, Training and Rehabilitation gathers similar types of data for vocational rehabilitation but not for ASD transition.

Many parents report feeling overwhelmed and undereducated about the various options available to help their child or are confused about what steps are next. To this end, a state-wide website devoted to transition education could be helpful, with links to various agencies and
resources about transition as well as broad overviews of information for parents to consider during transition planning. Transition tools for parents might include: 1) a resource guide organized by type of service and geographic location to help families connect with service providers; 2) easy to understand handouts on common aspects of transition, such as timelines on when to start components of transition (e.g., Autism Speaks Checklist for Transition: NV handout); 3) an editable transition planning worksheet to help parents outline their child’s goals; 4) application instructions for Social Security income, Medicaid, vocational rehabilitation services, etc.; 5) information about special needs’ trust funds; 6) information about helping their child choose a vocation or career field; and 6) links to other funding sources.

**Current Barriers to Best Practices in Nevada**

There are two significant barriers to best practices in Nevada. The first is workforce capacity and the second is the high cost of treatment services. Qualified professionals and paraprofessionals include but are not limited to: behavior analysts, interventionists, teachers, classroom aides, and job coaches/developers.

The large demand for behavioral services with populations older than 3 years, coupled with the insufficient number of behavior interventionists in Nevada, significantly delays onset of treatment or limits the number of treatment hours a child may receive. The waitlist to receive services at ATAP is 400+ children, and the program typically receives 25 referrals per month. In one study, parents reported that one of the biggest obstacles to receiving behavior intervention is recruiting and keeping behavior interventionists on their child’s team (Johnson & Hastings, 2002).

Behavioral intervention planning and services require, at minimum, a board certified behavior analyst to supervise programming and individual behavior therapists who deliver the
therapy on a daily basis. The bar graphs below indicate the distribution of licensed behavior analysts (supervisors) and certified autism behavior interventionists (direct therapy providers) in Nevada. The number of therapy hours that each child requires will vary but can range from 10 to 40 hours per week. One implication of a 40-hour therapy week is that the child has up to 5 therapists who provide services each week.

Currently, there are only 98 therapists in Nevada who are certified autism behavior interventionists. Assuming each certified therapist works 40 hours per week, this only provides 3,920 insurance-billable therapy hours. For example, if a child receives 15 hours of treatment per week on average, current workforce could only provide therapy to 261 children in the entire state. This is a large discrepancy, as the total number of children with ASD who would typically receive these services in the 3-5 age range is 856 (U.S. Department of Education, 2012a). The Nevada estimate also does not take geographic distribution into account. As seen in the bar graphs, most of the therapists are located in the Las Vegas or Reno areas, leaving large service gaps in rural Nevada areas in addition to the overall shortage of therapists to deliver services that can be funded by insurance or other agencies (e.g., ATAP).

To increase service capacity, Nevada would need to produce more behavior analysts at the master’s and bachelor’s level. Support will be needed to expand university programs in
Applied Behavior Analysis to prepare these professionals. In addition, Nevada would need to produce more paraprofessional interventionists to deliver the services. Funding allocations should also consider supervision hours for each level of professional certification. For example, 1500 hours of supervision is required for a master’s level professional.

A secondary issue within workforce capacity relates to the depth of training that professionals in education and employment preparation receive on ASD and effective interventions. For example, Nevada teacher licensure provides an endorsement in Early Childhood Developmentally Delayed, which requires classes on intervention for language and instruction for children with disabilities (NDE, 2012); however, evidence-based practices are not mentioned as the type of instruction that should be provided. Furthermore, there is lack of any mention for training to implement positive behavior intervention or to promote positive behavior for all students in the classroom.

The Council for Exceptional Children’s Division of Early Childhood (DEC, 2014) recently released guidelines for recommended practices in early childhood special education. Requirements for the Nevada endorsement for Early Childhood Developmentally Delayed could be strengthened if they were aligned with the new DEC recommendations. More broadly, teacher preparation curricula should include training on choosing adaptive skills that are meaningful for the child; data collection and data-based decision making; embedding instruction across multiple routines, environments, and persons; using systematic instructional strategies with fidelity; using clear feedback and consequences; using peer mediated instruction, and supporting positive behavior and addressing challenging behavior through functional assessment and prevention strategies to promote positive naturalistic teaching (DEC, 2014). These recommendations are
also in alignment with evidence-based practice for students with autism (NPDC, 2014) and will also benefit all children with developmental delays or other types of disabilities.

According to data from the U.S. Department of Education 2012 Individuals with Disabilities Education Act, there were 763 students in Nevada (ages 6-21) who were included in the general education classroom at least 40% of the day and 1596 students included for 80% or more of the day. Although the percentage of students with ASD who are being included for most of the day is promising (41%), transition plans need to be supported by general education teachers on a day-to-day basis, as they play an ever increasing role in this process.

General education teachers will make the most of their expertise if they are delivering content using the most effective methods of instruction. Ideally, general education teachers should receive specialized training on characteristics of ASD and evidence-based instructional practices (NPDC, 2014). General education teachers could also benefit from training in transition management (Ankeny, Wilkens, & Spain, 2009). For example, people with ASD may also experience depression or anxiety and, therefore, require assistance to connect with outside services upon exiting the school system (Hendricks & Wehman, 2009). Training teachers to be aware of these issues can help prevent gaps in services.

Classroom aides and support staff provide a great deal of instructional support, especially in self-contained classrooms for ASD students, and often implement protocols similar to a behavior interventionist; however, there are no standard criteria for training and the level of training varies considerably. Typically, teachers are training support staff “on the fly.” Thus, classroom aides would be better supported with training in evidence-based teaching methods like prompting, fading, discrete trial, incidental teaching, visual supports, functional communication, etc. (see NPDC, 2014 for all strategies). Although aides do not need to have intense conceptual
understanding of these strategies, they could benefit from instruction and feedback aside from incidental training from the teacher during class time. For the greatest chances of success, staff may need up to 40 hours of training.

Outside of the school system, job coaches and developers serve individuals with a wide range of disabilities by teaching them job skills and creating/securing employment. Upon intake of a client with ASD, job coaches or developers may not understand the common cognitive, sensory processing, and behavioral challenges that people with ASD commonly face. As a result, job coaches or developers with the best of intentions may inadvertently steer a person with ASD into a career path in which they may not be equipped to be successful.

Job coaches and developers will be more successful with their training, placement, and job creation for people with ASD if they have training in some of the cognitive, social, and behavior challenges of ASD. Training in common cognitive challenges of ASD should include difficulties with memory, synthesizing information, perspective taking, social skills, sensory sensitivities, and planning/organization (Bennetto, Pennington, & Rogers, 1996; Frith & Happe 1994; Baron-Cohen, Leslie, & Frith, 1985; American Psychiatric Association, 2013; Pennington & Ozonoff, 1996). Such training will help the job coach in several ways: 1) the job coach or developer may be more likely to match the person with ASD to a job that suits their strengths and weaknesses; 2) the job coach may more easily identify the job skill discrepancies between a person and environment; and consequently train the individual to a level where they can succeed; and 3) the job developer may be able alleviate a person’s challenges altogether simply by thinking creatively and working with employers to create new positions.
Costs of Treatment and Insurance Coverage for Services

Funding for ASD services has come from one of three sources: state funding for federal programs (e.g., Individuals with Disabilities Education Act, Part B and Part C) and state programs (i.e., Autism Treatment Assistance Program), private health insurance, or private pay by families.

Insurance Coverage for ASD in Nevada

In May 2009, Nevada became the eleventh state to pass insurance reform legislation (NRS 689A.0435) to include a component of coverage related to ASD services (Autism Speaks, 2014). The most current form of this bill requires state-governed insurance agencies to provide coverage for screening, diagnosis, and medically necessary habilitative treatment. This includes Applied Behavior Analysis (ABA) behavior therapy that is prescribed by a psychologist or psychiatrist and overseen by a behavior analyst who is licensed by the Nevada Board of Psychological Examiners.

Specifically, ABA therapy is covered at a maximum of $36,000 per year for individuals up to age 22 who remain enrolled in high school. However, Nevada law only requires certain health care plans and insurance policies (not all) to provide coverage for screening, treatment, or diagnosis for ASD, and individuals may continue to require behavior therapy after age 22, especially those who are more severely affected by ASD. Research indicates that 30-40 hours of behavior therapy a week produces the best results for individuals with ASD, but the cost for this number of hours is far above the $36,000 insurance cap:

- 35 hours a week at 49 weeks per year is estimated to cost approximately $87,000.
- This leaves the family to pay approximately $51,000 out of pocket.
- If families cannot supplement payment, $36,000 covers approximately 14 hours of therapy a week, half the recommended number of treatment hours.
In July 2014, the Centers for Medicare & Medicaid Services (CMS) announced that ASD treatment must be addressed under Early and Periodic Screening, Diagnostic and Treatment services, which cover Medicaid-eligible children up to the age of 21. ASD services include applied behavior analysis, speech and language therapy, occupational therapy, and physical therapies. Approximately half of the children receiving ATAP services in Nevada are eligible for Medicaid, so moving those children to Medicaid for ASD services would allow additional youth to be served by ATAP.

By removing financial barriers, greater numbers of individuals with ASD will have access to appropriate levels of treatment, thereby improving lifelong outcomes and reducing lifetime costs to families and society. Several strategies could be pursued: 1) amend legislation to require private insurance companies to offer ASD treatment coverage in the same manner as state insurance agencies; 2) align current Nevada legislation and new Medicaid regulations with the federal Affordable Care Act (2010) to allow coverage up to age 26; 3) remove the $36,000 annual cap to align state laws with the Affordable Care Act in order to allow families to access expanded treatment hours; and 4) ensure the CMS establishes a reasonably competitive fee schedule for providers of Applied Behavior Analysis to support a sufficient number of qualified, licensed providers to meet the needs of Nevadans.

Cost of Treatment

Current estimates of the lifetime cost of treatment for one individual with ASD ranges from $3.2 million to $4 million (Jacobson, Mulick & Green, 1998; Harvard School of Public Health, 2006). Other research studies estimate the annual societal costs at $126 billion, triple the costs in 2006 (Knapp, Mandell, Buescher, & Cidav, 2012). Ganz (2006) has divided costs into direct costs (e.g. behavioral therapies, medication, educational camps, child care) and indirect
costs (i.e. lost productivity for families, the difference in potential income between a person with ASD and without). According to Ganz, per-child direct costs are estimated to be between $67,000 and $72,000 annually, and annual indirect costs can range from $39,000 to $130,000 per child. It should be noted that additional research is needed to capture more data from the wide range of services utilized by people with ASD. According to the research conducted by Mandell et al., lifetime costs for treatment for a person with autism and no intellectual disability can be estimated at more than $1.4 million, increasing to $2.3 million for a person with autism and an intellectual disability.

Research studies have shown that the majority of children with ASD who receive appropriate intervention and treatment show marked improvement. With appropriate treatment, 47% recover an almost typical level of functioning, with 40% making significant improvement (Hockenyos, 2009). The challenge, however, is that only an estimated 1 in 300 students currently receives the appropriate level of treatment. Hockenyos reports the following possible net benefits as the incidence of treatment at the appropriate level increases.

<table>
<thead>
<tr>
<th>Incidence of Treated Autism</th>
<th>1/100</th>
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<td>Net Benefits (2008 Billions)</td>
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Early intervention services for children with ASD (services that occur before the child reaches kindergarten age) produce the greatest effect. The total cost-to-benefit savings for a child who receives $50,000 in early intervention services ranges from $214,801 to $246,551 (with inflation) by the time the child reaches age 22. This savings increases to a range of $1,635,061 to $2,765,535 by the time the individual is 55 (Jacobson et al., 1998).
Conclusion

ASD presents a pressing and growing challenge for Nevada. While there are many issues and interests to be taken into account, a targeted and pragmatic approach to addressing the needs of individuals with ASD will produce the greatest benefit. This approach should focus on five initiatives: 1) ensuring accurate screening and assessment of young children; 2) providing immediate access to appropriately intensive, evidence-based intervention services; 3) increasing the number of qualified professionals serving Nevadans with ASD; 4) reducing financial barriers to treatment by maximizing access to Medicaid and private insurance funding to offset state program funding; and, 5) creating a state-level office to coordinate and streamline access to services across the life span.
References


Educational Funding Practices in Nevada and the U.S.

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Executive Summary

Educational funding is an important topic that affects everyone whether they are a student, parent, or a citizen. Quality of education is linked to economic growth, increases in income levels, increased quality of life, good citizenship, an educated workforce, and strengthening the business climate.

At the K-12 level, varying levels of funding are needed to provide equal educational opportunities to children with different needs. The most critical variable that should affect funding levels is student poverty, because this correlates with other at-risk factors. Nevada uses a foundation program, where the state sets a guaranteed amount of money per pupil, but it does not provide weighted funding for individual student characteristics, whereas the majority of states do provide more funding per pupil to English language learners (ELL), low-income, special education, and rural students. However, the technical advisory committee of the Nevada Legislature Task Force on K-12 Public Education has recommended providing categorical funding to ELL and low-income/at-risk students until a transition to weighted funding occurs in Nevada. Nevada’s current K-12 funding formula has been deemed inequitable and unfair by the Is School Funding Fair? Report. All fairness measures used within the report are entirely within the control of state policymakers.

Recently, higher education funding formulas have not been fully funded in many states. Proper funding is essential to ensure well-functioning institutions. Most states are moving toward incorporating performance-based funding. Currently, Nevada’s higher education system ranks 49th in rate of production of degrees and certificates. The new performance-based funding approved in 2013 is based on graduation numbers, greater alignment with the state’s focus on economic development and diversification, and an emphasis on success with at-risk students. The new model shifts the focus from enrollments to course completions and graduating students.

This report describes what is known about educational funding, other states’ funding practices, Nevada’s funding practices, and future directions for educational funding.

Introduction

As citizens of the U.S., we want our nation to have a world-class educational system that enables our children to compete with the best that other nations have to offer.

To accomplish this, school funding plays an important role. Educational funding, however, is usually neither adequate nor equitable (Sims, 2004). Adequate funding
ensures that all students are able to meet intended objectives and goals of education. Equitable funding ensures a sufficient level of funding distributed within states that accounts for additional needs based on student characteristics. There are different costs for educating groups of students, and this should be taken into account for any funding formula. This has been made more difficult in the past several years due to the recession, as most states are now providing less per-pupil funding for K-12 education than they did in 2008 (Leachman & Mai, 2014). In the U.S. there are improvements to be made, because—based on standardized test scores—we have the greatest inequities between our highest and lowest scoring students of any nation (Mathis, 2003).

This paper describes K-12 and higher education educational funding practices in Nevada and the U.S., as well as the impacts and future directions of educational funding. Special attention is given to funding for individual characteristics of students, including low-income/at-risk, English language learners, special education, and rural students, to ensure that educational funding is equitable and that all students have opportunities to learn. Every child is entitled to an education appropriate to his or her needs.

**K-12 Educational Funding**

Educational funding practices in the U.S. vary by state but should be based on several principles. In general, education costs can be affected by three categories of factors: (1) geographic differences in the price of resources, (2) district size, and (3) the special needs of some students (Chambers, Verstegen, Jordan, & Baker, 2012). Tied into number 3 is the idea that varying levels of funding are required to provide equal educational opportunities to children with different needs. Also, a state must have a sufficient base funding that is adequate to provide for the educational needs of all
students. The most critical variable that should affect funding levels is student poverty. Student and school poverty correlates with gaps in educational achievement, school district racial composition, and English language proficiency. State funding programs should provide more funding to high-poverty versus low-poverty districts, because concentrated poverty is a significant barrier to educational progress (Baker, Sciarra, & Farrie, 2014). Students in poverty have stress, emotional and social challenges, and health needs that require more resources.

Educational funding comes from three main sources: property taxes, sales taxes, and state income taxes. Reliance on property taxes remains heavy among the states, which can lead to disparities between low-wealth, high-poverty and high-wealth, low-poverty schools (Baker et al., 2014). It has been noted that state income taxes used for education are more progressive while sales tax and property taxes are regressive, meaning that these taxes cost low-income families a greater portion of their money (Sims, 2004). Every state has unique characteristics for determining what its educational funding sources are, but care should be taken to ensure that educational funding practices are equitable.

**United States’ K-12 educational funding**

States fund K-12 schools through one of four finance models: (1) foundation programs, (2) district power equalization systems, (3) full state funding, and (4) flat grants. Several states have combined these programs into two–tiered systems. In a foundation plan, the state sets a guaranteed amount of money per pupil. In district power equalization systems, the local district determines spending and taxing levels within state-determined limits, and the state matches differences in what is raised locally and what is
guaranteed. Flat grants can include local funding but full funding does not (Verstegen & Jordan, 2009). Foundation programs are the most common, with 36 states as well as 9 other states that use part of a foundation program in their funding plan. Within these four models, states are moving to weighted systems to tailor funding streams to individual student needs and characteristics as well as to provide additional funding for remote schools/districts (Verstegen, 2011). Weighted systems have been shown to distribute resources more equally and, especially in large urban school districts, positive benefits have been demonstrated (Archibald, 2001; Fermanich et al., 2000, Miles and Roza, 2004).

The Nevada Plan

The Nevada Plan was created in 1967 and is a foundation program. State money is paid on top of local revenue in order to meet the guaranteed amount of per-pupil funding. Nevada is unique in that few other states have the combination of rural areas, a sales tax based economy, and capped property tax rates (Chambers et al., 2012). In 2012, revenue for education in Nevada came from 62.6% local, 30.8% state, and 6.6% federal sources, with 51% of the total funding from sales tax. This is the second highest local share nationally. The national averages are 43.8% local, 43.5% state, and 12.7% federal (Financial Analysis Division Legislative Counsel Bureau, 2013). The Nevada Plan consists of state support and locally collected revenues from 2.60 percent of sales taxes and one-third of the proceeds from the 75 cents per $100 assessed ad valorem property tax rate. Funding is based on the higher of current or past year school enrollments. Other local revenues outside the Plan include two-thirds of the proceeds from the 75 cent ad valorem property tax rate, franchise tax, interest income, and other local revenues.
(Financial Analysis Division Legislative Counsel Bureau, 2013). There are certain categorical programs that are funded outside the Plan but are not guaranteed every year, including class-size reduction, early childhood, and English Language Learners.

Not much has changed since 1967 in the *Nevada Plan*. At that time the state was mainly a rural state with greater homogeneity, which has changed considerably over the intervening years. Figure 1 shows the 2012-2013 statewide demographics along with the percentage of enrollment in the largest school district in the state, the Clark County School District (Wooden, Steaffens, & Roselinksy, 2014). The abbreviations used are English Language Learners (ELL), Individual Education Plan (IEP)-special education, and Free and Reduced Lunch (FRL). The state has become much more diverse and has changing needs to educate these student populations. The *Nevada Plan* currently lacks support for individual student needs and characteristics but does make adjustments for district size and rural location (Chambers et al., 2012).
“The increasing isolation of poor students in schools and districts presents what may be the most daunting challenge currently facing American public education” (Baker et al., 2014, p.2). There is a large and growing population of poor students who are concentrated in high poverty districts. In 2011, 21% of school-aged children lived below the federal poverty line (approximately $23,000 for a family of four), a 30% increase over 2007. In Nevada, 12 school districts with a total population of 118,571 students have 10 to 20% of students in poverty. Five districts with a total population of 358,764 students have 20% to 30% of students in poverty (Baker et al., 2014). In 2001 the gap in

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### Nevada Demographics 2012-2013

<table>
<thead>
<tr>
<th>Demographic Group</th>
<th># of Students</th>
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### Clark County School District Demographics

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<tr>
<td>White</td>
<td>55.50%</td>
</tr>
</tbody>
</table>

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*Figure 1.* 2012-2013 Nevada K-12 school demographics.

**Low Income/At-risk Students**

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spending between highest and lowest poverty school districts was $1,000, with a similar gap between white and minority students (Carey, 2004).

Currently, 36 states use a weighted approach to address the needs of low-income students in their funding formulas. Nevada does not. The average weight used for low-income students is .29, meaning that if a state had a per pupil guarantee of $5,500 then low-income students would be funded at an amount of 1.29 x $5,500 = $7,095. Most states, through federal programs, also provide an additional .20 to .25 weight in funding. South Dakota is a state whose incidence of students in poverty across its urban, suburban, small town, and rural districts is similar to that of Nevada. It has a .28 weight for lower income students (Chambers et al., 2012).

**English Language Learners (ELL)**

Nevada has the second highest state percentage of students participating in ELL programs: 14.9% of students were classified as ELL during the 2012-2013 school year (Task Force on K-12 Public Education, 2014a). This problem is compounded in that many ELL students are also low-income students. Forty-three states including Nevada provide additional funding for ELL students, with most coming through weighted support. The average weight is .387. In Arizona, a weight of .115 is used and in Texas a weight of .10 is used. Both states have similar ELL populations to Nevada (Chambers, Verstegen, Jordan, & Baker, 2012).

Nevada does not use a weighted approach for ELLs in its funding formula but in 2013 did provide categorical funding of $50 million split across the 2013-2014 and 2014-2015 school years. While this approach provides targeted support to some ELL students, there are more that are not receiving support. Nevada has an estimated 66,396 ELL
students, and the graduation rate for ELLs was only 23% in 2012. Categorical funding is easier to add to state legislation but can be easily eliminated from year to year, and it also has more of a focus on student outcomes (Nevada Legislative Counsel Bureau, 2013).

**Special Education Students**

Generally, states pay for special education through one of four methods: (1) per-pupil funding, either weighted or flat grant, (2) cost reimbursement, (3) instructional-teacher units, and (4) census-based. Cost reimbursement deals with state-defined eligible costs and the percentage of these costs that will be reimbursed. Instructional-teacher units provide funding for teachers generally based on the number of students served. Census-based funding is based on total number of students and, on average, the number of students who would statistically be categorized as special education. A contingency fund would be needed for a census-based funding approach so that high-cost special needs students would not financially strain smaller districts (Verstegen & Jordan, 2009).

Nevada uses an instructional-teacher unit approach that is funded outside the Nevada Plan. However, there is no formal documentation for how units are determined, although the Nevada Department of Education is working on this. The national trend is that more states are moving special education funding inside the primary educational funding program and more states are enacting different categories of weighting. For example, a speech/language impairment might be given a weight of .7 while autism might have a weight of 1.9 (Thatcher, 2014).

In 2014 in Nevada, special education instructional-teacher units were funded at $41,608. However, the total average cost of a teacher’s salary and benefits in 2014 was $75,756. It has been recommended that Nevada consider flat funding, pupil weights, or
census-based funding for special education for a more equitable funding program (Chambers et al., 2012). Regardless of the method used, the Clark County School District would stand to gain significant amounts of special education funding. If the census-based approach for funding were used, the Clark County School District would gain an additional $7,300,000 in funding and charter schools would gain an additional $5,500,000 (Nevada Legislative Counsel Bureau, 2013).

**Rural Schools**

Thirty-two states provide funding for remote and small schools, including Nevada. The *Nevada Plan* uses a Basic Support Ratio (BSR), which attempts to account for variations in the cost of providing educational services in different districts throughout the state (Chambers et al., 2012). In 2006 a study was commissioned by the Nevada Legislature to determine the additional cost weights for students with special needs, ELL students, students in Career Technical Education programs, and students in poverty. The study, *Estimating the Cost of an Adequate Education in Nevada*, was done by Augenblick, Palaich and Associates. The report suggested weights and a 9-year plan to phase them in (Figure 3), but with the 2007 recession no action was taken.

| Table 1.1. Added Cost Weights for Nevada Students With Special Needs* |
|-----------------------------|----------------|----------------|----------------|
| Special Needs               | Small District | Moderate District | Large District |
| SPED Mild                   | 1.04           | 0.88            | 0.89           |
| SPED Moderate               | 1.69           | 1.28            | 1.29           |
| SPED Severe                 | 3.55           | 2.52            | 2.44           |
| At-Risk                     | 0.31           | 0.29            | 0.35           |
| ELLs                        | 1.21           | 0.56            | 0.47           |
| CTE                         | 0.14           | 0.05            | 0.04           |


*Figure 3. Suggested funding weights for individual characteristics of students*
Impacts of K-12 Education Funding

Funding Levels

There are mixed research results about whether spending levels per student are correlated to student test scores (Hungerford & Wassmer, 2004). However, states that spent more on public education during the period 1970-1995 experienced larger personal income increases across all income levels by 2000 (Behr, Christofides, & Neelakantan, 2004). Nevada is ranked 48th in current expenditures per pupil and 50th in public school revenue per $1,000 of personal income, a measure of state effort for education (National Education Association, 2011).

Additional money can lead to improved education quality if it is used in the appropriate manner. Colorado’s 8th grade students perform at the highest level among states that are demographically similar to Nevada and spend less per pupil than the national average. All 8 states with student demographics similar to Nevada that spent more than $9,600 per student had their 8th grade students score above the national average in math and reading. Of those 8 states, Virginia, Colorado, and North Carolina are among the five best states for business on both the Forbes and CNBC lists. They have similar student ethnic diversity to Nevada and produce 8th grade students far better prepared than Nevada’s in reading and mathematics. In 2008, those three states spent, on average, $1,000 more per pupil than Nevada (Education Alliance of Washoe County, 2011).

Nationally, there have been different effects attributed to cutting public K-12 education funding. Cutting Nevada’s statewide public K-12 education funding per student by one dollar per a thousand would reduce the state’s overall employment
numbers by 0.7 percent in the short run and by 1.4 percent in the long run. It would also reduce the state’s personal income by about 0.3 percent in the short run and by 3.2 percent in the long run. Many states would risk significant adverse economic effects by cutting public K-12 education spending (Hungerford & Wassmer, 2004).

Funding levels can also affect class sizes, which in turn affect educational outcomes. Multiple experimental-design research studies have shown that students who are assigned to smaller classes have better academic outcomes (i.e. Mosteller, 1995). In addition, students from disadvantaged backgrounds, both racial and economic, experience larger gains from smaller class sizes than middle-class white students. In 2011 the pupil per teacher ratio was 15 to 1 in districts with 0% poverty and 21 to 1 in districts with 30% poverty (Baker et al., 2014). Hungerford & Wassmer (2004) have found that a 10 percent increase in the student-teacher ratio would lead to a 1 to 2 percent decrease in high school graduation rates and to a decrease in standardized test scores.

Effects of Funding

Effective K-12 education can have many desirable benefits. The quality of local public schools can affect resale values of homes, lead to increased employee productivity, economic growth, and increased quality of life (Education Alliance of Washoe County, 2011; Hungerford & Wassmer, 2004). Increased education spending can make a community a more desirable place to live (Sims, 2004). At present, Nevada has a transient population and is one of the least educated states in the nation.

Fairness of Funding

A report titled *Is School Funding Fair?* looked at four measures of educational funding fairness: (a) funding level, adjusted to reflect regional differences in wages and
population density, (b) funding distribution, whether a state provides more or less funding to schools based on their poverty concentration, (c) effort, the ratio of state spending for education to state gross domestic product (GDP), and (d) coverage, the proportion of children attending public schools. All four of the fairness measures are entirely within control of state policymakers (Baker et al., 2014).

Nevada received poor marks on all but one of the four measures. Nevada was 37th in funding level but did increase its per-pupil spending by $573 from 2007 to 2011. Among the states, Nevada had the least fair funding distribution. In 2011, a school district with 30% or more of students in poverty would receive .69 cents for every dollar that a school with lower than 30% of students in poverty would receive. In contrast, the most fair and equitable state was Minnesota, where a school district with 30% of students in poverty would receive $1.28 for every dollar that a school with lower than 30% poverty would receive. In comparison with three regional states, Colorado, New Mexico, and Arizona, it can be seen in Figure 2 that Nevada provides more funding for school districts with 0% poverty. However, there is a steep decline in funding per pupil as the percentage of students in poverty increases.
For the third measure of fairness, Nevada received a grade of F for its effort, which was at 0.028 in 2011. The highest was 0.055 in Vermont and the lowest was 0.022 in Delaware. Nevada did much better in coverage rates, at a ranking of 12th with 92% of students enrolled in public schools. The coverage rates ranged from 78% in Hawaii to 94% in Utah (Baker et al., 2014).

*Is School Funding Fair?* also examined preschool enrollments. High quality preschool programs boost achievement, lower grade retention, and reduce the need for special education services. Nevada had the lowest preschool enrollment at 29%. The average nationally is 47%. In addition, Nevada had the lowest enrollment rates among low-income children at 21%. Many states that rank well on early childhood education also appear at the top of other fairness indicators.

*Figure 2.* State funding across different poverty concentrations. (Baker et al., 2014, p.24)
Future Directions

The Nevada Legislature has recognized the need for improved educational funding and has begun to take steps. The Task Force on K-12 Public Education technical advisory committee (TAC) made multiple recommendations in 2013-2014.

- It recommended initially providing weighted funding for special education students as a categorical grant program outside the state funding formula, with a further recommendation to transition to weighted funding of 1.0 inside the formula at an unspecified future date. It also recommended a contingency fund be created for exceptionally high cost special education students (Task Force on K-12 Public Education, 2014c).

- It recommended initially providing weighted funding for ELL students as a categorical grant program outside the state funding formula, with a further recommendation to transition to weighted funding of no less than 0.5 inside the formula at an unspecified future date.

- The Task Force also recommended providing weighted funding for ELL students until the student reclassifies as non-ELL.

- It recommended using Free and Reduced Lunch data to identify students at risk of low academic achievement. The Task Force also recommended initially providing weighted funding for low-income/at-risk students as a categorical grant program outside the state funding formula, with an additional recommendation to transition to weighted funding of no less than 0.5 inside the formula at an unspecified future date.
• The Task Force recommended applying the highest single weight to a student who qualifies as both ELL and low-income/at-risk. In contrast, Chambers et al. (2012) supports the idea that if students are in multiple categories they should be counted in multiple categories.

• It recommended holding districts harmless for the 2015-2017 biennium by only distributing new funding approved by the Nevada Legislature and the Governor through the modified K-12 funding model for ELL and At-Risk students. Beginning in 2018, the TAC recommended a full phase-in over a four-year period through 2021, with 10 percent of the total calculated funding change implemented in the first year, 30 percent in the second year, 60 percent in the third year, and 100 percent in the fourth year. (Task Force on K-12 Public Education, 2014a; Task Force on K-12 Public Education, 2014b)

A ballot initiative for a margins tax for education of 2% on businesses with total revenue of over $1,000,000 failed in 2014. The boards of school trustees and superintendents of every school district in Nevada are united in their concern over the inadequate funding of public education. They support increases in base education funding as well as a revision to the current funding formula to include weighted funding for ELL students, at-risk, and special education students. The two districts with the most ELL students, Washoe County and Clark County, would also like more teachers with ELL endorsements and are working on ways to accomplish this through partnering with universities and colleges (Task Force on K-12 Public Education, 2014c).
Implications

Nevadans deserve an educational finance system that is equitable and provides sufficient funding for all students to achieve content and performance standards. Ideally, the funding system should be supported by stable and predictable sources of revenue. The funding plan also should be periodically reviewed and updated to ensure that all students have an equitable opportunity to learn (Baker et al., 2014). In the U.S., the schools and districts educating low-income students generally do not get enough resources (Carey, 2004). In partial response to this, most states have a weighted funding system for ELL, low-income/at-risk, rural, and special education students. Preliminary results from research on a weighted system appear to conclude that it does provide an increase in funding that is directed toward specific areas of need, which enhances student achievement (Petko, 2005).

Our system of K-12 public education has one overarching goal: to prepare our children—especially those who have been historically underserved—for citizenship, community, and work that earns a livable family wage. Support for education is imperative to achieve these goals. Educational funding is an important topic and one that deserves increased attention to ensure that students have the support they need to be successful and make a difference in their community, the state, and the world.
Higher Education Funding

A strong higher education system has many benefits for the community and the state. Higher education provides students with an opportunity for upward mobility and personal development. Higher education provides states and communities with good citizens, an educated workforce, and economic stimulation (Tandberg, 2008). It strengthens the business climate through innovation, research and development, and information dissemination (Education Alliance of Washoe County, 2011). However, proper funding is essential to ensure well-functioning institutions, and there are economic benefits to this as well. Helms (1985) found that increases in state and local taxes used to increase spending on higher education caused growth in state and personal income.

However, during difficult state fiscal conditions, higher education funding often suffers more than other public funding priorities (Hovey, 1999). In fact, state investments in higher education have substantially declined relative to changes in enrollment, state wealth, and the growth of institutional budgets (McLendon, Hearn, & Mokher (2009). Looking at all U.S. states from 1974 to 2001, higher education funding decreased from 9.4 percent of state general fund expenditures in 1974 to 5.9 percent in 2001 (Tandberg, 2008). It is vital to support higher education for the benefits noted above, especially because higher education funding investments should lead to economic growth and stimulation and more qualified workers. There is work to be done to improve access to higher education in Nevada, as its adult population is one of the least educated in the nation (Education Alliance of Washoe County, 2011). Quality higher education can attract new students and diversify the state’s economic base.
Funding Variations

There are various reasons why some states have greater higher education funding and why funding is increased at certain times. Recently, higher education funding formulas have not been fully funded in many states. When states have higher unemployment rates, less funding is appropriated to higher education. A 1 percent increase in the unemployment rate can lead to $3.80 per capita decline in higher education funding (Tandberg, 2008). If more students attend private universities, then there is less demand for public universities in a state. Also, there is decreased higher education funding if more students attend two-year colleges, because their tuition and fees are usually lower (McLendon et al., 2009). Increased funding is likely to be associated with states having higher population levels, a Democratic governor and a Democratic controlled legislature (McLendon et al., 2009), competitive election races, and a larger lobby for public higher education relative to the rest of the state lobby (Tandberg, 2008).

States’ Funding Methods

States use different methods to fund higher education, but funding should be based on policy goals where institutions receive an incentive to achieve a specific policy objective. For example, if a higher graduation rate is a goal, then a funding formula based on completed student credit hours is a best practice. If funding is based solely on enrollment, institutions might admit students who they know cannot succeed in order to increase enrollment numbers. If funding is based on course completion, institutions may provide more academic support, such as tutoring or teaching assistants (SRI International, 2012).

There are 17 states that use a funding formula, 19 states that are non-formula
based, and 14 states that use a hybrid of the two methods (SRI International, 2012). Whether a state uses a formula or a non-formula system, performance-based funding methods are becoming more popular. Thirteen states currently use performance-based funding methods, approximately five other states have plans to, and 14 additional states are considering performance-based funding. No matter what the funding method, a state must be aware of its goals and structure its funding formula in line with those objectives.

**Current Nevada Funding Method**

In 2013 Nevada made changes to its higher education funding method that are aimed at improving the higher education system and aligning funding with the goals of the Nevada System of Higher Education. Currently, Nevada’s higher education system ranks 49th in rate of production of degrees and certificates. Roughly 40% of students who enroll full-time in a four year college fail to graduate, and the numbers are worse for part-time and two-year programs. Only 22% of Nevada’s adult population has a bachelor’s degree (SRI International, 2012). The current production of college graduates by Nevada’s higher education system will not meet the needs of Nevada’s workforce. Nevada also spends less on academic research and development than any other state in the U.S. (Education Alliance of Washoe County, 2011).

The new funding is based upon the belief that it should be equitable to all institutions, simpler and more transparent than the prior formula, aligned with the goals of the state, and based upon national best practices in higher education financing. The funding model consists of two basic components: a base formula driven by course completions and a performance pool driven by graduation numbers, greater alignment with the state’s focus on economic development and diversification, and emphasis on
success with at-risk students. Also emphasized are greater research outputs for the universities, transfers from the community colleges, and completion of gateway courses for all colleges (Nevada System of Higher Education, 2012). Essentially, the new model shifts the focus from enrollments to course completions and graduating students.

Universities will retain tuition and fees that will not be counted toward the state general fund. Also, student credit hours will be weighted by program and degree type. For example, depending on the program, doctoral degrees are weighted from 4.0 to 8.0 and master’s degrees from 2.5 to 5.0. This weighting was based on relative cost data from studies conducted in Texas, Illinois, Ohio, and Florida (Nevada System of Higher Education, 2012).

The performance pool of money will not be additional funding but will be “carved out” of the state general fund appropriations. This pool will be phased in over four years from 5%, 10%, 15%, and then 20% of the general fund. Institutions will compete against themselves based on prior year’s performance. If an institution does not earn back its funds through the performance pool, unearned funds will be distributed to all institutions for need-based financial aid (Nevada System of Higher Education, 2013).

**Implications**

Higher education funding in Nevada is becoming better aligned with the state’s goals and priorities. Higher education in Nevada has room for improvement, as too few students who enroll graduate. Tying performance pool money to graduation completions is a needed step to ensure that graduation numbers are improved. Some states include performance money as additional funds, while Nevada is starting with a “carve out” of the state general fund appropriations. It remains to be seen if one method will lead to
greater improvements in graduation rates. Higher education in Nevada has many important outputs for local communities, the state, and the nation. Funding formulas that are equitable and ensure quality education are necessary to continue the effective preparation of students.
Selected Resources


Education Alliance of Washoe County. (2011). *Crises in Nevada: Education and the economy.* Education Alliance of Washoe County.


References


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Executive Summary

Throughout the United States, and particularly in Nevada, education for English Language Learners (ELLs) has become a topic of critical and timely importance. Across the nation, ELLs constitute the fastest growing subpopulation in public schools. While most states have seen at least a moderate rise in their populations of ELL students, Nevada continues to experience the steepest rises in the country.

Nevada’s English Language Learners: Facts and Statistics

- 2013-2014 enrollment was 452,220 total students
- At least 1 in 7 students in Nevada is an ELL (NSEA, 2013)
- Between 1998-2008, the number of ELLs increased more than 200%
- In 2010, 31% of children did not speak English as their first language
- In 2010, 33% of children ages 5-17 spoke a language other than English at home

During the last legislative session, Nevada made its biggest single investment in ELL education to date with the enactment of Nevada State Senate Bill No. 504. This provided a $50 million allocation over two years for designated low-performing elementary schools with high populations of English Language Learners. In the first academic year of implementation, schools in Washoe and Clark County School Districts have implemented programs and changes that have yielded positive outcomes.

The Purposes of Funded Initiative:

- Additional free preschool for ELL students
- Reduction in class sizes for PreK-K
- Expansion of full-day kindergarten programs
- Specialized reading centers
- Extended-year reading instruction
- Improved reading achievement performance
- English Mastery Council established

In considering future directions for ELL policies and programs, stakeholders should examine Nevada’s statistics within the national context. Nevada has the unique opportunity to evaluate the successes of programs funded and implemented with its own population and to improve and expand those programs as necessary in order to meet the growing and urgent needs of its own ELL students. In doing so, Nevadans can invest
resources and funds in ELL education and confidently predict a meaningful return on that investment.

**Considerations for Future Directions:**

- Develop sustainability plan for current effective practices for ELLs
- Consult experts and utilize task forces to evaluate research and programs
- Develop consistent definition of ELL and LEP among districts in Nevada
- Require high-quality teacher preparation and professional development for those educating ELLs
- Develop an adequate short- and long-term funding plan that will meet the projected needs of Nevada’s ELLs

**Introduction**

All children in Nevada should have access to a high-quality education, the benefits of which are life altering and irrefutable. This goal involves significant planning, effort, and commitment to implementation, as well as a willingness to engage in reflection and evaluation. Nevada’s fastest growing population of K-12 students continues to be English Language Learners (ELLs), and Nevada has begun limited implementation of services to meet their unique needs. It is important now to engage in dedicated planning to demonstrate an ongoing commitment to the implementation of these efforts. In order to ensure that ELLs are receiving the most appropriate services and the education they receive can truly be considered high-quality, it is necessary to evaluate the progress the state has made, to look at data from existing and newly implemented programs, as well as to consider the implications of adopting additional recommendations on the potential outcomes for Nevada’s ELLs and educational framework.

**Context and Overview**

The current demographics and trends in education and population related to ELLs, both nationally and in Nevada, help to create a stronger understanding of the issues surrounding this diverse population of learners. There are special terms that are unique to
this topic, and the inconsistencies in terminology and identification criteria can create complications for those seeking to make comparisons among programs or outcomes. This information is presented to provide context for decision-making and to illustrate Nevada’s remarkable and demanding realities.

**Definitions**

It is important to note that there are many different ways the same terminology is used throughout the research and literature about English Language Learners, so it is necessary to ensure that all conversations and comparisons of research clearly define how they are using each of these terms in order to promote clarity. For example, there is the lack of a common definition of “English proficiency” (ECS, n.d) or even “English Language Learner.” The U.S. Department of Education’s Office of Civil Rights notes that, in its perspective, the phrases “limited-English proficient” and “English-language learner” have similar meanings and can be used interchangeably, as can their respective acronyms “LEP” and “ELL” (OCR, 2014). The No Child Left Behind Act (NCLB, 2001) uses the term “limited-English proficient” to refer to students acquiring academic English, although the term “English-language learners” is used more frequently in professional literature and practice.

The Elementary and Secondary Education Act (ESEA) does provide a general definition of these terms but leaves the process of operationalizing the definitions and developing identification criteria up to individual states. Because states vary in their definitions and identification procedures, the data they report to the U.S. Department of Education (USDE) is not based on the same definitions or classification criteria, which makes comparisons of state-level data difficult, even though these data are required and
reviewed for Title III funding purposes. Furthermore, all programs serving ELLs are not the same, and there are many different titles given to the types of programs that are used in schools, though the implementation may also vary widely. The variations among these programs make it difficult to determine the overall academic impact they have on children learning English.

**National Context and Demographics**

During the 2011-2012 school year, according to the USDE’s National Center for Education Statistics (NCES, 2014), there were an estimated 4.4 million children classified as ELL enrolled in American public schools, representing approximately 9.1% of the total K-12 enrollment (see Figure 1: NCES, 2013). Most of these students are in states in the southwest region of the country.

![Map showing percentage of public school students who are English language learners (ELL), by state: School year 2011–12](source: U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Local Education Agency Universe Survey," 2011–12. See Digest of Education Statistics 2013, Table 264.20)

Though many people may primarily associate the term “English-language learner” with a native Spanish speaker, in reality 25% of ELLs speak a language other than
Spanish (see Map 1: U.S. Department of Education, 2009). Simply knowing that a student is classified as an ELL provides very little insight into ethnic background or potential educational needs.

In 2010-2011, 16% of children nationally came from homes where English was not the primary language spoken, and some estimates suggest that by 2020 there will be more children who have exposure to a language other than English at home than children who speak only English at home (ECS, 2013).

Young ELLs under the age of six are less likely than other children to have access to high-quality early childhood educational programs (NCELA, 2011). In 2011, only 30% of preschool-aged children were participating in center-based programs, and for Hispanic children only 22% were enrolled in preschool programs, which was lower than any other ethnic group. Despite the research indicating that attending high-quality preschool programs has many short- and long-term benefits and can even mitigate achievement
gaps, many families simply do not know about the availability of these free early childhood programs and therefore do not participate in them.

**Nevada’s Context and Demographics**

Nationally, the population of ELLs is growing steadily and rapidly, but it is growing remarkably quickly in Nevada. According to ECS data, Nevada’s 3% ELL population gain between 2009-10 and 2010-11 was the largest gain in any state (ECS, 2013). The Migration Policy Institute (2010) also reported that Nevada had the highest density of ELLs in the nation, with ELLs representing 31% of Nevada’s total public school enrollment. In the Nevada State Literacy Plan, the Nevada State Literacy Team (NDE, 2011) cited the high number of school-aged ELLs as a compelling factor contributing to Nevada’s low levels of literacy achievement.

**States with the Highest ELL Student Density, 2007-2008**

![Map of the United States showing states with the highest ELL student density.](image_url)

Source: National Clearinghouse for English Language Acquisition, State Title III Information System.

© 2010 Migration Policy Institute.

ELL share of state Pre-K-12 enrollment
- Higher than 30.0 percent
- 20.0 to 29.9 percent
- 10.0 to 19.9 percent
- 5.0 to 9.9 percent
- Less than 5.0 percent

ELL share of national Pre-K-12 enrollment: 10.7 percent
According to the Nevada Department of Education, 89% of the ELL students in Nevada were born in the United States (NDE, 2013). In the 2014 Quality Counts report, only 73% of children had parents who spoke English fluently, which earned Nevada a ranking of 49/51 states on that dimension and was included as one of the factors likely to impact a child’s success over his or her lifetime (Education Week Research Center, 2014), earning Nevada a ranking of 51/51 on the Chance for Success Index in the Quality Counts 2014 report. This is consistent with the Nevada Department of Education’s data indicating that only 29% of high school ELL students successfully graduate, 60% are deficient in the credits they need to graduate, and 40% are categorized as “Long-term ELLs,” meaning they have received ELL services for more than six years with growth that has slowed in the final two years (NDE, 2013).

**Significance of ELL Education**

The size of the population of ELL students, combined with their unique learning needs and profiles, makes these students a rapidly growing group of learners who are critical to the success of the educational system in this country. According to the National Education Association (n.d), at least 1 in 10 students is currently an ELL, and by the year 2025 it estimates that approximately 1 in 4 students will be an ELL. Callahan (2013) notes that ELL students comprise approximately 11% of the national student population and approximately 20% of the student population when students who were ever classified in the past as ELL are included in the count. Callahan explains the difficulty in obtaining accurate dropout rates for ELLs but estimates that ELLs are approximately two times more likely to drop out of school than their native and fluent English speaking peers. ECS (n.d.) suggests that, as a subpopulation, ELL improvement overall might be
systematically underestimated by design: once students are performing well, they are
exited from their supportive programs and no longer classified as ELL, so that only
students with lower proficiency levels retain the ELL classification. This means that as
some succeed and exit, other students move in and take their place, skewing the data. It
would be difficult to capture a high-achieving ELL student in the data, because as soon as
a child reaches that target, he or she loses the ELL classification and no longer represents
that subpopulation.

Callahan’s *California Dropout Research Project* report (2013) also notes that
education appears to have a different impact on some subpopulations of ELL students
than on other students who drop out. For example, the report found that certain academic
courses can have a potentially powerful effect on individual behavior and on
communities, specifically noting that children born to immigrant parents who take social
science courses in school are more likely to participate in citizenship by voting and
registering to vote. Thus, the impacts of not completing a high school education extend
beyond the well-noted economic impacts of an individual not having the skill set to
compete in a job market; it can also result in myriad costs and long-term consequences to
the state and society in general.

**National Efforts**

It is important to look at various state-level decisions, because there is no
federally mandated instructional program for ELL students. Nearly every state has a
different funding formula, and each state may spend those funds to implement very
different types of programs and services for ELL students. Some of these programs are
bound by state legislation. Additionally, programs with the same titles may have very
different operational definitions, and it can be very difficult to compare the populations of learners in the programs, or the programs themselves, due to the differences in interpretation. The assessments used to measure the outcomes of the programs may also vary, so it is important to carefully investigate each of these dimensions before making decisions about how they relate to Nevada.

Funding

Students who are Limited English Proficient (LEP) or immigrant students currently receive language instruction primarily through funding from Title III of the Elementary and Secondary Education Act (ESEA), reauthorized as No Child Left Behind (NCLB) in 2001. Title III is a formula grant program that allocates money for these students to each state, and the states are required under the NCLB to show that students are making progress toward English proficiency by meeting annual, measurable achievement objectives. The USDE calculates the amount for each state based on the number of LEP students indicated in the American Community Survey. As indicated in the USDE’s Office of English Language Acquisition’s 2008-2010 Title III Biennial Report to Congress (OELA, 2013), the primary goal of this section of the ESEA is to ensure that children who are not proficient in English have access to a high-quality education and have the same chances for academic success. In order to move states toward this target, Title III requires states to develop English proficiency standards in each of the four primary language domains: reading, writing, listening, and speaking.

In 2013, researchers for The Lincy Institute at the University of Nevada, Las Vegas prepared a policy brief on ELLs in Nevada, and in that document they presented a comparison of the funding formulas of districts in several states with similar
demographics to Nevada’s (Horsford, Mokhtar, & Sampson, 2013). The findings and charts show that Nevada’s 2012-2013 funding formula for ELLs relies heavily and primarily on federal Title III funds, where the needs of ELLs are addressed at the district level with a weighted formula that adds funds to the state’s base contribution. Nevada is one of only eight states that do not factor the additional expense of educating ELL students into their state funding formulas, and one of only six that do not factor in the expense of educating low-income students.

In The Lincy Institute’s report (2013), as well as others, the comparisons of different funding formulas and their impact on per-pupil funding were outlined and compared to Nevada’s most recent funding allocations. According to the Nevada Department of Education (NDE, 2013), the 2012-2013 Federal Title III grant totaled $8,798,885, which equates to $116.64 per pupil for the 2012-2013 school year. Also in the NDE report, expenses related to educating ELL students that cannot be paid using Title III funds are noted, including the costs of the English Language Proficiency Exams.

In the 2013 legislative session, Nevada’s funding formula was not altered, but a significant one-time allocation was made to specific elementary schools that did impact ELL students. The American Institute for Research conducted an equity study in 2012, commissioned by the Nevada State Legislature, and found that approximately $145 million annually, through pupil-weighted adjustments, would be required to address the growing ELL population and meet the state’s projected educational needs (AIR, 2012). The 2013 funding for ELL education was significantly short of that recommendation but provided the means for a targeted, short-term program. In order to sustain and extend the academic gains enabled by the funds released in the 2013 legislative session, the state
will need to carefully review recommendations from national studies that suggest per-pupil ELL funding increases of 19 to 100 percent above the average base funding allocated per English-speaking student in the state.

**Programs Options**

There are many different programs designed to meet the needs of ELLs as they develop English proficiency and demonstrate content area mastery. Students typically remain in these specialized programs until they have mastered reading, writing, listening, and speaking in English and are able to comprehend all subject area content. Some schools offer bilingual education programs developed under the Bilingual Education Act (Title VII, 1968) and administered under the supervision of the USDE’s Office of Civil Rights. Other common types of programs are English as a Second Language (ESL), transitional bilingual education, high-intensity language training, and dual-language immersion programs.

The bilingual programs provide instruction in the child’s native language, potentially allowing an increased understanding of content while making progress toward English-language acquisition. Proponents of bilingual education assert that bilingualism is an asset and that a deeper understanding of language and content in one’s first language increases capacity to acquire a second language. Opponents suggest that delaying immersion in English hinders progression in language development (ECS, n.d.).

The other types of programs (i.e., ESL, transitional bilingual, high-intensity language training, and dual-language immersion) vary in their composition and implementation. The purpose of these programs is to teach English and support the transition to instruction in English with varying degrees of support in the native language.
It is important to understand the components of the programs, as they may vary from state to state and from district to district, even if they have the same title.

A relatively recent movement toward English-only instruction in some regions promotes English immersion and the prompt discontinuation of bilingual instruction. Voters have passed English-only legislation in California, Massachusetts, and Arizona, requiring the use of “sheltered English immersion programs” to teach ELLs in order to encourage a faster transition into mainstream classes (NCTE, 2008). This approach provides ELLs “shelter” from academic “competition” with their fluent English-speaking peers for up to one year, after which they must transition to non-sheltered, mainstream classes (unless their parents sign a waiver). This is very different from traditional approaches that have no time limit for remaining in ELL classes. At least 25 other states have similar English-only legislation that affects the implementation of their ELL programs (NCTE, 2008).

**Nevada’s Efforts**

Several efforts are underway in Nevada to support education for ELLs and to provide the necessary structures for educators. Many of these efforts will be aligned and validated through the work of the English Mastery Council, which was created in compliance with Nevada State Senate Bill 504 during the 2013 legislative session to support the state in three primary ways: by 1) reviewing university courses of study to teach English as a Second Language and making recommendations for improvements and adoptions related to endorsements and regulations as needed; 2) making recommendations about district policies for serving ELL students and submitting recommendations about policy criteria; and 3) developing standards and criteria for ELL...
curriculum for consideration by the State Board of Education (NDE, “English Mastery Council,” n.d.).

**Senate Bill 504 - Zoom Schools**

For the first time in Nevada’s history, in 2013 the Nevada State Legislature allocated $50 million in one-time funding to provide services for the state’s ELL students. This means that some ELL students are temporarily funded at a different per-pupil rate than other students, and the legislation propelled Nevada into the ranks of the other 43 states that also fund ELL students differently than their English-proficient peers. These funds were primarily distributed in the form of grants to Washoe and Clark County School Districts with the intent to provide targeted, intensive services for children in grades preschool through third grade at select elementary schools with significant ELL populations that have been underperforming on state assessments.

Washoe County School District designated 6 schools as Zoom Schools, and Clark County School District initially designated 14 schools, with additional schools to be included in the second year of the project. Specifically, the state funds were to be used over two years to support the development or expansion of preschool programs for ELLs, diagnostic assessment tools that can be used to determine reading proficiency levels, computer software programs to support and supplement literacy instruction, the development and implementation of before- and after-school and summer school programs, and professional supports for teachers (i.e., TESOL certifications, literacy coaches, professional development). Some of this work was accomplished through the development of specifically designed Zoom reading centers, smaller class sizes, additional classrooms, and additional school days.
Administrators involved with the Zoom Schools reported that, with the help of the funding, they were able to reduce kindergarten classroom sizes from as high as 40 students in a classroom to a maximum of 21 children, and at this class size 80% of students were meeting their end-of-year language benchmarks. Additionally, only 10% of the pre-kindergarten children spoke English at the beginning of the school year, but at the end of the additional days 80% spoke English and nearly 100% were reading at grade level. Administrators are seeking additional professional development opportunities for their campuses in order to increase teacher skill and competence related to literacy and educating ELLs.

Adopting Standards

The Nevada State Board of Education adopted the Common Core State Standards (CCSS) in October of 2010, which became the Nevada Academic Content Standards (NACS) for English Language Arts (ELA). According to the Nevada Department of Education (NDE) website, with the implementation of these standards, children in Nevada are given “the tools and experiences that will help them not only to succeed in school, but also to become lifelong and adept readers, writers, listeners, and speakers” (NDE, n. d.). The standards were developed as a result of collaboration between the Council of Chief State School Officers and the National Governor’s Association, and various education groups and associations provided input through work on committees or by submitting feedback and comments on public drafts. The culmination of this work provides standards that outline a recommendation for the progression of knowledge and skills that students should acquire throughout their K-12 academic career. Each state had
the opportunity to review these standards and determine whether to keep their current standards or to adopt the CCSS, and Nevada chose to adopt the CCSS.

One consideration in the adoption of the CCSS was that, in its initial publication, the CCSS ELA standards did not include standards that address children with Limited English Proficiency or the unique needs of English Language Learners. There was an addendum indicating that these needs should be considered in implementation, along with some suggestions for improving the quality of the implementation of the CCSS. Several educational groups have developed documents, based on research and including strategies, to focus on supports to ensure that students are able to access grade-level content while meeting the requirements of the new standards for ELA, Math, and the Next Generation Science Standards, which Nevada has also adopted.

Stanford University’s Understanding Language Initiative is a group of experts in education, as well as from advocacy, policy, and educational organizations, that have come together to increase awareness of the critical role that language plays in the new Common Core State Standards and Next Generation Science Standards and to improve education for all students, particularly English Language Learners (Stanford University, 2014). In 2012 this group published a brief stating, “We know the best research indicates that instructing ELL students bilingually strengthens their knowledge and skills” and that “a thoughtfully planned and well-implemented bilingual education program clearly contributes to students developing the college and career-ready capacities envisioned in the Common Core” (Stanford University, 2012, p. 1).

Assessment of Standards
**Assessment of Standards**

The next phase in implementation of the CCSS includes assessment, and Nevada is participating in the Smarter Balanced Assessment Consortium (SBAC) that is developing the new assessments. SBAC appointed the English Language Learners Advisory Committee to consult and provide feedback and guidance related to ELL assessment, language acquisition, and bilingual education. In addition, Nevada is participating in a system based on the work of the World-Class Instructional Design and Assessment (WIDA) consortium called *Assessment Services Supporting ELLs through Technology Systems* (ASSETS), which will be a complete assessment system to include formative assessments teachers can use during classroom lessons, interim/benchmark assessments to measure progress, summative assessments to measure outcomes, diagnostic screeners to determine whether children need further assessment, and even professional development materials for teachers.

**Striving Readers Comprehensive Literacy Initiative**

In 2011, Nevada’s Department of Education was one of only six states to secure the USDE’s *Striving Readers Comprehensive Literacy Grant* to target improving literacy acquisition for at-risk children and their families (NDE, “Striving Readers Comprehensive Literacy”, n.d.). This is a competitive, five-year grant that brings approximately $12-14 million per year to the state to improve literacy outcomes. Through this grant, children ages birth through 12th grade, in four districts across the state, receive intensive and specialized literacy instruction and services. These include services for historically underserved populations, including children identified as ELL, as well as related professional development, coaching, supportive texts, materials, and supplemental curricula. In both Clark County and Washoe County school districts, which are two of the
four sub-grantee school districts funded in Nevada, the schools receiving Striving
Readers funding are very similar in demographic and performance profiles to the Zoom
Schools.

**Conclusions and Implications**

Across the nation, and particularly in Nevada, the number of ELLs is growing
rapidly, and, as with all students, the educational structures need to be in place to support
their academic success. With more rigorous content standards in place, it is important to
consider the rest of the systems needed to ensure students are able to rise to those
standards and to sustain the momentum of early successes from initiatives in place at a
select number of schools. The infrastructure should support the expansion of what is
working and put provisions in place to correct those efforts that could be made more
effective. With thoughtful planning, Nevada’s students will have the benefit of pilot
programs and research as well as years of data and trends, resulting in evidence-based
programs that can be implemented with a high degree of confidence in their effectiveness.

An important consideration of any educational advancement goal is the
preparation and capacity of the teachers to promote and sustain potential changes. In
planning for programs to teach and support ELLs, the needs of the teachers who will be
working with them should also be considered. All teachers, whether they are bilingual
educators, ESL educators, or general educators, should possess the content knowledge
and pedagogy required to successfully meet the needs of ELLs and implement the
Nevada Academic Content Standards. This process should begin in teacher preparation
programs and continue to support teachers by providing meaningful, relevant, and
ongoing professional development. General education teachers do not need extensive
knowledge of their students’ native languages; however, states such as Florida produce stronger teachers for ELL students by having all pre-service teachers complete some training related to teaching English as a second language (TESOL). Committing ELL resources to both students and their teachers is an important priority and will ensure that both are successful in meeting increasingly demanding expectations.

Funding for educational services for ELL students continues to be a complex issue, with no federal mandates to provide specific services from specific funding streams. The complexities involved with securing clear definitions within this topic increase the difficulty with comparing programs, services, interventions, and resources. Ensuring consistency, uniformity, and reliability among definitions and interpretations related to ELL is important for evaluation and decision-making purposes. The ELL growth in Nevada is outpacing even the rapid national growth, and Nevada can look to many other states for examples of fiscal investments in ELL education and the return on those investments. Several recommendations for funding have been requested and produced in Nevada; with initial limited funding in a relatively small number of schools, early indications are that teachers and administrators are producing the results that stakeholders hope to see for all of Nevada’s children.

By focusing on needs that are unique to ELL students as well as those that are common to all children, educators, families, lawmakers, and other stakeholders can more clearly see the areas where ELL education has improved and where there is still considerable room to make changes. Making targeted and meaningful investments while engaging in thoughtful long-term planning now will provide opportunities for significant
changes to the trajectory of outcomes for our state’s ELL populations and our statewide community in the future.
### Annotated References List

<table>
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<tr>
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<th>Summary</th>
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<tr>
<td>Batalova, J., &amp; McHugh, M. (2010). States and districts with the highest number and share of English language learners. Washington, DC: Migration Policy Institute.</td>
<td>This report provides statistics, data tables, and maps related to nationwide enrollment of ELL students.</td>
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<tr>
<td>The Lincy Institute. (2013) Nevada’s English language learner population: A review of enrollment, outcomes, and opportunities. Las Vegas, NV: Horsford, S. D., Mokhtar, C., &amp; Sampson, C.</td>
<td>This policy brief contains research and data about ELLs in Nevada and particularly in CCSD (2010-2011). The authors provide significant historical context and recommendations for future policy and practices.</td>
</tr>
<tr>
<td>Office of English Language Acquisition, Language Enhancement, and Academic Achievement for Limited Proficient Students. U.S. Department of Education. (2013). The biennial report to Congress on the implementation of the Title III state formula grant program: School years 2008-2010.</td>
<td>This is a report to Congress outlining the demographics, progress, and current status of each state in the U.S. during the period outlined. The report was published in 2013.</td>
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References


Full Day Kindergarten: An Overview for Nevada

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Executive Summary

Full-day kindergarten (FDK) is a public school experience that occurs the year before a child enters first grade, in which students attend school for 6 hours per day, 36 hours per week, and 1008 hours annually. A quality FDK experience is characterized by a welcoming, developmentally appropriate, safe, healthy, and nurturing learning environment taught by teachers with licenses in early childhood/early childhood special education and who possess strong teacher-child interaction skills. Quality full-day programs include:

- Highly-qualified teacher educators challenging all children and differentiating instruction.
- A play- and academically-based curriculum that includes a mixture of large group, center-based, individual, and small group instruction.
- Children utilizing technology (and assistive technology as needed).
- Learner outcomes that are documented on a regular basis (e.g., daily, weekly, monthly, annually) and utilized to develop goals, write lesson plans, and implement program improvement measures.

What does the research say about FDK?
Research surrounding FDK suggests students experience academic as well as social benefits, including but are not limited to:

- Greater gains in literacy skills than their half-day kindergarten peers (Zvoch, 2008).
- Increased language skills, better phonemic segmentation, higher standardized test scores, and lower rates of retention (Brannon, 2005; Cooper et al., 2010).
- Increased independence, peer interaction, originality, self-confidence, and the ability to work effectively with others (Cooper et al., 2010, Brannon, 2005; Plucker & Zapf, 2005).
- Increased time for children with disabilities to work on skills (e.g., language and social skills development and motor coordination) (Schubert, 1997).
- English Language Learners benefit from early language instruction and increased literacy/language gains (Brewster & Railsback, 2002; Villegas, 2005).
- Increased time for math and reading instruction for children in need.
- More time to challenge gifted children (Schubert, 1997).

Why is FDK important?
Parents of children who attend FDK have higher levels of satisfaction with kindergarten for both child- and family-based reasons (Boardman, 2005; Elicker & Mathur, 1997). Additional rationale for providing full-day programs include:
Reducing the number of transitions children face each day, thereby helping better prepare children to transition to and learn in first grade (Cryan, et al., 1992; Elicker & Mathur, 1997).

FDK teachers know their students better and have more time for individual and small group instruction (vs. large group) (Elicker & Mathur, 1997).

FDK reduces achievement gap by $\frac{1}{5}$ in reading and $\frac{1}{4}$ in math between the highest and lowest performing students.

Students who attend FDK have better attendance rates in kindergarten through the primary grades (Hough & Bryde, 1996; Weiss & Offenberg (2002).

Students in FDK have reduced grade retention and remediation rates (Villegas, 2005).

Introduction

Kindergarten is a unique time in a student’s educational career. Full-day kindergarten (FDK) programs are receiving increased interest from schools, parents, community leaders, and policymakers, including the Pre-K-3rd Grade Movement. There are many societal reasons for the increased interest in full-day kindergarten programs. Initially, there was an increase in the number of single parent and two parent families in which both parents are working. This, in turn, increased the number of students who attend full-day preschool programs (Brewster & Railsback, 2002; Gullo, 1990). Moving from a full-day preschool or child care program back to a half-day kindergarten program can be a challenging transition for parents and children who are accustomed to full-day educational or child care experiences. Another reason for the increase in FDK programs may be the recent emphasis placed on accountability towards meeting rising state standards (National Education Association, 2014; National Governors Association, 2012). The Pre-K-3 movement recommends full-day kindergarten be provided as an option, suggesting that “...fundamental and far reaching changes in American society and in education require that full-day become the new standard for kindergarten” (Kauerz, 2010, p. 3).

With the increase in attention to FDK programs, it is the intent of this paper to (a) provide a historical perspective of FDK; (b) describe research-defined benefits of full-day kindergarten
programs; (c) provide demographic information about full-day kindergarten programs around the nation and in Nevada; (d) examine implications of FDK programming; and (e) list resources that can be used to identify research and evidence-based practices related to full-day kindergarten programs.

**Historical Perspective**

Friedrich Frobel originated the Kindergarten in 1830 to teach young children about aesthetics, mathematics, and natural history. All through Germany, Austria, and Hungary, kindergarten had become an involved part of required education for children younger than 6 years old, and by 1909 Vienna established and operated more than 72 kindergartens (Watson, 1997). In the 1850s and 1860s, kindergarten came to the United States using the Frobel method. Then, in the 1870s philanthropic organizations operated kindergartens for the children of immigrants as well as those of lower socio-economic status. In 1876, the first public school kindergarten in the United States opened on a half-day schedule because of financial limitations. This half-day model prevailed through World War II due to the limited number of available teachers. Although Froebel and Dewey’s philosophy of education was the principal approach, an emphasis on academic skills began to evolve, influenced by the emergence of the Cold War.

Significant expansion of state- and community-funded kindergartens evolved in the 1960s and 1970s (Elicker & Mathur, 1997). Most of these programs remained half-day programs and continued to focus on play, socialization, and the transition to more formal learning. By 1990, the kindergarten movement was beginning to make a change in the curriculum (Elicker & Mathur, 1997), with goals becoming more skill oriented and academic. A traditional half-day kindergarten involved solid, scheduled literacy instruction, arithmetic learning, and diverse structured activities. Play and socialization were considered secondary to the increasingly
binding first grade curriculum. This led to the belief that FDK could afford teachers the opportunity to better meet curricular expectations by providing more in-depth coverage of content and giving students more individual attention to guide skill development.

Despite kindergarten not being required in the USA public school system, by 2000 nearly all of the 4,156,491 children eligible to attend kindergarten did, 85% in public schools and 15% in private (U.S. Department of Commerce, 2000). As of 2012, according to the Education Commission of the States (ECS), FDK is currently mandatory in 11 states plus the District of Columbia and explicitly permitted in 19 other states (U.S. Department of Education, 2012). Currently FDK is offered by some schools in Nevada, but it is not mandatory at the date of this publication.

**Review of Research**

**Quality Full-Day Programs**

Full-day kindergarten programs can be defined in many different ways. Based on the research used for this paper, FDK will be defined as a formal kindergarten school experience that occurs the year before first grade for at least 36 hours per week. However, time in school cannot be the only determinant of what will be considered a quality FDK program. In order for the effects that are discussed throughout this paper to hold true, the time in school needs to be spent with students engaging in instructional activities that are appropriate for the child’s developmental level (WestEd, 2005).

It is important to note that kindergarten is not just a less demanding version of first grade. Children of kindergarten age exhibit a wide range of skills and behaviors, and some will have mastered skills that other children are still developing. Additionally, children may develop more quickly in one area (e.g. communication) and more slowly in another area (e.g. self-regulation).
A full-day kindergarten experience should meet the needs of all young children, including children who are culturally, linguistically, and ability diverse (Kaurez, 2010). In other words, FDK should be universal—providing access, participation, and supports for all children (West Ed, 2005).

Full-day kindergarten should also be developmentally appropriate (individual and age appropriate) as it nurtures and cultivates development and learning in physical (including health), cognitive, social, and emotional domains (Gullo, 2006). To do this in a heterogeneous class (e.g. mixed-ability; mixed-ages), there needs to be a balance between teacher-directed activities (i.e. whole group instruction in which all students are doing the same activity at the same time), small group activities, and child-directed activities where children make choices and engage in discovery learning (Gullo; Miller, 2001). Within the instruction, all new learning should be connected to past experiences as well as current events in context of the family, community, culture, linguistic norms, and social group (NAEYC, 2009, p. 10). Also, the classroom should have an unhurried feel, allowing individual pacing of work (Miller, 2001).

Effective kindergarten programs have an emphasis on language development and pre-literacy skills (Miller, 2001). Children are allowed to interact informally with learning materials as well as other children and adults, thereby creating first-hand experiences (Miller, 2001; NAEYC 2009). Teachers in effective programs work closely with families and encourage reading both at school and at home (Miller, 2001).

**Teacher Licensure**

Effective teacher preparation, licensure, and on-going professional development are critical components of quality of instruction. Ideally, states should offer separate early childhood teacher preparation tracks for K-6 and K-8 licenses (Kauerz, 2010; Workman, 2013). Kauerz
states that early childhood education (ECE) “certification should include preparation in child development, diverse learning styles, social and emotional development, cultural diversity, effective teacher strategies, and family engagement” (p.12). The state of Nevada offers a license/endorsement in Early Childhood Birth through Second Grade from the Nevada Department of Education (NDE), requiring courses that surpass the Kauerz recommendations (Nevada Department of Education, 2014). The University of Nevada, Las Vegas offers a bachelor of arts degree in early childhood education (pre K-2) for licensure and an early childhood non-license administrative option. Additionally, UNLV offers a master of education (M.Ed.) degree in early childhood with course work that meets the NDE Birth-2nd grade licensure/endorsement requirements.

**Academic Benefits**

Research has found that in the short term FDK students make more academic gains over the school year and their rate of growth is higher than their half-day kindergarten peers (Finn & Pannozzo, 2004; Guarino, Hamilton, Lockwood, Rathbun, & Hausken, 2006; Votruba-Drzal, Li-Grining, & Maldonado-Carreno 2008; Walston & West, 2004). FDK students scored higher than their half-day counterparts in all regions of the U.S. except for the West, where full-day and half-day students make comparable growth (Lee, Burkam, Ready, Honigman, & Meisels, 2006). This may be a result of fewer full-day programs offered in the West. Zvoch (2008) found children who attend FDK programs hold a higher rate of growth in literacy skills—which remain consistent through first grade—than half-day students. In addition to increases in literacy, students in FDK demonstrate increased language skills, better phonemic segmentation, and score higher on standardized tests (Brannon, 2005; Copper et al., 2010). Additionally, they show increases in mathematics (DeCicca, 2005).
It is important to note that most academic gains appear to sustain through second grade but then may begin to fade (Cooper, Allen, Patall, & Dent, 2010; Plucker & Zapf, 2005). The long-term impact of FDK has not been consistently substantiated through current research, which typically examines standardized test scores. That being said, many of the benefits of FDK (i.e. social/emotional gains, graduation rates) are typically not measured with standardized tests and have not been adequately examined in the research. Moreover, in a study of more than 17,000 students in Philadelphia, researchers found that by the time students who attended full-day kindergarten reached the third and fourth grades, they were more than twice as likely as children without any kindergarten experiences, and 26% more likely than graduates of half-day programs, to have advanced without repeating a grade (Viadero, 2002).

**Social/Emotional Benefits**

Social competence has been identified as a foundation for school readiness and academic achievement (Blair, 2002; Brigman, Lane, Lane, Lawrence, & Switzer, 1999; Raver, 2004). Children who experience difficulties with social skills are more likely to have difficulties maintaining satisfactory peer relationships, which in turn can impact learning behaviors (Vaughn, Hogan, Lancelotta, Shapiro, & Walker, 1992). Children’s social competence has been found to be a better predictor of first grade academic competence than family background or cognitive skills (Raver & Knitzer, 2002). Researchers have found that (a) following directions, (b) listening to instructions, (c) handling temper with peers and adults, and (d) conflict resolution are specific skills teachers have identified as necessary for school success (Agostin & Bain, 1997; Lane, Pierson, & Givner, 2003; Lane, Wehby, & Cooley, 2006).

Specifically, research has shown that students who attend FDK programs have better self-esteem and self-confidence (Brannon, 2005, Brewster & Railsback, 2002). Additionally, students
who attend FDK programs have been found to benefit from higher conduct marks (e.g. following rules, working well with others, etc.) (Evansville-Vanderburgh School Corporation, 1988). In an analysis of research, Plucker and Zapf (2005) reported indicators of increased independence, peer interaction, and originality. Cooper et al. (2010) found a significant increase in self-confidence and the ability to work or play with others for students who attended full-day vs. half-day programs, yet they did not find a significant difference in the levels of student independence.

**English Language Learners**

One quarter of the 75 million children living in the United States are children of immigrants, most likely speaking their native language at home. There has been an increase of 150% in English Language Learners (ELL) since 1990, with students speaking more than 400 languages (Goldenberg, 2008). The majority of ELLs are in elementary schools, and 40% of those children range in age from 3 to 8 years (Russakoff, 2011). Yet only 35% of elementary education teachers have had even one hour of professional development in working with ELLs (Russakoff). It is projected that by 2030 40% of the school age population will be ELLs (Thomas & Collier, 2002).

Unfortunately, 43% of immigrant children never participate in an early childhood program due to a variety of obstacles, including language barriers and struggles parents face getting their child to and from a program (California Tomorrow, 2004; Fortuny, Capps, Simms, & Chaudry, 2009). Seventy-five percent of ELLs who speak Spanish are at a high risk for school failure (Russakoff, 2011). When native English speakers enter kindergarten, educators expect them to learn new vocabulary words, reading, writing, math, and social sciences in addition to adjusting to new social contexts, environments, rules, schedules, adults, and peers. These challenges are compounded when a child is not able to speak the language in which instruction is
delivered. Given all the challenges native English speakers face when entering kindergarten, policymakers and educators expect ELLs to learn the same knowledge and skills while also learning to comprehend, speak, read, and write in the English language (Goldenberg, 2008).

Research suggests that ELL students will benefit from increased academic outcomes if they are able to receive extended language training at the earliest age possible (Brewster & Railsback, 2002). Providing dual language, FDK programs with children learning academic, social-emotional, and language skills in both the home language and English will improve the skills of both ELLs and English speakers (Nemeth, 2012). With the overall increase in ELL students, many schools are adopting FDK to close the gap for students who come from lower-socioeconomic and/or diverse backgrounds (Brewster & Railsback; Cooper, 2010).

**Children with Disabilities**

Prior to 1975, only 1 in 5 children with disabilities attended public school (U.S. Department of Education, 2013). Today, 302,447 five year-olds with disabilities (including 3,124 in Nevada) are receiving Free and Appropriate Public Education (FAPE). There are 133,730 five-year-olds in the country receiving FAPE in the general education classroom at least 10 hours per week, with 1,255 of these children in Nevada (U.S. Department of Education, 2013).

The FDK movement assists students with disabilities by reducing the need for remediation and grade retention and/or special education placement (Cooper et al., 2010; WestEd, 2005). Access to the general education curriculum, although guaranteed by law, is a hurdle many children with disabilities face. Full-day kindergarten programs provide these students increased access to services and supports and, thus, better preparation for elementary school (Plucker & Zapf, 2005). For children with disabilities, FDK will provide (a) more full-day general education placements, (b) reduced transitions between general and special education
classrooms, (c) decreased transition time each day from half-day public school programs to child care programs, (d) increased instruction time for educators to meet the individual needs of all students, and (e) greater opportunities for children to engage in exploration and play.

Teacher/Child Ratios

The National Association for the Education of Young Children (NAEYC) recommends adult to child kindergarten ratios as follows: a range of 1:10 (group size of 20), 1:11 (group size of 22) or 1:12 (group size of 24) (NAEYC, 2005). The Nevada Revised Statutes specify K through 2nd grade class size reduction at 1:16. However, current class sizes in many schools exceed these recommendations due to temporary statutory revisions enacted in 2010 by the Nevada Legislature, which are in place through June 30, 2015. Zvoch, Reynolds and Parker (2008) examined literacy acquisition at economically disadvantaged schools and found that class size played a large role; students in FDK classrooms with fewer than 24 students made more gains in literacy compared to half-day kindergartners with the same class size. See Table 1 for a compilation of kindergarten data from the states plus the District of Columbia, including teacher child ratios and group size.

Table 1: Compilation of Kindergarten trend data from the states plus District of Columbia

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Number of States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of states requiring that Kindergarten is offered*</td>
<td>43</td>
</tr>
<tr>
<td>Number of states requiring Full-Day Kindergarten</td>
<td>13</td>
</tr>
<tr>
<td>Number of states requiring attendance in Kindergarten</td>
<td>16</td>
</tr>
<tr>
<td>Number of states with recommended student to teacher ratio of the following**</td>
<td></td>
</tr>
<tr>
<td>15 students or fewer to 1 teacher</td>
<td>6</td>
</tr>
<tr>
<td>Maximum of 16 students to 1 teacher</td>
<td>1</td>
</tr>
<tr>
<td>Maximum of 17 students to 1 teacher</td>
<td>2</td>
</tr>
<tr>
<td>Maximum of 18 students to 1 teacher</td>
<td>5</td>
</tr>
<tr>
<td>Maximum of 20 students to 1 teacher</td>
<td>12</td>
</tr>
<tr>
<td>Maximum of 22 students to 1 teacher</td>
<td>4</td>
</tr>
<tr>
<td>More than 22 students</td>
<td>5</td>
</tr>
<tr>
<td>States with no recommendation/no data reported</td>
<td>16</td>
</tr>
</tbody>
</table>
Number of states with recommended student to teacher ratio for Full-Day Kindergarten

- Maximum of 18 students to 1 teacher: 3
- Maximum of 20 students to 1 teacher: 5
- Maximum of 22 students to 1 teacher: 3
- States with no recommendation: 1

Number of states requiring minimum hours for Kindergarten per school year***

<table>
<thead>
<tr>
<th>Hours Range</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>360 and fewer hours</td>
<td>5</td>
</tr>
<tr>
<td>400-449 hours</td>
<td>3</td>
</tr>
<tr>
<td>450-499 hours</td>
<td>7</td>
</tr>
<tr>
<td>500-549 hours</td>
<td>3</td>
</tr>
<tr>
<td>550-599 hours</td>
<td>2</td>
</tr>
<tr>
<td>720 hours</td>
<td>2</td>
</tr>
<tr>
<td>990 hours</td>
<td>1</td>
</tr>
<tr>
<td>1000-1080 hours</td>
<td>2</td>
</tr>
<tr>
<td>States without hours specified in statutes/unable to calculate data</td>
<td>36</td>
</tr>
</tbody>
</table>

Number of states requiring minimum hours for Full-Day Kindergarten per school year****

<table>
<thead>
<tr>
<th>Hours Range</th>
<th>States</th>
</tr>
</thead>
<tbody>
<tr>
<td>440 hours</td>
<td>1</td>
</tr>
<tr>
<td>810 hours</td>
<td>1</td>
</tr>
<tr>
<td>990 hours</td>
<td>1</td>
</tr>
<tr>
<td>1000-1080 hours</td>
<td>2</td>
</tr>
<tr>
<td>States without hours specified in statutes/unable to calculate data</td>
<td>7</td>
</tr>
</tbody>
</table>


*** Data retrieved from [http://nces.ed.gov/programs/statereform/tab5_1.asp](http://nces.ed.gov/programs/statereform/tab5_1.asp)


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**Overview of Full Day Kindergarten across the States**

**National Full-Day Kindergarten Trends**

As previously stated, there has been an increase in the number of students who attend FDK programs. These numbers have increased from 28% of all kindergarteners in 1977 to 76% of all kindergarteners in 2012 (Child Trends, 2012). Each state takes a different approach to requiring and funding full-day kindergarten programs. Currently only 11 states and the District of Columbia provide publicly funded mandatory FDK for all students (Children’s Defense Fund,
2013; Workman, 2013). Additionally, 34 states require at least a half-day program and 6 states have no kindergarten requirements. However, 10 of the 34 states that do not require full-day programs but do require half-day programs report a range of percentage of students attending full-day from 35-94% (Children’s Defense Fund, 2013), with most of these states over 75%. Fifteen states and the District of Columbia require children to attend kindergarten; 35 states do not (Workman, 2013). In Nevada, kindergarten is not mandatory; children are not required to attend school until they reach the age of 7 and can skip kindergarten as long as they are able to pass a developmental screening test (Children’s Defense Fund).

Full-Day and Half-Day Kindergarten Trends

Since 1977, the percentage of kindergartners enrolled in full-day rather than half-day programs has more than doubled, increasing from 28 percent of all kindergartners in 1977 to 76 percent in 2012. Increases were especially steep between 1996 and 1998 and between 2002 and 2006. (Figure 1)

- See more at: http://www.childtrends.org/?indicators=full-day-kindergarten#sthash.qjyQ1AwC.dpuf
Full-day programs vary greatly by state. The majority of states do not require full-day programs to be the same number of hours as first grade programs. The amount of time for a full-day program can vary from 4 hours per day to 7 hours per day (Children’s Defense Fund, 2012). Additionally, the recession has led many states and school districts across the country to cut funding for FDK and/or enact enrollment caps in kindergarten classrooms (Children’s Defense Fund, 2012).

The variability in kindergarten programming throughout the nation can lead to unequal access to FDK programs. This, in turn, creates a situation where some students miss opportunities to develop skills that may lead to long-term academic success, along with
additional implications for the workforce as well as society as a whole. It has been shown that high quality early childhood programs lead to an increase in economic growth and workforce production as well as a decrease in required mental health and juvenile detention systems (Heckman, 2009; National Association of Workforce Boards, 2012).

Full-Day Kindergarten across Nevada

At the start of the 2014-15 school year, there were a total of 488 FDK classrooms in Nevada (NDE, September 2014) as shown by county in Table 2. Sixty-nine elementary schools in southern Nevada offered full-day kindergarten during the 2013-2014 school year, with 53 of those tuition based.

Table 2: Number of Full-Day Kindergarten Classrooms by County

<table>
<thead>
<tr>
<th>Nevada by Counties</th>
<th>Total Number of Kindergarten Classrooms by County</th>
<th>Of Total K-Classrooms by County: How Many are Full Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carson City</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Churchill</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Clark</td>
<td>901</td>
<td>316</td>
</tr>
<tr>
<td>Douglas</td>
<td>19</td>
<td>19</td>
</tr>
<tr>
<td>Elko</td>
<td>22.5</td>
<td>11</td>
</tr>
<tr>
<td>Esmeralda</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Eureka</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Humboldt</td>
<td>18</td>
<td>14</td>
</tr>
<tr>
<td>Lander</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Lincoln</td>
<td>4.5</td>
<td>0</td>
</tr>
<tr>
<td>Lyon</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Mineral</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Nye</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Pershing</td>
<td>Storey</td>
</tr>
<tr>
<td>----------------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>3</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

Source: Nevada Department of Education, September, 2014

**Teachers’ Perceptions of Full-Day Kindergarten**

Researchers report that FDK gives teachers more time to get to know children and their families and to work with specialists and related service personnel who work with children with disabilities. It allows professionals (a) additional time for curricular planning and in depth coverage of the material, (b) additional time to assess children and document learning, (c) less stress and frustration for children, and (d) more opportunities for children to complete challenging projects (e.g. for children with disabilities or English language learners) including long-term projects (e.g. for gifted children) (Hall-Kenyon, Bingham & Korth, 2009; NEA, 2006).

**Kindergarten Funding**

Quality early childhood programs provide a 3 to 1 or higher return on educational investment: $3 for every $1 invested (NEA, 2006). States have reported cost savings in both child care subsidies and transportation due to full-day kindergarten. Children enrolled in FDK can ride the same school bus to and from school as first and second grade peers, saving states fuel, maintenance, and labor costs. For example, New Mexico “saved approximately $5.5 million per year in reduced labor, maintenance and full costs” (WestEd., 2005, p. 3). Although savings from these two services (i.e. child care subsidy and transportation) may or may not be directly transferred to FDK, states will have projected savings (WestEd, 2005). As of 2013, 12 states
allowed school districts within their state to charge tuition for the second half of the full-day kindergarten program (Children’s Defense Fund, 2013). Figure 2 provides information related to the weighted funding contributions made for kindergarten, first grade, and second grade across the states. At a minimum, ECS (2005) recommends policymakers consider making decisions that provide more funding for full-day kindergarten than half-day kindergarten, with funding equal to first grade. This funding could provide incentives to districts to offer FDK or rather, at the very least, remove the disincentives that are found in 18 states (ECS, 2005).

**Figure 2**

**State Kindergarten Funding—Weighted Contributions**

Many states fund schools using a base as a foundation for developing a funding formula. This base can then be adjusted to meet the needs of individual school districts. The following information shows the number of states funding different programs at different percentage rates. Please note that the percentage rates do not indicate equivalent dollars across the states. For example, 50% in Nevada may be different than 50% in Minnesota. Some states do not use this method of funding and therefore are included in the “no data” category.

**Data from All 50 States**

![Bar chart showing data from all 50 states](chart.png)

**Data from 11 States with Mandatory Full-Day Kindergarten**
Conclusions and Implications

Children who attend full-day kindergarten display statistically significant gains by the end of kindergarten and close the achievement gap between the highest and lowest students’ performance. Research has shown that FDK is beneficial for all children, particularly those who are at-risk for school failure and English Language Learners (Walston & West, 2004). In addition to academic benefits, there are social benefits to FDK (Walston & West; Kauerz, 2010). These gains are especially true for children attending FDK classrooms with a smaller class size of 18 to 24 children (Brannon, 2005, Brewster & Railsback, 2002).

Recommendations from the field suggest that states require all kindergarten teachers to hold a renewable certification/endorsement in early childhood education. Nevada requires all kindergarten teachers to hold a renewable certification/endorsement in either early childhood education or elementary education. Teacher preparation should include child development, diverse learning styles, social-emotional development, cultural diversity, family engagement, and effective teaching strategies (Kauerz, 2010). A Nevada certification/endorsement requires all of the above, including effective assessment practices.
States can establish professional development systems that integrate the professional development systems found within community-based, school based (K-3), and home care core components of the PreK-3 system (Kauerz, 2010). Additionally, school districts may choose to assess the quality of classroom environments, curricula, materials, and teacher child interactions to gain useful information for professional development and policy reform (Kauerz, 2010).

Nevada has made strides in early childhood education (e.g. submitting Race to the Top proposals, implementing a Quality Rating and Improvement System, and reorganizing early childhood agencies such as the early childhood advisory council, Office of Early Learning and Development, etc. under the Nevada Department of Education), but there is more to do. Expanding high-quality FDK would provide Nevada’s children with six hours of instruction and socialization, giving all of Nevada’s children a strong start and foundation. Nevada can raise the bar on the importance of FDK and change the trajectory of the state’s educational ranking of 50th in the nation (Annie Casey Foundation, 2014; Kaurez, 2010). Nevada could consider enacting policies requiring all school districts to offer FDK by integrating it into the state’s school finance formula (Kauerz) and by leveraging existing funds. Although FDK requires more teachers, additional classroom space, and materials, funding FDK at the same level as Grades 1 through 3 would reduce the educational inequities of a fee-based FDK.

Miami-Dade uses Title 1 funds (since 1988) to fund full-day kindergarten in 194 schools, and these same funds provide voluntary pre-kindergarten to 4 year-olds who attend kindergarten (Herbert, 2012). “A full-day program offers greater exposure for students,” says Marisel Elias-Miranda, director for the Office of Early Childhood programs in Miami-Dade. “Students—ELLs in particular—make significant gains in vocabulary, oral language development, and letter knowledge. Increasing participation in a high-quality program is a huge
asset for ELLs.” (Herbert, p. 55). The Clark County School District has the sixth largest population of ELLs in the country (Herbert, 2012). Nevada has the opportunity to be a leader in early childhood education by offering high-quality FDK to all children.
An Annotated List of Full-Day Kindergarten Resources

[Full-day kindergarten downloadable reports, research, and data sources.]

[The Children’s Defense Fund (CDK) released an interactive map February 1, 2013, that looks at Kindergarten in America. The CDK conducted a thorough review of the literature and state statutes, including research correspondence and calls with states’ departments of education to clarify information presented. Information presented by state is included whether or not full-day kindergarten is required, mandatory, FDK entry age, and funding source(s).]

[The individual fact sheets by state include statutory provisions, funding, standards, and assessment information about full-day kindergarten.]

[Article addresses educational outcomes, full-day vs. half-day kindergarten; child access to full-day kindergarten; importance of full-day kindergarten to Common Core State Standards; and federal and state full-day kindergarten policy recommendations.]


[In 2013, the ECS created a report by state(s) (stand alone and comparison reports) describing how states use a weighted formula to allocate funding for half-day kindergarten, full-day kindergarten, and grades 1-12. For the purposes of this document, comparisons will only be made for half-day kindergarten, full-day kindergarten, and grades 1 and 2.]

[This document addresses the importance of good teaching and learning in kindergarten including: knowing the children, building a sense of community, structure (e.g., structuring the physical environment, learning centers, classroom schedules, teacher-child interactions), and guiding learning.]


[This website provides quick and easy indicators of quality kindergarten programming.]


[The authors of this book address developmentally appropriate practices (DAP), effective DAP in kindergarten, and they answer frequently asked questions, changing the picture about how 5 and 6 year-olds learn.]


[In 2000, the NAECS/SDE revised and updated the trends in kindergarten entry and placement and concluded the trends were still unacceptable. The same position statement was endorsed by the National Association for the Education of Young Children in March 2001.]

References


Implementation of the Nevada Academic Content Standards in English Language Arts and Mathematics: Key Issues

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College of Education
University of Nevada, Las Vegas

Executive Summary

In 2010, the State of Nevada adopted new standards for what K-12 students should know and be able to do. The standards in English Language Arts (ELA) and mathematics reflect the Common Core State Standards that 45 other states had initially adopted. These new standards were developed to make students more prepared for college and the workplace, for example in ELA by having students demonstrate proficiency in reading complex fictional and nonfictional/expository text and, in mathematics, balancing computational fluency with conceptual understanding. This paper describes the new standards in some detail and some of the educational research that supports the standards. It concludes that:

- There is substantial research evidence supporting many aspects of the standards but not all.
- It is important for teachers to assess through formative methods their implementation of the new standards to improve their teaching methods and monitor student learning.
- It is also important for formative evaluation to be conducted at all other levels of the educational system (district, regional, state, and federal). Key issues that formative evaluations and policy deliberations should address include:
  - Teacher and administrator understanding of the new standards (which appear to vary widely);
  - Examining the appropriate balance of instruction between literary and expository text in light of what will best prepare students for college;
  - Improving the quantity and quality of professional development;
  - Enhancing rather than diminishing the range of choices afforded to classroom teachers in how curriculum and instruction is provided; and
  - Evaluating the effects on the educational system of new “standard-aligned” tests and the state’s existing accountability policies.

Introduction

Pursuant to NRS 389.019, the Council to Establish Academic Standards (in 2010) and the Nevada State Board of Education (in 2012) established more rigorous content standards, specifically known as the Nevada Academic Content (NVAC) standards, for each grade level.
regarding what students should know and the skills they should possess. The Nevada standards in English Language Arts (ELA) and mathematics reflect the Common Core State Standards (CCSS). This paper briefly describes the new standards and how they were developed nationally, discusses some of the educational research connected with the standards, and identifies key issues that policy deliberations and formal evaluations might ideally address.

**Nature and Development of the Common Core State Standards**

The new standards are contained in two documents that are available at the CCSS Initiative website [http://www.corestandards.org/](http://www.corestandards.org/), one for mathematics and one for ELA and “literacy in history/social studies, science, and technical subjects.” The development of the standards was led by state governors and school superintendents through their national professional organizations, jointly with a nonprofit group called Achieve.

**The Problems Addressed**

The Common Core was developed, in part, because states varied widely in the quality and breadth/depth of their standards. Many states had been encouraged by the federal government during the 1990s to develop state standards, but definitions of “proficiency”—based on state standards and measured by statewide assessments—were found to be quite variable in the last decade (CEP, 2006). The No Child Left Behind (NCLB) Act, passed in 2001, emphasized statewide testing on commercially available or state developed tests and provided negative consequences to districts and schools who failed to make “adequate yearly progress” in test scores, thereby creating an incentive for states to set proficiency levels rather low, although—as stated—there was also wide variation among states (Rothman, 2011). Many state standards were found to contain a lack of focus and coherence (Porter, Polikoff, & Smithson, 2009) and did not prepare students adequately for college (Rothman, 2013). There was also
concern with high levels of remediation needed by many students attending college and that U.S. students as a whole did not rank very high on internationally administered tests (Rothman, 2013). When U.S. standards, curricula, and textbooks were compared with those in other industrialized countries, they were criticized as being “a mile wide and an inch deep,” with a heavy emphasis on covering content material and skills that would be “on the test.” Typically the tests emphasized factual recall and did not require students to understand the material. Research has shown that students are more likely to learn material and use it in new contexts when they have an understanding of it (Bransford, Brown, & Cocking, 1999). Advocates of the new standards also argued that there needed to be a greater emphasis on critical, creative, and communication skills if students were to become adequately prepared for college or high paying jobs.

There was one other problem the new standards address. To be college- and career-ready, students need to be able to read not only literature but also informational texts. Scientific and historical knowledge is important, but these subjects have tended to receive less attention and instructional time, professional development, and evaluation of curricula, especially in elementary schools. (This situation is, in part, due to the fact that reading and mathematics were heavily assessed during the last decade.) At the secondary level, the complexity of the texts students are required to read in ELA, science, and social studies has declined in recent years (ACT, Inc., 2006), and reading assignments (other than reading the textbook) and writing assignments are relatively rare in science and social studies (Rothman, 2013). The new standards envision that, across the school curriculum, students will read a balance of both fiction and nonfiction of increasing grade-level complexity. Few prior state standards specifically addressed the complexity of texts that students are asked to read (ACT, Inc., 2006).
Development of the Standards

The CCSS were developed in several phases. First, small working groups of educators were convened to write standards of what it would mean to be college- and career-ready in the 21st century. Some of the participants were from Achieve, the College Board, and the Educational Testing Service, on the assumption that these individuals would be familiar with the research on college readiness. (There were also separate feedback groups, including education professors from research universities such as Stanford, Harvard, and Michigan State, who were familiar with various aspects of educational research.) The working groups analyzed entry-level course textbooks (i.e., for first-year college students and workplace training programs) and conducted other research to support the standards (Rothman, 2013).

The standards developed by these groups were not the complete Common Core Standards but rather standards that defined the “end points”: what students should know and the skills they should possess by the end of 12th grade. The decision to use a relatively small number of people for this task was deliberate, based on research by Coleman and Zimba (2007) that found standards initially developed through broad and open participation became too “numerous”: too many standards to fit too many agendas, resulting in a lack of depth on any one. (Note: While this situation may have been the case in many states, it was not necessarily the case in Nevada, where the old state standards were few and sparse, with many gaps.)

Once the initial guiding standards were made public, larger groups of about 100 educators (including scholars, teachers, and business representatives) developed grade-by-grade standards. Feedback was then obtained on the initial drafts from a broad segment of groups, with thousands of responses. The final Common Core documents were then released in 2010.
 Adoption of the Standards

The federal government was not involved in the development process and did not require states to adopt the new standards, but it did create strong incentives later when it offered 40 additional points (out of 500) in the *Race to the Top* initiative to states using college- and career-ready standards that were internationally benchmarked (Rothman, 2011). (*Race to the Top* was a state-by-state competition for additional federal funds; Nevada applied for but did not receive these funds.) The Secretary of Education also indicated that waivers from No Child Left Behind requirements would be granted to states who adopted college- and career-ready standards with specific statewide assessment and accountability provisions, including classifying and differentially supporting schools receiving Title 1 funds (USDE, 2012). Given these incentives, 46 states, including Nevada, adopted the CCSS as their state standards during 2010-2012.

However, the federal incentives were not the only reason that Nevada adopted the new standards. There was also dissatisfaction with Nevada’s high rates of college remediation (for example, 55.6% of high school graduates were placed in college remedial courses in 2013-14, NSHE, 2014) and the low number of individuals statewide (only 28%) with an associate’s degree or higher (Klaich & Erquiaga, 2014). Furthermore, there was dissatisfaction with the old Nevada education standards. In comparing the old with the new standards, one administrator interviewed noted that the new standards are much clearer, more detailed, have more logical and research-based progressions, and contain a good balance between skills and procedures and conceptual understanding. The old standards were sparse and, in mathematics particularly, mostly emphasized skills.
Structure and Nature of the Standards

It is important at this point to explain what the CCSS contain and exactly what was adopted by the state. The standards “define what students are expected to know and be able to do, not how teachers should teach” (CCSSI, 2010a, p. 9). Teachers may use different curricula, materials, and methods in teaching the standards, although they do impose some constraints on instruction (for example, in the order and grade levels that topics are taught). Also, some of the mathematical practices students are expected to learn, such as the ability to construct arguments and critique the reasoning of others, do tend to promote the use of some instructional methodologies over others. Nevertheless, the standards leave a lot unsaid about how teachers are to enable students to meet the standards. Both the ELA/Literacy in History & Social Studies/Science/Technical Subjects Document (hereinafter “ELA/Literacy”) and the Mathematics Document begin with a set of general expectations that are designed to make students “college and career ready.”

ELA and Literacy in Other Subjects. Page 10 of ELA/Literacy describes 10 anchor standards to which all the grade-level standards are linked in a backward-mapped fashion (see Table 1). To be college- and career-ready, students have to be able to understand and summarize the main ideas of a text and cite details to back up their arguments. They need to be able to “read closely,” when appropriate, to support their inferences, analyze how texts develop and are structured, use different points of view, and determine how specific word choices contribute to meaning. Students should be able to evaluate arguments contained in a text and to integrate and evaluate content from diverse media (e.g., pictures, films, charts and graphs). They need to be able to analyze commonalities and differences among texts with similar themes or topics “to build knowledge” (e.g., scientific or historical knowledge), because building background
knowledge makes it easier to read such texts (Recht & Leslie, 1988). These proficiencies should be demonstrated on complex literary and informational texts.

The next 89 pages of ELA/Literacy present specific grade-level standards for reading, writing, speaking and listening, and language (e.g., grammar and vocabulary). So, for example, in the first anchor standard, a first-grader should be able to ask and answer questions about key details of a literary text, whereas a sixth grader should be able to cite textual evidence about what the text says explicitly and about inferences made from the text. By grades 11-12, the evidence needs to be strong and thorough, and the student needs to identify where matters are left uncertain. The CCSS therefore define a “learning progression,” which is a description of how competencies should develop over time.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Summary of Common Core General Standards</th>
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<tbody>
<tr>
<td><strong>Anchor Standards (English/Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects)</strong></td>
<td><strong>Headings of Practice Standards (Mathematics)</strong></td>
</tr>
<tr>
<td>1. Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.</td>
<td>1. Make sense of problems and persevere in solving them.</td>
</tr>
<tr>
<td>2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.</td>
<td>2. Reason abstractly and quantitatively.</td>
</tr>
<tr>
<td>3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.</td>
<td>3. Construct viable arguments and critique the reasoning of others.</td>
</tr>
<tr>
<td>4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.</td>
<td>4. Models with mathematics.</td>
</tr>
<tr>
<td>5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a selection, chapter, science, or stanza)</td>
<td>5. Use appropriate tools strategically.</td>
</tr>
</tbody>
</table>
relate to each other and the whole.

6. Assess how point of view or purpose shapes the content and style of a text.

6. Attend to precision.

7. Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

7. Look for and make use of structure.

8. Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.

8. Look for and express regularity in repeated reasoning.

9. Analyze how two or more texts address similar themes or topics in order to build knowledge to compare the approaches the authors take.

10. Read and comprehend complex literacy and informational texts independently and proficiently.

Mathematics. The CCSS begin by listing eight general standards for mathematical practice (Table 1 lists the headings for each standard). A “mathematical practice” is something people do using mathematics in the real world, such as creating an argument, using a spreadsheet, or constructing a model. To demonstrate these practices, students need to use mathematics for problem-solving and understand the relationship between “equations, verbal descriptions, tables, and graphs” (Standard 1). They also need to look for structure and patterns.

The next 76 pages of the Mathematics Document list grade-level content standards, which are specific concepts and skills. The content standards “are a balanced combination of procedure and understanding” (CCSSI, 2010b, p. 8). Understanding is important, because, “without a flexible base from which to work, [students] may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work the mathematics, explain the mathematics
accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut” (CCSSI, 2010b, p. 8).

The first standard for kindergarten is the ability to count to 100 by ones and by tens, but students also need to understand that number names represent the quantity of something and comprehend the meaning of addition and place value. By high school, students need to understand such things as exponents and matrices, use spreadsheets, create equations that represent constraints, and solve equations algebraically and graphically. In geometry, they need to prove theorems and know formulas for shapes but also understand concepts such as congruence and similarity from the perspective of geometric transformations. They need to use algebra, geometry, and statistics to model real-world situations, for example “savings account balances” or understanding “bacterial colony growth.” These examples are meant to give readers a flavor for the Common Core State Standards in mathematics, but not described are the carefully designed learning progressions in the standards from one grade to the next.

**Nevada Academic Content (NVAC) Standards.** The NVAC for ELA and mathematics are essentially the Common Core State Standards. State regulations specifically reference the CCSS except for high school mathematics, where specific standards are described in the code. The NVAC standards can be found at: [http://www.doc.nv.gov/Curriculum_Standards/](http://www.doc.nv.gov/Curriculum_Standards/)

Districts in Nevada initially implemented various portions of the new standards from 2011 to 2015. A recent survey of districts by the Nevada Department of Education asked each district to self-assess the degree to which it has implemented the standards by aligning curricula, materials, and district assessments to the standards and providing professional development to teachers and administrators. Three districts indicated complete or near-to-complete implementation (Eureka, Washoe, and Lyon), one with incomplete (60% or less)
implementation, and the remaining 12 mostly partial implementation. The largest area of incomplete implementation was administrator preparation (4 districts) followed by assessment in ELA (3 districts). The largest area of complete implementation was assessment (5 districts) followed by teacher preparation (4 districts). It must be emphasized that these are self-reports and do not necessarily reflect the quality of preparation or alignment. More rigorous research should be conducted in this area.

**Research Evidence Underlying the Standards**

As the CCSS have been implemented throughout most of the nation, opposition to them has grown. In Nevada, the organization “Stop Common Core Nevada!” claims on its website that the standards are not research based (SCCN, 2014). In fact, there is substantial research underlying the standards, as detailed below. However, it is important to distinguish the standards themselves from instructional recommendations made in additional documents published by some of the authors of the CCSS (such as Student Achieve Partners). These additional recommendations were not necessarily formally adopted by the state of Nevada and may have varying amounts of empirical evidence in support of their effectiveness. It is also important to distinguish between the standards and specific curriculum materials based on the standards. The effectiveness of those materials may or may not have been tested.

**Mathematics.** Regarding evidence in support of the instructional assumptions underlying the standards in mathematics, there is a large body of empirical evidence supporting the need for balancing procedural and conceptual instruction (Rittle-Johnson, Siegler, & Alibali, 2001). There is also evidence on effective ways to do this (Moss & Case, 1999), although some methods require skilled and knowledgeable teachers (Ball & Forzani, 2011). There is substantial evidence for some, though not all, of the mathematical learning progressions reflected in the
standards (Daro et. al., 2011). Some are based on international comparisons and on conjectures based on the best available evidence, even though the evidence may not be conclusive. Finally, there is a section of the high school Common Core Standards related to transformational geometry; the results of empirical studies on this approach are mixed (Hirschhorn, Thompson, Usiskin, & Senk, 1995; Kort, 1971; Usiskin, 1972). (The reader should note that transformational geometry does not explicitly appear in the state regulations regarding NVAC and thus this approach does not appear to be clearly mandated in Nevada.)

**ELA and Related Subjects.** There is substantial empirical evidence supporting a balanced approach in the early elementary grades and emphasizing both phonics and reading comprehension (Pressley, 2006). There is also evidence to support how various aspects of reading (vocabulary, grammar, reading comprehension, speaking, and listening) should build on one another (CCSSI, 2010a, Appendix A).

Research has also shown that one of the largest predictors of reading comprehension is background knowledge (Recht & Leslie, 1988), and this principle is reflected in the CCSS’s emphasis on using reading, writing, and discussion of a topic or theme to gain knowledge, which is then used to understand related texts. There is also considerable evidence that the use of student-generated questions and critical thinking to understand and write about texts improves student learning and motivation (Bruning, Schraw, & Norby, 2011). Furthermore, there is evidence that teachers sometimes underestimate students’ ability to read complex texts (Shanahan & Duffett, 2013) and that sustained exposure to complex expository text is necessary to build students’ “skill, concentration, and stamina” (CCSSI, 2010a, Appendix A, p. 4). The standards do not address how to motivate students to read complex texts but leave it up to teachers’ professional judgment. There is a body of research on how best to motivate and
engage students to read (Guthrie, McRae, & Klauda, 2007; Hulleman, Godes, Hendricks, & Harackiewicz, 2010; Lent & Gilmore, 2013; Purcell-Gates, Duke, & Martineau, 2007).

One instructional approach that has generated some controversy is “close reading.” The technique is not, however, contained in the CCSS except for a mention in Anchor Standard 1 of reading texts “closely.” Rather, the close reading technique was defined and advocated by Student Achieve Partners, led by David Coleman, one of the authors of the CCSS (although close reading has been defined in different ways by different authors, Porter-Magee, 2014). In theory, the technique may help students do better in reading short passages, such as those found on tests, but not necessarily on broader literacy outcomes. A literature review showed little empirical research on the general effectiveness of this specific technique (Hinchman & Moore, 2013), although it may help students prepare for college-level English classes. With respect to learning to read, research does support the need for students to read a text closely enough that they are extracting some meaning from it (Kintsch, 1998), and this may require students to slow down their reading, reread text passages, and generate and/or answer questions about the texts. There are various methods for fostering reading comprehension (Palincsar & Brown, 1984), and close reading is but one of these.

Summary. An analysis of the available literature shows there is substantial research evidence supporting many aspects of the standards but not all. The standards do not, however, primarily prescribe specific instructional methods or a curriculum, although they do present some guiding principles and learning progressions. It is important for educators to continually assess the instructional techniques they use for their impact on student learning. Such evaluation is especially important because much of the existing research is based on carefully designed
studies using small- and medium-sized samples but not on how these innovations can be scaled up effectively for large-scale implementation.

**Formative Assessment and Evaluation of NVAC Standards Implementation**

One of the most critical components of effective implementation of the NVAC standards is formative assessment and evaluation conducted at all levels of the educational system. *Formative assessment and evaluation* involves examining how a practice, program, or policy is working and its effect on student learning outcomes, so as to make a practice, program, or policy work better. (It differs from summative assessment/evaluation, which is concerned with an overall judgment of whether the practice, program, or policy is worth continuing.) *Levels of the educational system* refer to the classroom, department, school, district/school board, region, and state and federal levels of governance.

Formative assessment at the classroom level involves teachers using a range of indicators (test results, oral questioning, observation, homework, student projects, and discussions) to assess to what extent students understand a concept or skill and to adjust their teaching methods accordingly. Research has found it to be one of the most powerful instructional practices in promoting student learning (Hattie, 2009). Formative assessment is extremely important when teachers implement new standards and new instructional innovations (Calfee, Wilson, Flannery, & Kapinus, 2014). Teachers need to understand the pedagogical principles underlying the innovation so they can make the necessary adjustments to their teaching (and the innovation) to ensure success (Brown & Campione, 1996). Without formative assessment, the effectiveness of an innovation can be undermined. Teachers need—to varying degrees—professional development on formative assessment and principles underlying new instructional techniques, and professional development programs themselves need formative assessment to ensure
teachers (and ultimately students) are learning what they need to. Districts and schools need to evaluate curriculum materials they purchase (e.g., textbooks, novels, trade books), the manner in which professional development is provided, and how reform efforts are being implemented. The state needs to continuously assess these issues, as well, but also needs to evaluate assessment and accountability systems to ensure that these systems are aligned with the new standards and are actually having positive effects, rather than negative or no effects, on other levels of the educational system, especially student learning. Likewise, the federal government needs to formatively evaluate its laws and regulations (e.g., waiver requirements) for appropriateness.

These points would be applicable even if new standards were not being implemented, but they become essential during the implementation of major reforms such as the NVAC standards. The purpose of this section is to identify some issues that a statewide formative evaluation of the NVAC implementation should address. Such an evaluation could be funded as one large study or as a series of different studies conducted by different parties that address separate issues. This list of issues was generated by preliminary research in which the author contacted administrators in all 17 Nevada school districts as well as in the Regional Professional Development Programs (RDPDs), interviewed teachers, and reviewed literature about how the CCSS are being implemented across the country.

Some Important Issues

1. **Teacher and Administrator Understanding of the Standards.** During the last 30 years, several states (e.g., California, Michigan) have implemented curriculum standards or frameworks similar to the new CCSS. Studies of these efforts have found that educators interpreted state standards in vastly different ways, often in ways inconsistent with the intent
(Cohen & Ball, 1990; Spillane, 2004). There is preliminary evidence that the implementation of the CCSS may again often be off the mark (Calfee et al., 2014). Anecdotal reports have shown teachers misinterpreting the math standards as not emphasizing or even rejecting traditional mathematical algorithms, when in fact the standards emphasize both traditional algorithms as well as alternatives that incorporate mental shortcuts or that are more understandable. Many educators are focusing upon “close reading” (mentioned briefly in Anchor Standard 1) while neglecting the call for students to read broadly, skim, and summarize texts, to write broadly, and to conduct and present research. Many teachers may be focusing on specific grade-level standards and treating them as isolated skills and competencies, without addressing how these skills should be used in combination to read, discuss, think, write, and make presentations about great works of literature and rich informational texts, and for conducting research projects (Calfee et al., 2014; Porter-Magee, 2014).

2. **Balance of Literary and Expository Text.** There is evidence that many educators have been misinterpreting the CCSS’s recommendation for a balance between informational and literary texts as applying solely to English teachers at the secondary level and not to the entire school curriculum (Shanahan & Duffett, 2013). Rather, the CCSS recommend that, across the entire school curriculum, the balance should be 50%-50% at the elementary level in grade 4 and, by grade 12, 30% literary and 70% informational. (These percentages are based on the division of test items in a national assessment known as NAEP, a rationale that some have questioned, Ravitch, 2013.) The standards state that “a significant amount of reading of informational text take place in and outside the ELA classroom” (CCSSI 2010a, p. 5, emphasis added), which is why the ELA/Literacy Document also applies to history/social
studies, science, and technical subjects. However, there have been some reports that secondary ELA teachers believe that teaching informational texts is solely their responsibility. More research is needed to determine how educators in different districts and schools are interpreting the balance requirement, what is actually occurring in different ELA classrooms, how the responsibility for teaching expository text is being shared among teachers in other subject areas, and whether ELA teachers are adequately prepared or motivated for their new responsibility. Cases demonstrating effective collaboration among ELA and other teachers should continue to be identified and, if necessary, state regulations clarified. The Nevada System of Higher Education should provide additional input as to what balance is needed, in its view, to best prepare students for college.

3. **Professional Development.** Teachers and administrators need professional development (PD) on exactly what is required by the new standards, on instructional methods for teaching the standards, and on using formative assessment to implement the standards. A recent report by the Guinn Center for Policy Priorities and Nevada Succeeds (Carreón & Rau, 2014) found that the PD system in Nevada is fragmented and of inconsistent quality. Effective PD requires follow-up sessions tied to classroom practice, but such follow-up often does not occur. Many have also made the argument that PD in Nevada is grossly underfunded. Furthermore, training of administrators is lagging that of teachers (NDE, 2014), which in some cases causes administrators to fail to understand or support new practices taught to teachers or to mandate practices or the use of instructional materials of low quality. A formative evaluation of NVAC implementation could help identify specific instructional areas where more PD is needed and how formative evaluations currently used by PD providers could be improved. Carreón and Rau found that evaluation of PD programs in
Nevada is generally weak, relying mostly on surveys of teacher satisfaction, although there are exceptions where student outcomes data are also used (e.g., SNRD, 2013). The state’s Common Core State Standards Steering Committee (2013) called for the development of a statewide, coordinated plan of action for professional development.

4. **Teacher Professional Judgment.** There is abundant research to indicate that effectively implementing instructional innovations requires professional judgment, problem-solving, and formative assessment on the part of teachers (McLaughlin, 1990; Reeves, 2014). For example, Carreón and Rau (2014) point to teacher professional learning communities as a promising model of PD when implemented well. (These involve small or large groups of teachers problem-solving with one another on how best to implement instruction.) The new standards can be implemented in ways that augment teachers’ professional judgment about how to teach the standards or in ways that diminish it (through top-down mandates from administrators). In addition to the NVAC, Nevada is also implementing new statewide assessments and school accountability systems, which further impact and potentially constrain teacher professional judgment. The alignment of these components with one another, and how teacher professionalism is being enhanced or degraded, needs to be carefully examined.

5. **Curricular and Instructional Materials.** A recent survey of school districts also identified a lack of instructional materials aligned with the NVAC as a key implementation problem (NDE, 2014). Instructional materials include textbooks and readers but also books, newspapers, and other materials that should be used to teach the NVAC standards. Because most states have adopted the CCSS, there is intense pressure on publishers to claim that their textbooks are aligned with the new standards, even when such alignment is limited and
superficial (Cristol & Ramsey, 2014). To properly implement the CCSS, materials in ELA
must be of appropriate grade-level complexity, provide ways to support struggling learners,
be engaging and interesting, be organized around themes that allow students to accumulate
background knowledge, and include activities that support writing, discussion, research
projects, and reading expository texts. The math standards call for certain learning
progressions and for learning activities that promote conceptual understanding, skill
development, and mathematical practices. Furthermore, homework activities should not be
confusing to parents, so that they can help their children. This is a tall order. Because
adopting new textbooks is expensive, some school districts have been hesitant to purchase
new materials until publishers develop higher-quality textbooks that are better aligned with
the standards than is currently the case. Some school districts are relying on teacher-
developed lessons and materials that are shared on the Internet (for example, in a platform
called Edmodo), but locally developed materials can vary greatly in quality and are not a
substitute for a carefully sequenced curriculum.

Much of the current public backlash against the CCSS can likely be traced back to
poorly designed curriculum materials that were sent home with children and found confusing
by parents. The problem in Nevada is not with the NVAC standards but with the lack of
well-designed curricula to support them. Publishers such as Pearson Education are in the
process of developing new materials, but it takes time. Although Chapter 110 of the Nevada
Revised Statutes (2011) directed the Nevada Department of Education to develop a “model
curriculum,” these materials and modules need to be evaluated formatively just like other
instructional materials. Teachers and administrators also need an opportunity to evaluate the
materials (there are currently some online resources that can be used for this purpose, see
Rothman, 2011, p.142). Any statewide formative evaluation would need to analyze what implementation problems (or successes) can be linked to the availability of high-quality instructional materials as opposed to other factors.

6. **State-Mandated Testing.** At the time of this writing, Nevada was planning to use tests developed by the Smarter Balanced Assessment Consortium (SBAC) to assess achievement in grades 3-5 and 8 and the ACT test to assess achievement in Grade 11. Four statewide, end-of-course exams in high school will also be developed in mathematics and ELA. Test developers promise that the content of these tests are aligned with the new standards, but these claims need to be evaluated. (The American Institutes for Research is currently evaluating the alignment of the SBAC.) The SBAC is composed primarily of computer-adaptive, multiple-choice tests and a limited number of classroom-based performance tasks. The performance tasks require students to do something in the classroom, such as writing an essay drawing on multiple texts, or in mathematics constructing a comprehensive written response to a problem scenario involving mathematical modeling, argumentation, and justification. The SBAC will eventually also contain some materials that can be used for classroom-level formative assessment.

Because results on state-mandated tests are used, in part, to evaluate teachers and to rate schools, there is an incentive for teachers to align their instruction to the type of items on these tests. It can be argued that the content of these tests is therefore more influential than the standards themselves. Students tend to receive less instruction on topics, skills, and subjects not covered by the tests. For example, over the past decade, intensive testing in the areas of reading and mathematics has resulted in less instruction provided in science, social
studies, art, and music (NAE, 2009). Furthermore, it is much easier to test basic skills with multiple-choice tests than it is to test critical thinking, creative, and communication skills.

Testing systems have effects on teachers’ and administrators’ educational practices. These effects can be positive, negative, or null (meaning the system has no effect, which could be viewed as positive or negative, depending on one’s point of view). Only a system that has positive effects is considered to possess what is known as systemic validity.

Although the SBAC and its contractors are performing extensive research on various aspects of their tests (for example the validity of the items, alignment with the standards, etc.), it is left to each state to conduct studies of systemic validity. Given the importance of assessment in successful implementation of the NVAC, the State of Nevada should consider funding a study of the systemic validity of the SBAC and ACT tests on the state’s educational system, because it is actually the assessment system (and not the NVAC standards themselves) that has the most direct effect on educational practices. State testing and accountability systems limit local control, and whereas the SBAC is intended to be less controlling than previous systems (which heavily skewed instruction toward lower-level basic skills and factual recall), the actual effect of implementing the SBAC and ACT tests has yet to be seen. A systemic validity study would allow policymakers to evaluate the effectiveness of the reform efforts and make adjustments in accord with agreed-upon values. In this way, a systemic validity study would be a type of formative evaluation of state education policy. See Sireci (2012) for recommendations of some elements of what a systemic validity study should include.

7. **Accountability.** A statewide systemic validity study should also address Nevada’s system of accountability. Accountability refers to the consequences that teachers, administrators, and/or school districts face depending on student test performance and other outcome
measures. Many states are struggling with the questions of (1) how to design an accountability system that is fair (given that there are many factors that affect educational outcomes that are not under educators’ control) and (2) how much to enforce accountability measures while new standards are being implemented. Some argue that teachers and administrators need a period of time to learn how to implement the standards, become familiar with the new tests, and make changes before they are held accountable (Sears, 2014). Others argue that accountability measures are needed up-front to ensure teachers take the new standards seriously. Deliberation and action on these issues should be informed by actual evidence of the effects of current policies at the classroom level. A systemic validity study is intended to provide useful information that can inform state-level policy. Evaluation should also address (1) the extent to which state-mandated assessments can and should be used formatively rather than summatively (to reward and punish schools) and (2) the extent that improvements can be made within the constraints imposed by the NCLB waiver criteria (USDE, 2012) and whether and how the waiver criteria should be modified through policy discourse or Congressional action.

**Existing Evaluations**

State-level planning and evaluation should take into account existing or planned evaluations of various aspects of the NVAC and related professional development and assessments, such as the following.

**District-Level**

1. The Washoe County School District is planning to conduct a formal evaluation of the general implementation of NVAC in the district during the 2014-15 school year. Early
implementation in Washoe County was described and evaluated by the Fordham Institute (Cristol & Ramsey, 2014).

2. The Lyon County School District is working with the WestEd organization to make sure its end-of-unit district assessments are aligned with the NVAC and then will use the results of these assessments to evaluate the standards’ implementation. Data are also being collected to evaluate “Mission Literacy,” a district initiative to ensure that students are reading and writing at deep levels consistent with the CCSS.

**State-Level**

3. WestEd is currently conducting an evaluation of the validity of Nevada’s Educator Performance Framework, which is used for teacher, administrator, and school accountability. The final report is due in June 2015.

**Consortium-Level**

4. The American Institutes for Research (AIR) is presently evaluating the alignment of the SBAC tests with the Common Core State Standards.

5. The consulting group Hanover Research in Washington D.C. is examining whether SBAC items and test structure are aligned to the CCSS and whether the test forms comprise a representative sample of Common Core content and skills. Its report should be released soon.

6. The Educational Testing Service will be conducting validity and reliability studies of the SBAC items.

7. The Fordham Institute will be studying how the SBAC tests compare to those of another state consortium, the Partnership for Assessment of Readiness for College and Careers
(PARCC), and to those of the Trends in International Mathematics and Science Study (TIMSS).

Conclusions and Recommendations

During the 2015 legislative session, the Nevada Legislature may be faced with the question of whether to continue the NVAC standards or repeal them. One argument made against the new standards is that they will result in too much uniformity in school districts' curricula (Beck, Balfe, & Olson, 2014), but the analysis here indicates that interpretation and implementation of the standards is already highly variable. Another argument is that there is a lack of evidence to support the standards, but a closer analysis of the history of their development reflects much of what is known about research-based best practices.

This paper has highlighted the critical importance of formative assessment and evaluation at every level of the educational system to successfully implement the new standards. Formative assessment is intended to identify both problems and solutions, so as to make implementation more effective. At the state level, policy deliberation and evaluation could address the following key issues: (1) assessing teachers’ and administrators’ understanding of the NVAC, (2) clarifying the expected balance between use of literary and expository texts in secondary ELA classrooms, (3) improving the quality and quantity of professional development provided to both teachers and administrators, (4) examining methods to strengthen teachers’ professional judgment and decision-making while maintaining accountability, (5) helping local education agencies monitor and evaluate the availability of high-quality instructional materials, (6) funding an evaluation of the systemic validity of new state-mandated tests aligned with the new standards, and specifically the effect of these tests on what is taught and how, and (7) determining the extent to which educators should be held accountable, and in what manner,
while they are learning to implement the new standards. The extent to which state-mandated
assessments can and should be used formatively, rather than summatively, should also be
examined.

Educators need stability to make educational reforms work (Kirp, 2013). Much time and
resources have already been invested in implementing the NVAC standards, and educators need
time to fully understand the standards and to examine how best to implement them. Formative
evaluation of the standards is needed at all levels of the educational system, providing data that
can inform the state’s educational policy-making.
Additional Resources

National

[Contains copies and summaries of the standards as well as other resources.]

[Gives a detailed history of the Common Core Standards.]


Student Achievement Partners website:  http://achievethecore.org/about-us.
[Contains information about the standards, professional development modules, research summaries, and other resources.]

[Contains various resources on instructional alignment, support, and implementation.]

Council of Chief State School Officers (CCSSO) website:  http://www.ccsso.org/What_We_Do/Standards_Assessment_and_Accountability.html
[Contains reports and other resources on the standards, assessment, and accountability.]

Smarter Balanced Assessment Consortium website:  http://www.smarterbalanced.org/
[Describes the assessment system, contains sample items, and provides a list of resources for engaging parents and the public at http://www.smarterbalanced.org/k-12-education/common-core-state-standards-tools-resources/]

State of Nevada

Nevada Department of Education:  http://www.doe.nv.gov/Curriculum_Standards/
[Website on the Nevada Academic Content Standards.]

[Contains detailed recommendations regarding many of the key issues outlined in this paper.]
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In recent years, child and adolescent mental health issues have become a significant healthcare concern across the U.S. and in Nevada. As many as 1 in 5 children and adolescents experience a diagnosable mental health disorder each year; however, fewer than half of them receive mental health treatment. Nevada has one of the highest rates of major depression and suicide in the nation and ranks 36th in the nation on per capita mental health care state funding.

In 2013, pilot programs were established for assessing and identifying children and adolescents with mental health needs in the Washoe County and Clark County school districts. School-based mental health initiatives such as these can effectively provide prevention, identification, and interventions for common child and adolescent mental health issues. Furthermore, implementing coordinated wraparound services between schools and state and local organizations can help provide a continuity of care for Nevada’s children and adolescents receiving mental health services.

Improving school- and community-based mental health services for Nevada’s youth may include:

- Making permanent the pilot mental health identification programs in the Washoe County School District and the Clark County School District and expanding this program to all Nevada public schools;
- Expanding mental health prevention and mental wellness programs in Nevada’s schools and integrating them into the K-12 curriculum;
- Expanding school-based intervention programs to help children and adolescents experiencing mental health issues;
- Hiring mental health professionals to be part of the regular staff in Nevada’s public schools; and,
- Utilizing a coordinated wraparound service model between Nevada’s public schools, state and local organizations, and community-based resources to help ensure the continuity of mental health care for Nevada’s children and adolescents.
Introduction

Child and adolescent mental health in the U.S. has recently received more attention in the media and by lawmakers, often as a result of school-based acts of violence, including school shootings. Although such tragic events involve extreme examples of individuals with mental health disorders, many of today’s children and adolescents experience mental health concerns. In fact, up to 20% of children experience symptoms of a diagnosable mental disorder each year, yet fewer than half of them receive appropriate treatment by mental health professionals (Centers for Disease Control and Prevention [CDC], 2013). Untreated mental health issues can affect children’s interpersonal and cognitive development, ultimately impacting academic success and postsecondary educational opportunities. This paper focuses on the current mental health needs of Nevada’s children and adolescents and provides information to assist policymakers in their efforts to promote mental well-being among children and adolescents attending Nevada’s schools.

Child and Adolescent Mental Health Issues

For children and adolescents experiencing mental health issues, routine activities at home and school can become major obstacles, and academic achievement and relationships with friends, teachers, siblings, and parents can be compromised. Many children and adolescents with mental health problems are not identified and, of those who are, only about 20% receive treatment. Furthermore, adolescents with untreated mental health issues have a school dropout rate of 50% (National Alliance on Mental Illness [NAMI], 2010). Research on child and adolescent mental health suggests that addressing mental health issues ultimately improves academic success (Hurwitz & Weston, 2010). Fortunately, most child and adolescent mental health disorders can be successfully treated with appropriate assessment, diagnosis, and intervention.
Common Mental Health and Behavioral Disorders

Anxiety disorders affect between 8-12% of children and adolescents in any given year. The main categories of anxiety disorders include panic disorder, generalized anxiety disorder, obsessive-compulsive disorder, social anxiety disorder, and post-traumatic stress disorder. Symptoms of anxiety may include nervousness, problems sleeping, nightmares, panic attacks, avoidance of people or places, and physical symptoms including headaches and digestive problems. Anxiety disorders commonly co-occur with other mental health issues including depression and substance abuse (Anxiety and Depression Association of America, 2014; National Institute of Mental Health [NIMH], 2009).

Depressive disorders affect up to 11% of children and adolescents, and major depressive disorder is the main cause of disability among adolescents and young adults in the U.S. (NIMH, 2014). Depression symptoms may include intense feelings of sadness, fatigue, difficulty concentrating, withdrawal from friends and family members, anger and hostility, and suicidal thoughts. Bipolar disorder, formerly termed “manic-depression,” affects up to 6% of children and adolescents and has increased significantly as a diagnosis over the past decade (Youngstrom, 2006). Bipolar disorder involves alternating cycles of depression and manic symptoms with extreme highs and lows in both emotions and behaviors. Suicide among children and adolescents with depression and bipolar disorders is a stark reality. Every year in the U.S. as many as 4,500 deaths among adolescents and young adults are attributable to suicide, with more than 150,000 attempting suicide (NAMI, 2013).

Common behavioral disorders among children and adolescents include attention deficit hyperactivity disorder (ADHD), oppositional defiant disorder, and conduct disorder. Rates of ADHD among children and adolescents are estimated to be between 5-14% (American
In general, ADHD is characterized by inattention or a lack of sustained attention on tasks and hyperactive behavior, including excessive talkativeness, fidgeting, and impulsivity. Oppositional defiant disorder affects up to 6% of children and adolescents and conduct disorder affects up to 5%. Both disorders involve inappropriate and disruptive behaviors. Bullying and fighting with peers are characteristic of oppositional defiant disorder, while persistent hostile behavior towards authority figures is found in youth with conduct disorder (American Academy of Child and Adolescent Psychiatry, 2009).

**Nevada’s Child & Adolescent Mental Health Trends**

Paralleling national trends, data on the prevalence of mental health disorders among Nevada’s children and adolescents are compelling. Between 2008 and 2012, approximately 8% of all Nevada youth experienced a major depressive episode and, of those, only 31% received treatment (Substance Abuse and Mental Health Services Administration, 2013). In a 2004 study in Southern Nevada, the Clark County Children’s Mental Health Consortium (CCCMHC) found that nearly 20% of elementary students in the Clark County School District (CCSD) needed mental health services, but only 30% of these students were getting the help they needed. Another study in 2009 found that 30% of high school students in CCSD reported experiencing symptoms of depression (CCCMHC, 2010). In the 2012-2013 school year, CCSD (2014) reported implementing 778 suicide intervention protocols. In addition, Nevada is ranked within the top five states for suicide rates (NAMI, 2006).

The Lincy Institute at the University of Nevada, Las Vegas recently compared child and adolescent mental health in Nevada with Arizona, Colorado, and Florida. Findings suggested that Nevada’s children and adolescents had slightly lower percentages of all mental and behavioral disorders but that Nevada’s youth had the highest percentage of depression. In addition,
Nevada’s children with mental health issues were less likely to receive treatment when compared to children in peer states (Denby, Owens, & Kern, 2013).

**Mental Health Providers and Access in Nevada**

Depending on the particular issue, child and adolescent mental health treatment may involve medication, behavior management, counseling, and parent/caregiver support. Mental health service providers in Nevada include psychiatrists, psychologists, clinical professional counselors, social workers, marriage and family therapists, nurse practitioners, and primary care physicians. The Nevada Division of Child and Family Services (DCFS) oversees state-funded child and adolescent mental health services, including both inpatient and outpatient treatment. The DCFS also oversees the *Wraparound in Nevada* (WIN) program designed to coordinate mental health services and to help parents and other caregivers access mental health treatment for children (Caloiaro, 2014).

The National Alliance on Mental Illness (NAMI) analyzed the access and provision of mental health services across the nation in both 2006 and 2009. In the 2006 report, Nevada received a grade of “D-” for its mental health care system. At that time, Nevada ranked 36th in the nation in per capita mental health spending, and the capacity to treat those with mental illness was identified a significant problem, with emergency rooms often the only resource for mental health treatment (NAMI, 2006). By 2009, Nevada’s grade remained essentially unchanged at a “D,” and more than $30 million in cuts to the state budget for mental health care led to reductions in clinics and services for those with mental health needs (NAMI, 2009). In the years between 2009 and 2011, Nevada reduced its mental health care budget by more than 28%, ranking at 5th in the nation for the highest cuts to mental health care (NAMI, 2011). Nevada has, however, been commended by NAMI (2009) for having a transparent mental health care system,
marked by openness to sharing performance data about programs and the provision of mental health services.

**School-Based Mental Health Initiatives**

Historically when health issues have been addressed in the school setting, the focus has primarily been placed on the physical health of children and adolescents, with their mental health often being overlooked (Denby, Owens, and Kern, 2013). However, the provision of mental health counseling services in the school setting has gained support around the country as educators and policymakers recognize the importance of both physical and mental wellbeing in the academic and career success of today’s youth (Adelman & Taylor, 2010). At the federal level, the proposed *Mental Health in Schools Act of 2013* aimed to provide more access to school-based mental health services and to help train school personnel in identifying mental health issues among children and adolescents. President Barack Obama’s *Now is the Time* initiative (The White House, 2013) emphasized the expansion of counseling in schools, improving the identification of children and adolescents with mental health issues, and improving child and adolescent access to mental health care.

The social and emotional wellbeing of children has been recognized as an important component of school readiness and success in Nevada (Horsford, 2012). During 2013, the Nevada Legislature and Governor Brian Sandoval approved a pilot program in the Washoe County School District and the Clark County School District to screen students for mental health problems (Nevada Legislative Counsel Bureau, 2013). As a result, CCSD (2014) developed a mental health project with two primary goals: 1) developing and coordinating mental health care in CCSD; and, 2) increasing collaborations with community mental health stakeholders and organizations including Communities in Schools of Nevada, the Clark County Children’s Mental
Health Consortium, the Nevada Children’s Behavioral Health Consortium, and the Nevada Department of Child and Family Services. As part of this program, CCSD (2014) aims to assess children and adolescents for mental health issues, to expand on-site health centers at more CCSD schools, and to enhance anti-bullying programs.

Providing school-based mental health services to students has numerous advantages. Research has consistently demonstrated that providing school-based mental health assessment, prevention, and intervention services:

1) Improves school success, including increased academic achievement and reduced behavior problems;
2) Creates an optimal learning environment for all students and enhances school safety;
3) Improves working conditions for teachers and other school staff members and administrators;
4) Increases the effectiveness of mental health prevention and intervention programs offered to children; and,
5) Reduces the long-term costs for treating children and adolescents with mental health problems (Hurwitz & Weston, 2010).

Addressing mental health in schools involves more than just traditional counseling or “talk therapy” provided by mental health professionals. Other ways that schools may address mental well-being include providing programs and instructional activities designed to enhance the social and emotional development of children, providing mental health information and support for families and school staff working with children experiencing mental health problems, and developing systems to evaluate and address barriers to the provision of mental health services in schools (Adelman & Taylor, 2004). Providing a continuum of mental health care in
the school setting—including prevention, intervention, and coordination with community-based support—can ultimately help foster school improvement and academic success for all students (Adelman & Taylor, 2012).

**Wraparound Services for Child & Adolescent Mental Health**

Wraparound services, also referred to as “systems of care,” involve individualized, coordinated, family-driven, and community-based support and interventions for children and adolescents with mental health issues. The wraparound delivery model has grown in popularity as schools increasingly seek coordinated ways to help address the mental health needs of youth. Today, wraparound services assist more than 100,000 children and their families in the U.S. each year, and 88% of states formally utilize wraparound methods (Bruns et al., 2011). Central components of wraparound services include team-based planning and decision-making, use of community-based services, and extensive family involvement (Walter & Petr, 2011). Wraparound teams consisting of individuals representing various agencies and stakeholders help to design, coordinate, and implement mental health services for children and their families. This case management approach helps ensure the continuity of care for children and adolescents simultaneously receiving services from schools and various community and state organizations (Bruns et al., 2010).

Wraparound models for addressing children and adolescent mental health issues are currently used in many of Nevada’s public agencies and schools. As already noted, the Nevada Department of Child and Family Services operates the Wraparound in Nevada program for children with mental health concerns. The DCFS also coordinates child and adolescent mental health wraparound services through Northern Nevada Child and Adolescent Services in Washoe County and Southern Nevada Child and Adolescent Services in Clark County (Caloiaro, 2014).
Both the Clark County Children’s Mental Health Consortium (2010) and the Washoe County Children’s Mental Health Consortium (2010) incorporate wraparound services as a central component in their strategic plans. In addition, CCSD’s (2014) Mental Health Project utilizes a systemic “response to instruction” framework that emphasizes the academic, behavioral, and mental health supports needed for various levels of student mental health concerns.

Research on the effectiveness of wraparound services suggests this approach may have significant benefits. In a recent study, children and adolescents with more severe mental health problems who received wraparound services experienced fewer behavioral problems and a reduction in mental health symptoms. Caregiver stress levels decreased as well (Painter, 2012). Another review of several existing outcome studies suggested varying degrees of helpfulness; however, future research that is more standardized may help solidify the understanding of the best practices for providing wraparound services to children and adolescents (Suter & Bruns, 2009).

**Implications for Policy and Practice**

Successfully addressing the mental health needs of Nevada’s children and adolescents will clearly involve ongoing collaboration among the state’s public school systems and state and local community mental health organizations. Both school-based mental health initiatives and wraparound services show promise in helping Nevada’s children and adolescents. In order to continue improving access and treatment for mental health issues among Nevada’s youth, the following may be considered:

- Expanding mental health prevention and mental wellness programs in Nevada’s schools and integrating them into the K-12 curriculum.
• Continuing permanently the pilot mental health assessment and identification programs in Washoe County and Clark County school districts and expanding this initiative to all of Nevada’s public schools.

• Expanding school-based intervention programs to help children and adolescents experiencing mental health issues.

• Hiring mental health professionals as regular school staff in Nevada’s public schools to provide direct mental health services to students.

• Continuing the collaborations among Nevada’s public schools, state and local organizations, and community-based resources and utilizing a coordinated wraparound services model to help ensure the continuity of mental health care for Nevada’s youth.

**Conclusion**

Over the past decade, child and adolescent mental health has increasingly become a priority healthcare issue across the U.S. and in Nevada. Fortunately, most mental health problems can be effectively treated with appropriate identification, assessment, and intervention by mental health professionals. Nevada’s children and adolescents needing mental health services may best be served through a combination of school-based mental health initiatives and coordinated wraparound services that draw on community programs and support. Ultimately, improving child and adolescent mental health services in Nevada’s schools and in state and local organizations can help provide all of Nevada’s youth with a promising future and strengthen the health of the next generation of Nevadans.
Recommended Resources

Nevada Resources


[This report provides an overview of recent changes in the structure of Nevada’s mental health system and includes numerous links to online data sources and resources on behavioral and mental health in Nevada.]


[Discusses the vision and strategic plan of the Clark County Children’s Mental Health Consortium for providing optimal mental health services to southern Nevada’s children and adolescents.]


[Reviews the primary goals and strategies of the Mental Health Project in the Clark County School District.]


[Highlights the current status of child and adolescent mental health in southern Nevada and reviews changes in mental health service delivery as a result of the Affordable Care Act.]


[Reviews the current mental health needs of Nevada’s children and adolescents and identifies current state service delivery models.]

Discusses the vision and strategic plan of the Washoe County Children’s Mental Health Consortium for providing optimal mental health services to Northern Nevada’s children and adolescents.]

National Resources


[This website provides several downloadable booklets highlighting major child and adolescent mental health issues.]


[Provides an overview of the rationale and evidence base for providing school-based mental health services to children and adolescents.]

University of California, Los Angeles, Center for Mental Health in Schools: [http://smhp.psych.ucla.edu/](http://smhp.psych.ucla.edu/)

[Comprehensive website providing information and resources on school-based mental health services.]

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The Teacher Pipeline: Recruitment and Retention

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Executive Summary

Teachers in the U.S. comprise the largest organizational group in the nation. While there has been a dramatic increase in the number of teachers who are beginners, more than 41 percent of new teachers are estimated to leave the profession within five years. The loss of new teachers plays a significant role in the inability to adequately staff schools with highly qualified teachers, as new teachers are quitting before they have fully developed their skills. One result is a large contingent of “permanent” substitute teachers. And the number of candidates entering the teacher preparation pipeline nationwide has dropped 10 percent between 2004 and 2012. The economic downturn in 2008 led to lay-offs and dismissals of teachers, which had a ripple effect on career choices that continues to deter potential candidates from entering the profession despite current teacher shortages.

The dramatic growth of K-12 student population in Nevada, and particularly in southern Nevada, and the lack of significant increase in the number of teacher education completers in the state present dilemmas that most other states are not facing. Of the 2,200 teachers hired by the Clark County School District for the 2013-2014 school year, only 900 of these teachers came from preparation programs in Nevada. If the Clark County School District alone were to hire all available Nevada teacher program completers (approximately 1,364), it would not be close to filling the district’s current needs. And this does not take into account the hiring needs of Washoe County and rural districts in Nevada.

Additionally, the U.S. does not have a systematic approach to recruiting, preparing, and retaining teachers, as many others countries do. While some states actually produce a surplus of teachers, nationally there is distribution mismatch and a shortage of teachers who are willing to work in districts where the wages are poor and the working conditions are not conducive to success. Two-thirds of U.S. teachers do not feel their profession is respected (Darling-Hammond, 2014-2015), making recruitment more difficult.

The challenges of providing an adequate supply of highly competent, diverse, and well-trained teachers for Nevada’s schools are complex. The solutions must also be multi-faceted. It is recommended that Nevada policymakers consider:

- Developing a statewide plan for recruitment and retention of teachers;
- Establishing a central data collection site;
- Securing grants and fellowships for highly qualified candidates from Nevada;
- Creating statewide mentoring and induction programs;
- Examining successful initiatives used in other states; and
- Ensuring that solutions are prioritized, targeted, and evaluated.
Introduction

Teachers in the U.S. comprise the largest organizational group in the nation (Bureau of Labor Statistics, 2011). Data from the Consortium for Policy Research in Education (Ingersoll, Merrill and Stuckey, 2014) indicate there are approximately four million teachers in the U.S. serving nearly 58 million students. The number of teachers has increased dramatically over the past decades. Much of this increase is due to the 102 percent increase in college majors in special education between 1998 and 2008. Increases in middle and high school teachers can be attributed to the need for more science and math teachers, accounting for nearly 15 percent of the growth in the teaching force. “The fastest rate of growth among mathematics and science teachers occurred during the 1990’s, before the advent of the No Child Left Behind Act” (Ingersoll, Merrill and Stuckey, 2014, p. 6).

The growth in the teaching force includes a dramatic increase in the number of teachers who are beginners. There were 147,000 first-year teachers in the U.S. in 2011. However, more than 41 percent of new teachers are estimated to leave the profession within five years (Perda, 2013 as cited in Ingersoll, 2014), although some research seems to suggest that this rate has slowed in recent years. On the whole, beginners are less likely to stay in teaching. This loss of new teachers plays a significant role in the inability to adequately staff schools with highly qualified teachers. One result is a large contingent of “permanent” substitute teachers who often end up teaching for the entire school year. This can have a profound impact on student academic achievement. Studies have found
that teacher retention varies across states, regions, school districts, and even schools within school districts. As is true within Nevada, urban and rural schools that are high minority, high poverty tend to have the highest turnover rates.

Recent studies (Sawchuk, 2014) indicate that the number of candidates entering the teacher preparation pipeline nationwide has dropped 10 percent between 2004 and 2012. In California, the number of candidates entering teacher preparation programs has dropped 74 percent since 2001-02 (Freedberg and Rice, 2014).

**The Teacher Workforce in Nevada**

There are approximately 22,000 public school teachers in Nevada. These teachers are distributed across 17 districts serving approximately 450,000 students in 685 schools. More than half of the schools in Nevada are Title 1 schools, with 19.1 percent of Nevada students in limited English proficient programs. The two largest school districts in Nevada, Clark and Washoe, serve nearly 400,000 of the total student population while the remaining 15 county districts serve 50,000 students. Issues regarding student funding, support for teachers, and educational resources are not necessarily distributed evenly throughout the state’s 17 districts (NSEA, 2011).

Nevada is experiencing a crisis in providing highly qualified teachers for every child. In spite of the increase in the number of teachers working nationwide, Nevada has experienced significant population growth of K-12 students that its teacher pipeline has been unable to meet. In fact, the state’s production of teachers is in a serious crisis.

**Challenges Unique to Nevada**

An editorial appeared in the Las Vegas Review Journal on May 22, 2014, written by Kim Metcalf, Dean of the College of Education at the University of Nevada, Las
Vegas (UNLV), and Victor Wakefield, Director of Teach for America (TFA) in Clark County. The editorial followed on the heels of the release of the 2014 Quality Counts Report in February 2014, which ranked Nevada last in the nation in terms of support for children and their success in school and life. Metcalf and Wakefield stated that one of the most important factors that needed to be addressed was the recruitment, preparation, support, and retention of highly qualified teachers for the schoolchildren of the state. They saw this as a task that would require the support of the entire community and cited numbers to bolster the seriousness of the issue. Clark County School District (CCSD) hired 2,200 teachers for the 2013-2014 school year, yet only 900 of these teachers came from preparation programs in Nevada. TFA and UNLV together produced 500 program completers. Metcalf and Wakefield concluded there was a lack of coordinated recruitment efforts across multiple organizations in the state and used the editorial as the impetus to begin a movement to increase the teacher pipeline in Nevada. Dean Metcalf committed to increase the university’s recruitment efforts and produce 1,000 new teachers each year. Mr. Wakefield pledged to produce 175 Teach for America candidates per year. They went on to call for community support for these efforts.

As part of this initiative, an inaugural meeting of a Teacher Pipeline Collaboration brought together participants from many different state, school district, higher education, and community organizations. The meeting, held at UNLV in September 2014, was designed to begin a dialogue about the teacher pipeline crisis in Nevada and to investigate the issues and identify potential solutions from multiple perspectives.

The teacher pipeline challenge in Nevada is complex. While other states may have a more stable school population, Nevada’s has been fluctuating. Despite the
economic downturn, student enrollment has increased every year in Clark County except for the 2009 and 2011 school years (CCSD HR Unit HRMS, 2014). Enrollment in 2013 increased by 3,214. Total enrollment in CCSD in 1998 was 203,777. By 2013 it stood at 314,643 (CCSD, 2014). In 2014-2015, Clark County had a deficit of 670 teacher vacancies. Projections for 2015-2016 estimate the teacher shortage to be 650 (Staci Vesneske, CCSD Human Resources, 2014). Seventy-six percent of these vacancies are in high poverty schools, Title 1 and Tier1-3.

Vesneske posited several reasons for the teacher shortage in Clark County.

- The district is still recovering from teacher layoffs in 2008 during the economic downturn. This event discouraged candidates from entering the field of teaching.
- More teachers are retiring.
- Licensure reciprocity issues with other states hinders hiring of teacher candidates.

Edith Fernandez, Associate Vice President of Community Engagement and Diversity Initiatives at Nevada State College, offered the following statistics about teacher preparation in the state for academic year 2013-2014, citing the most recent graduation numbers:

- Nevada State College: 52 graduates
- UNLV: 400-500 graduates
- Sierra Nevada College: 75 graduates
- Teach for America: 150 participants
- CCSD Alternative Routes to Licensure (ARL) Program: 150 certified
Vesneske noted that if Clark County alone were to hire all available Nevada teacher program completers (approximately 1,364), it would not be close to filling the district’s current needs. CCSD will need 2,630 new teachers for the 2015-2016 school year. This, of course, does not take into account the hiring needs of Washoe County and rural school districts.

The Teacher Pipeline Collaboration group also began the task of identifying the challenges to increasing the number of teachers prepared in Nevada, including a lack of resources and increasing demand for teachers not only from enrollment growth but also due to legislative efforts to increase full-day kindergarten and reduce class size. Other challenges were seen in the negative public perception of teachers and education, issues of quality in teacher preparation programs, teacher retirements, as well as recruitment of minority teachers. These challenges echo those reported by other states.

**Does Teacher Quality Matter?**

Does the academic ability of teacher education graduates make a difference in student academic achievement in these teachers’ classrooms? Some recent studies have begun to make a connection. The relationship to teacher academic ability, as measured by SAT scores and grades, among other factors, seems to have the greatest correlation to the achievement of students of poverty (Lankford, Loeb, McEachin, Miller, and Wyckoff, 2014). So it becomes more important, then, not to solely increase the numbers in the
teacher pipeline but also to increase the pipeline of highly qualified teachers. The good news, according to this study, is that the SAT scores of those entering teacher education programs have been steadily rising since 1999 (p. 444). The authors believe this is due in part to higher standards for teachers, more accountability, and the resulting rise in the status of the profession. However, other sources still see the lack of status of the profession as a deterrent to recruitment.

Consider, then, the effect on students who have had a permanent substitute as their classroom teacher for the year. The impact on these students’ academic achievement could be significant, especially in high-poverty schools where they may find themselves in this situation more than once during their school years. The challenge becomes one of attracting highly qualified candidates to teaching and then providing the support to help them succeed. Lankford, et al. (2014) suggest that the rising ability levels of teachers evens out the disparities among socioeconomic areas and between minority and white teachers.

**National Trends and Issues**

Linda Darling-Hammond asserts that there is not an overall shortage of teachers in the U.S. but rather a “misdistribution of qualified teachers across states and districts” (Darling-Hammond, 2010, p.2). She points out that some regions and states actually produce a surplus of teachers, but there is definitely a shortage of teachers who are willing to work in districts where the wages are poor and the working conditions are not conducive to success, and nationwide there is an actual shortage in the fields of math, science, special education, and teachers of English language learners.
Studies also indicate that there is a severe mismatch between the percentage of minority teachers compared to the national percentage of minority students in U.S. classrooms. Minority students now make up more than 40 percent of the student population in the U.S., while minority teachers comprise only 17 percent of the teaching force (Huffington Post, 11/11/2011). In places like the Clark County School District, where the minority populations are the majority, the gap is pronounced. In California, 72 percent of the students belong to minority groups while only 17 percent of teachers are minority members. Nevada and Illinois had the second and third largest gaps (Huffington Post, 2011). This challenge exists mainly because of the large growth of minority populations in schools. The percentage of minority teachers has slowly risen, but not as quickly as the student populations (Ingersoll, Merrill, and Stuckey, 2014).

Some states, like Nevada and California, have serious teacher shortages. While California at one time had a surplus of teachers, the state now estimates it will need to hire 83,000 elementary and secondary teachers over the next ten years (California Teacher Pathway Initiative, 2014). We have previously cited the dramatic needs of the Clark County School District for highly qualified teachers.

**Challenges of Recruitment**

Linda Darling-Hammond (2010) believes that the U.S. needs a systematic approach to “recruiting, preparing and retaining teachers” (p.2). Other high-achieving, industrialized nations have a central data base. Ingersoll (2009) also believes there should be a national data base to assist with teacher recruitment. Currently, school districts do their own recruitment. Most efforts are underfunded and are not guided by research into effective practices. Time and money are expended on practices that do not provide a very
high rate of return. In some cases, as once happened in Clark County, principals go out recruiting on their own, thus missing important instructional days at their schools.

The economic downturn in 2008 led to lay-offs and dismissals of teachers around the nation. Teacher preparation program numbers declined shortly afterwards. It is believed that these lay-offs may have deterred potential candidates from entering the profession despite current teacher shortages. The Clark County School District was affected by this as well. Many notices went out to teachers and, although almost all were hired back, the ripple effect impacted the enrollment of new candidates into the program at UNLV. The same phenomenon appears to have occurred nationwide (Sawchuk, 2014).

Studies in California have identified the state’s 6th year program for teacher credentialing as an obstacle to recruitment. California is the only state in the nation that has this requirement (Freedberg and Rice, 2014). In addition, the report delineates the fragmented nature of the teacher preparation programs in the state as being an impediment to recruitment.

A study by the NEA (2014) examined several strategies for teacher recruitment. It identified high school teaching academies and high school teacher cadet corps as yielding significant numbers of recruits while the college fellows program was not very effective, especially in recruiting minority candidates. Recruitment efforts with community colleges held promise.

The current national criticism of teachers, teaching, and teacher preparation programs is having an impact on recruitment efforts. Even students currently in the pipeline are demoralized when they read attacks on teachers. Other professions may have more appeal in these situations. Getting potential candidates excited about the challenges
and rewards of teaching seems to be a daunting task in these times. California’s Teacher Pathway Initiative (2014) has come to the same conclusion: it will take a united effort to increase the number of highly qualified, diverse candidates coming into the teaching profession.

**The Effect of Teacher Preparation on the Pipeline**

Public attitudes toward the nation’s public schools indicate support for changes in the preparation of teachers. How teachers are prepared could be a logical segue way into how they can best be recruited. Residency programs in teacher education can focus on preparing candidates for teaching positions in specific subjects and specific areas, especially those identified as high needs. Darling-Hammond (2010) identified some of these programs that appear to be successful. She describes the Urban Residency in Chicago as one of the most successful. This program takes mid-career individuals in non-teaching professions and places them in classrooms of highly effective teachers in high-needs schools. They work intensively with these master teachers while taking graduate classes at local universities. At the end of the year, during which they are paid $30,000, they receive a teaching credential and a license.

Darling-Hammond echoes the belief of many that intensive clinical experience is critical to producing effective teachers. While some Alternative Routes to Licensure (ARL) programs can be effective, poorly designed programs that do not provide clinical experience and mentoring do not seem to promote retention. Instead of the typical 6-8 week student-teaching experience, respondents to the 46th annual PDK/Gallup Poll suggested a one- or two-year student-teaching cycle. Another proposal would pair beginning teachers with master teachers for the first two years of their licensure. A
novice and an expert could share two teaching assignments in a co-teaching situation, with the expert filling a mentorship role often delegated to a cooperating teacher during student teaching or practicum. Such an arrangement would allow for sharing energy, expertise, and expectations and spread the possibilities for effective teaching across wider horizons.

An analysis of the teacher education practices of countries highly successful on international achievement tests shows that teacher preparation has strong governmental support (Darling-Hammond, 2010). These nations provide their teacher candidates with government support for graduate education, a year-long practice teaching in clinical practice schools associated with a university preparation program, followed by mentoring and professional development for all new teachers.

As noted previously, the recruitment of academically able candidates is an important element of effective teacher preparation programs. Some states provide grants and scholarships to attract these students. Darling-Hammond, in her Senate testimony detailed in the Forum for Education and Democracy (2010), suggested that the government should establish scholarships for highly qualified students and also fund state-of-the-art teacher education programs in high-needs areas of the country, wherein teacher candidates can work in a clinical setting in schools of poverty with strong mentoring from teacher education faculty and skilled teachers in the schools (Darling-Hammond, 2010).

**Challenges of Retention**

There are conflicting reports on the numbers of teachers who leave the profession each year. Some studies (Ingersoll, Merrill, and Stuckey, 2014) say it may be as high as
40-50 percent, with beginning teachers having the highest rates of resignation. Others dispute this figure and say that it is actually much lower (Di Carlo, 2014) and that up to 25 percent of those departing the profession may return in the future. Some districts like Philadelphia, New York, and Chicago have an extremely high rate of resignations. Di Carlo (2014) believes the numbers may have decreased during the recent recession. Teachers leave for many reasons. Clark County School District, for instance, has 60-80 retirements each month. Ingersoll, Merrill and Stuckey (2014) estimate that one-third of all teachers leave due to retirements. Other teachers leave for personal reasons, relocation, or for further education. The most troubling reason for leaving is dissatisfaction with working conditions and lack of support by administrators. Bonuses and “combat pay” are not enough to keep teachers in demoralizing, difficult situations where they do not feel they have the resources or support to be successful.

Whatever the cause, teachers who leave cost school districts a lot of money and resources for recruitment and support of new teachers. A more hidden cost to the profession at large is the fact that the largest numbers of leavers are beginning teachers, who are quitting before they have fully developed their skills (Perda, 2013 cited in Ingersoll, 2014).

A study done by the University of North Carolina (UNC, 2012) found that 70 percent of their teacher education graduates stayed for at least five years while the Teach for America candidates had less than 10 percent still teaching in five years. In Clark County, local teacher education graduates stay in teaching longer than teachers recruited from other geographic locations. As a result of these data, many districts have begun “grow your own” programs for teacher recruitment.
Darling-Hammond (2014-2015) analyzed data from international studies, including TALIS (Teaching and Learning International Survey), and discovered that American teachers “work harder under much more challenging conditions than teachers elsewhere in the industrialized world” (p.14). For example, more of our middle school teachers work in schools of poverty than anywhere else in the world. Only Malaysia and China are even close. This creates additional stress, as teachers must deal with issues of hunger and health in order to facilitate student learning. U.S. teachers also work longer days and have less time for planning, collaboration, and professional development than nations with higher achievement scores. Thus, American teachers are not on a level playing field with the rest of the industrialized nations, and test scores on international measures reflect this. Until we provide a safety net for all of children in terms of health, hunger, and poverty, the work lives of teachers will be less effective.

These surveys also showed that two-thirds of U.S. teachers did not feel their profession was respected (Darling-Hammond, 2014-2015). Recruitment is made more difficult if teachers do not believe their efforts are appreciated and either consciously or unconsciously communicate these impressions to potential candidates.

Changing the dysfunctional culture of failing schools and reconstituting them in order to provide mentoring and induction support for new teachers is a more daunting task, and yet unhappiness in these schools is a major cause of teacher resignations. If school districts want to retain quality teachers, they must arrange the environment so that teachers have the potential to be successful. When first-year teachers in middle school math classes have 45 students and 8 of them have Individual Education Programs (IEPs)
due to a disability, yet the teacher has no mentor, the odds are not good that the teacher will stay. Poor wages, lack of resources, and little incentive also cause retention issues.

**Induction: Does It Make a Difference in Retention?**

Since the early 2000s, induction programs have been implemented nationally among some schools districts and individual schools to support and guide novice teachers, with an ultimate goal of nurturing them to become career educators. Induction for beginning teachers is often cited as a necessary support to facilitate long-term teacher success. Yet induction programs vary in length and intensity, with little uniformity across districts or schools, so it is difficult to determine just how effective these programs are. A study of existing research done by Ingersoll (2012) found that there was a range of induction efforts offered in school districts, along with districts that offered no induction at all. One common approach was to provide a mentor and regular communication with the principal or other administrator. This had some impact on retention. However, a more comprehensive package that offered mentoring, regular communication with an administrator, a seminar for beginning teachers, common planning time with other teachers, a reduced teaching load for the first two years, and a classroom aide produced retention twice as high as for those teachers who had no mentoring. More systematic research needs to be done, but it appears that induction has a positive impact on teachers’ feelings of success and security.

Freedberg and Rice (2014) found in their research on California teachers that new teachers were finding it very difficult to access support programs (induction, mentoring) that were essential to their success as teachers. This support has been shown to be related to teachers staying in the classroom. They suggest that new teachers be given a reduced
workload for the first two years while mastering their professional skills through induction activities. A policy paper on state teacher induction policies (Goldrick, Osta, Barlin, and Burn, 2012) asserts that “comprehensive, multi-year induction programs accelerate the professional growth of new teachers, reduce the rate of new teacher attrition, provide a positive return on investment, and improve student learning” (p.iii).

**What Other States and School Districts Are Doing**

School districts around the nation that are impacted by teacher shortages are engaged in a number of initiatives to increase the teacher pipeline and retain new teachers. Linda Darling-Hammond (2010) examined 15 of these programs. All are designed to meet the specific needs of their situation and challenges, but some commonalities exist. She discusses state plans (Connecticut and North Carolina) that have been successful. Both states, she claims, have made significant gains in student academic achievement as indicated by both national and international test scores. Both states increased standards for licensure, provided incentives and support for professional development, eliminated emergency licensing, and, in the case of North Carolina, increased support for professional development schools. Both states also developed induction programs that included mentoring. Major salary increases, linked to standards, were introduced. Recruitment drives and incentives were introduced to attract high achieving candidates into the pipeline. Within three years, Connecticut had not only reversed its teacher shortage but was experiencing a teacher surplus. The state also offered incentives to increase staffing in areas that were difficult to staff because of location.
Darling-Hammond (2010) also describes several district-level initiatives that were successful in reducing teacher shortages and increasing teacher ability. New York City, for example, had a long history of hiring unqualified teachers and uncertified personnel. The district, at the onset of the No Child Left Behind Act (NCLB), began to focus on hiring highly qualified teachers and initiated an aggressive campaign to recruit and hire well-prepared teachers. It matched these efforts with corresponding increases in salary. Once these policies became enacted, teacher vacancies were dramatically decreased and certified teachers made up 90 percent of the teaching force.

Community School District #2 in New York City had a similar success story. As a result of attrition, retirements, and dismissals, the district began filling vacancies by recruiting from several high quality teacher preparation programs. It partnered with these programs for clinical experiences and professional development. The district ended its practice of hiring underprepared teachers. The enhanced quality of the district attracted teacher recruits, and new teachers were supported with strong mentoring (Darling-Hammond, 2010).

These are just a few of the success stories of places where teacher quality was raised, teacher shortages were curbed, and student achievement went up. None of these efforts were overnight miracles. It took hard work, determination, and a cohesive vision of what the schools should be like.

Some initiatives are in the planning or launch stage. For example, California is launching the California Teacher Pathway Initiative (2014) with a $15 million grant to pilot an alternative teacher preparation program in conjunction with a school district. The goal is to create stability in the teaching force and recruit more K-12 teachers,
particularly minority candidates. The initiative will provide employment while students are experiencing their early clinical experiences. A recent study in California (Freedberg and Rice, 2014) is calling for government, business, and philanthropic institutions to underwrite the cost of teacher preparation for highly qualified and diverse candidates. What these initiatives have in common is the ability to think outside of the box for potentially effective solutions and then to develop strategies to make them happen.

**Possible Next Steps for Nevada**

Initiatives like the Teacher Pipeline Collaboration begun in Clark County in 2014 hold great promise for involving all stakeholders in a unified vision of what the teaching force in Nevada should look like. Potential solutions are being brainstormed and prioritization has begun. The multiple viewpoints are rich and provide a full picture of the reality of life and economics in Nevada. The diversity of the group leads to a balanced view of the needs of the community in terms of diversifying the teaching pipeline. The continuation of this group is critical to making progress toward increasing the number of highly qualified teachers for all children in Nevada.

Many ideas have been discussed and some solutions are already in progress. The UNLV College of Education and other teacher preparation programs are committed to increasing the number of initial licensure students. Teach for America is increasing its pipeline. UNLV is developing a marketing and recruitment plan, “Be a Rebel Teacher,” through which it plans to more actively reach out to community college and high school students as well as to attendees at national education conferences. The university already has partnered with a local high school for dual credit courses in education, and it is looking at joint recruitment efforts with CCSD. The UNLV College of Education has also
initiated an ARL program for elementary and secondary candidates, who will be teaching after completing three courses, and has admitted the first cohort of the Troops to Teachers program. These candidates will fast-track their studies in summer 2014 and be in CCSD classrooms by fall 2015.

National University is beginning a program designed for substitute teachers who already have a bachelor’s degree to fast-track them into teacher licensure. The Clark County School District has its own ARL Program and has plans to expand it. The school district is also considering offering signing bonuses, striving to offer higher starting salaries, and targeting its recruitment activities. Community groups are making plans for recruitment efforts as well.

Future plans include securing grants and fellowships for highly qualified candidates from Nevada. These funds could come from private sources, business and industry, community groups, or the state legislature. A statewide plan for recruitment and retention and a central data collection site would be most helpful. Statewide mentoring and induction programs would also be of great utility in insuring that every new teacher receives the necessary professional support to be successful and become a career educator. A report by Goldrick, Osta, Barlin and Burn (2012) may be useful in this regard, as it examines current state policies on induction and sets out ten criteria a state plan should include.

For maximum effectiveness, it is important that solutions be prioritized and targeted. Potentially effective initiatives that have been researched and have the potential for success should be implemented and then assessed formatively and summatively to
determine how well they are working and their cost-effectiveness. It is important that all stakeholders continue to work together and share successes and challenges.

**Conclusion**

The challenges of providing an adequate supply of highly competent, diverse, and well-trained teachers for Nevada’s schools are complex. The solutions must also be multi-faceted. Not only must quality students be recruited to the profession, but they also must be retained as career teachers in order to prevent future shortages from occurring. By uniting the efforts of all the stakeholders in the educational systems in the state, creative and potentially effective solutions can be identified, piloted, and evaluated both for immediate increases in the teacher pipeline and for long-term goals as well.
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