

Northwest Regional Educational Laboratory
EVALUATION  REPORT

ACE HIGH SCHOOL

Sparks, Nevada

**Prepared by
Changhua Wang, Ed.D.**

June 2005

**Center for School, Family, & Community
Dr. Eve McDermott, Director**

This special evaluation report of ACE High School has been sponsored by Blueprint for America, an educational project of the Ronald M. Simon Family Foundation headquartered in Newport Beach, California.

**Northwest Regional Educational Laboratory
101 S. W. Main Street, Suite 500
Portland, Oregon 97204**

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I would like to thank Dr. David Hartl for guiding the development of this independent evaluation study and for his feedback on every phase of the study within a compressed time period. I also appreciate the open-minded attitudes of Forrest Gorden (principal of ACE High School) and Leigh Berdrow (vice principal of ACE High School) toward this study, for their willingness to share all the school data needed for this study, and for their efforts in setting up focus groups with students, teachers, parents, and the school board members. I would like to thank my colleague Dennis Wakeland for editing the report.

Finally, I would like to thank the sponsor of this study, Blueprint for America, an educational project of the Ronald M. Simon Family Foundation for their belief in the value of independent evaluation of school programs and for their confidence in NWREL to conduct and report on this research.

Changhua Wang

EXECUTIVE SUMMARY

Nevada's Charter School Legislation was enacted in 1997 and amended in 2003. The legislation places a geographic restriction on the number of charter schools that may be located in each county, with the exception that an unlimited number of charters may be issued for serving at-risk students.

In Nevada, charters schools are K–12 schools that are relatively autonomous schools of choice that operate under a charter or contract issued by Nevada State Board of Education or local school district. Currently, a total of 19 charter schools are in operation. The Academy for Career Education (ACE) High School (hereafter referred to as ACE or ACE High) is one of eight charter schools sponsored by the Washoe County School District in the Reno area. The charter for ACE was approved in March 2002 and the school officially opened in August of the same year.

ACE is a comprehensive high school for 10th- through 12th-grade students who are interested in a career in construction. In alignment with Nevada's and the Washoe County School District's academic standards, reading, writing, math, and science are taught not only in classrooms but also through the application of construction skills. In addition to classroom activities, students at ACE build a house each year, performing all the work themselves.

ACE has a close partnership with the local construction industry for its business expertise, financial support, and apprenticeship opportunities. A number of local business representatives serve as members of the ACE school board. The school also has articulation agreements with local community colleges so that students can earn college credits while still enrolled in the high school.

The push for forming such a charter school came from two major sources: the decline of vocational programs in the Washoe County School District and business people's concerns about the lack of a quality workforce for the construction industry. Three of the founders of the school are former vocation educators from the district and one is a local businessman in the construction industry.

The Northwest Regional Educational Laboratory, located in Portland, Oregon, was approached by Blueprint for America, a project of the Ronald M. Simon Family Foundation of Newport Beach, California, to conduct an independent evaluation of ACE High School to be sponsored by BFA. Dr. David Hartl served as the BFA liaison person

among Blueprint for America, ACE High School, and the Northwest Regional Educational Laboratory.

Given its short history of three years, ACE High School has proved to be a solid option for high school students who are not doing well in a regular school setting. This school has demonstrated that academics can be taught in connection with vocational skills. Data collected from various sources for this study clearly support the following conclusions:

- On state academic measures, the performance of ACE High School students meets and exceeds required standards for academic success in the State of Nevada.
- ACE has met the expectations of students and their parents and is on the right track for meeting the charter agreement with the sponsoring school district.
- The small size of the school, its hands-on and relevant curriculum, and its class schedule were cited by students and parents as most the important features that attract students.
- A significant number of students in the school have proved themselves to be better learners through hands-on experiences.
- Students showed great academic growth as indicated by a comparison of their grades at ACE to those at their previous schools, and by the results of the Nevada High School Proficiency Exam.
- Most graduates of ACE are employed in the construction industry and/or are taking post-secondary education classes or are in advanced training, such as apprenticeship programs.

The evaluation data also suggests that there is a series of challenges that ACE has to deal with in the future years:

- As with many other charter schools, ACE has to raise funds all the time to maintain the operation of the school. The current school site, with limited parking space and busy warehouse activities, is limited as to what students can do in the school (there is no space for sports activities, for example).
- The requirement for students to drive to the worksite on their own on daily basis has created pressure for a single-car families.

- Small size has many benefits for students, but also has its limitations such as a lack of choices for classes and extracurricular activities. Some of the problems have been alleviated by allowing students to take extra classes at other district schools. ACE has to continue to work with sponsoring district schools to provide more choices for students.
- As a public school, ACE has to keep a good balance between an open enrollment and screening students to maximize educational benefits for those students in need.
- The business side and the education side of running a school do not always go hand in hand. It will make good business sense to expand the program with more career choices and more students. However, while doing this, ACE will have to retain the most important features of the school that attract most students: small size, individual attention, and relevant curriculum with hands-on activities.

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INTRODUCTION

Nevada's charter school legislation was enacted in 1997 and amended in 2003. The legislation places geographic restrictions on the number of charter schools that may be located in each county, with the exception that an unlimited number of charters may be issued for serving at-risk students.

In Nevada, charter schools are K–12 schools that are relatively autonomous schools of choice that operate under a charter or contract issued by the Nevada State Board of Education or local school district. Currently, 19 charter schools are in operation. The Academy for Career Education (ACE) High School (hereafter referred to as ACE or ACE High) is one of eight charter schools sponsored by the Washoe County School District in the Reno area. The charter for ACE was approved in March 2002 and the school officially opened in August in the same year.

ACE, located in an industrial area, is a comprehensive, six-classroom high school for 10th- through 12th-grade students who are interested in a career in construction. In alignment with Nevada's and Washoe County School District's academic standards, reading, writing, math, and science are taught not only in classrooms but also through application of construction skills. In addition to classroom activities, students at ACE build a house each year, performing all the work themselves. Proceeds from the sale of the house go directly into the following year's school budget. Scheduled on a quarterly system, students start their school early in the morning and end their classes at noon. However, those students who are in need are allowed to stay in the school beyond noon to get additional help from teachers or simply study on their own. Starting in their junior year, students are required to spend a certain number of hours performing various types of construction work and studying at an off-campus worksite where a house is built from beginning to end. Much building material was donated by local construction companies.

ACE was designed to accommodate a maximum of 125 students. In the 2004–05 school year, 108 students are enrolled in the school. About 18 percent of the students are Hispanic, 3 percent Native American, 1 percent African American, and the rest (78%) Caucasian. About 20 students are special-education students. The school brochure makes it clear that ACE is not an at-risk school or a “dumping ground,” but rather a school that offers opportunities for those students who do not do well in a traditional school setting to excel by means of meaningful learning curricula and hands-on activities. ACE currently employs seven certified teachers, two school administrators, and one support staff.

ACE has a close partnership with the local construction industry for its business expertise, financial support, and apprenticeship opportunities. A number of local business representatives serve as members on the ACE School Board. The school also has articulation agreements with local community colleges so that students can earn college credits while still enrolled in the high school.

METHODOLOGY

To evaluate the effectiveness of ACE High School, the NWREL evaluator collected data from various sources: school administrators, school records/documents, students, parents, teachers, and school board members. The following questions were addressed in the evaluation:

- What is the history of the school?
- What is the governance structure of the school?
- What is the curriculum structure of the school?
- To what extent is the school meeting students' needs?
- To what extent is the school achieving academic success for its students?
- What are the experiences of students, parents, and teachers relating to this school?
- What are the effects of the school on students academically and personally?

To address the above questions, the evaluator visited the school in March 2005. During the visit, the evaluator interviewed school administrators and conducted focus groups with students, parents, teachers, and school board members. In May 2005, all students of the school and their parents/guardians were asked to complete a survey regarding their experiences with ACE High School. In addition, the evaluator reviewed the ACE High School charter and student assessment data.

EVALUATION FINDINGS

Student Survey and Focus Groups

A survey designed by the Northwest Regional Educational Laboratory was administered to all students at ACE High in May 2005. The survey was designed to obtain information on why students want to attend the school and to obtain students' feedback regarding their experiences with the school. Students taking the survey were assured of anonymity and were told that the information they provided would be kept confidential. Each of them was provided with an envelope in which to seal the completed survey. Before the student survey was administered, eight students were randomly selected from each grade level to participate in focus groups. Three focus groups were conducted: one with eight sophomores, one with eight juniors, and one with eight seniors. The purpose of the focus groups was to allow students to share their experiences more in depth.

Eighty-eight percent (or 95 students) of 108 students enrolled at ACE High School in 2004–05 responded to the survey. About 35 percent (33 students) of respondents were sophomores, 39 percent (37 students) juniors, and 26 percent (25 students) seniors. About 95 percent of the respondents attended regular public schools before their enrollment at ACE High School. Students heard about ACE High School through different channels, but words from friends and outreach activities conducted by ACE High School representatives were the two most important ways new students were recruited. Table 1 summarizes the percentages of students hearing about ACE High School through different channels.

Table 1
Percent of Students Hearing about
ACE High School through Different Channels

Channels	Percent
Flyer/brochure	24
School counselor	14
Teacher from my previous school	22
Friends	40
Sisters/Brothers	10
ACE High School representative	32
Other	16

Note: Students could hear about the school from more than one channel, so the percent does not total 100.

Sixty-five to 81 percent of the respondents listed the following as a “very important reason” for them to choose to enroll in ACE High School: the school curriculum (81 percent), the school schedule (79 percent), an opportunity for a new start (73 percent), and the size of the school (65 percent). Over 61 percent of the respondents reported that they were not doing well in their last school; this constitutes a very important reason for them to come to ACE High School. About 50 percent of the respondents indicated that they plan to pursue building construction as a career and about 45 percent were not sure at the time of the survey. Five percent of the respondents do not plan to pursue building construction as their career. Table 2 summarizes the percentage of student respondents who rated the importance of various reasons for enrolling in ACE High School.

Table 2
Students’ Reasons for Choosing ACE High School

Reason	Importance of reasons rated by percent of students		
	Not Important	Somewhat Important	Very Important
I am interested in the construction trade.	1.1	29.5	69.5
I like the schedule of the school.	4.2	16.8	78.9
I like the curriculum of the school.	0	18.9	81.1
I like the small size of the school.	9.5	25.3	65.3
My parents though this school is better for me.	18.9	30.5	50.5
I was not doing well in my last school .	13.8	24.5	61.7
Teachers at my last school did not help me enough.	17.0	27.7	55.3
My friends/brothers/sisters were attending this school.	64.2	16.8	18.9
This school is an opportunity for me get a new start.	4.2	23.2	72.6

When asked what is the highest level of education that they plan to obtain, 86 percent of the respondents indicated that they are going on for a postsecondary education. About 37 percent plan to go to a four-year college/university (see Table 3).

Table 3
Highest Level of Education That Respondents Plan to Obtain

Highest Level of Education	Percent of Respondents
4-year college degree or higher	36.8
Some college, but less than a 4-year college degree	22.1
2-year college degree	12.6
1-year trade school	14.7
High school diploma	12.6
GED	1.1
Less than high school	0
Total	100

Using selected characteristics of exemplary alternative schools as a framework,¹ students were asked to what extent they agree or disagree with various aspects of ACE High School in the areas of school climate, structures, supports, instruction, and goals and expectations. The following table summarizes the percentage of student respondents who agreed or strongly agreed with each of the statements relating to these characteristics. It is clear from student responses that there are clear expectations and rules set for all students; 98 percent indicated that they were clear about what they need to do to graduate. Students were very positive about the school climate; 93 percent felt they belong to this school. All student respondents reported that the school schedule works for them and hands-on learning experiences are a great plus for their learning. Thirty-eight percent of the respondents reported that they often worked with their teachers to design their own learning activities. This is a significant number of students within the school who were able to work with teachers for their specific academic needs. Ninety-three percent reported that they had received adequate help from their teachers for their academic classes.

¹ Three other characteristics—standards, staff supports, and use of data—were not included in the student survey. Questions relating to these characteristics are more appropriate for teachers and school administrators.

Table 4
Percent of Students Respondents Who Strongly Agreed or
Agreed on Various Aspects of ACE High School

	Strongly Agree	Agree	Total
School Climate			
a. I feel safe in the school.	38	59	97
b. Students at my school treat me with respect.	31	60	91
c. I feel respected by my teachers.	40	48	88
d. My teachers are truly interested in my learning.	44	45	89
e. I feel comfortable talking with my teachers.	37	47	84
f. I feel I belong to this school.	51	42	93
Structures			
g. The class size in the school is about right for me.	59	38	97
h. I am able to learn at my own pace in the school.	45	38	83
i. I have a clear plan for my learning in the school.	36	51	87
j. The school schedule works for me.	74	26	100
k. This school helps me get a clear sense of what I would like to do in the future.	42	41	83
Supports			
l. I have been provided with adequate information on education materials or resources that are available within the school.	36	59	95
m. I have been provided with adequate information on education materials or resources that are available outside our school.	26	59	85
n. I have received adequate help from my teachers for my academic classes.	40	53	93
o. My parents/guardians are actively involved in my learning in the school.	16	54	70
p. My teachers pay attention to my interests, problems, and accomplishments.	26	58	84
r. I have received a lot of individual help from my teachers.	31	44	75
Instruction			
s. My teachers are knowledgeable in the subjects they are teaching.	42	41	83
u. I often work with my teachers to design my own learning activities.	7	31	38
v. I have a lot of opportunities apply what I have learned in the school.	52	42	94
w. I often find things I have learned in one class are related to another class in the school.	34	54	88
x. Hands-on experiences provided by this school are very helpful for my learning.	79	21	100
y. I feel I am responsible for my own learning.	60	31	91
z. I am interested and involved in learning at my school.	54	42	96
Goals and Expectations			
aa. I am clear about what I have to do to graduate from the school.	63	35	98
bb. I am clear about our school rules.	61	37	98
cc. All students are expected to follow the same rules.	57	37	94
dd. The grading system in the school is clear and fair.	50	44	94

The survey included two open-ended questions for students to respond to: one asked students to list what they like most about ACE High School and the other asked them to describe what they dislike most about the school.

Comments from sophomores, juniors, and seniors were reviewed separately and no big disparities were found among the three groups regarding their views on ACE High School. Hands-on experiences and the school schedule were cited most frequently by the student respondents as to what they liked most about the school. Students enjoyed building a real house and seeing the relevance of different academic subjects used in the building trade. Most students were working part time after school and the current school schedule allows them to leave school around noon, making it possible to keep their after-school jobs. Students were also appreciative of the fact they could remain in the school in the afternoon to catch up and get additional and individual help from teachers if they are behind.

Regarding the things that students don't like about ACE High School, there are more varieties of comments. The most frequently mentioned are 1) a limited number of female students in the school, 2) the location of the campus (it is in an industrial area with many big trucks driving by; there are not enough parking spaces and space for activities), 3) no lunch program, and 4) insufficient teaching in math.

Overall, students were very positive about their experiences in the school. Many students indicated that this school was the best thing that had happened to them. One student said: "It is a great school, but I cannot wait to graduate."

Student Focus Group Summary

Results from student focus groups are generally complementary with student survey results. The majority of the students were not doing well in their previous schools and a few of them had run into some legal problems before entering ACE High School. Three female students participated in the focus group discussion. Both male and female students wish to have more girls in the school. Testimonials from students cited below clearly suggest that the school did a great job of helping students with their academics and students were having very positive experiences at ACE.

I came to ACE in the middle of my sophomore year. I barely passed the freshmen year and my counselor recommended me to come here. Now I am right on the track with grades. . . . It is [the] first time that I start to get "A"s in school.

I got arrested in the previous high school and got kicked out. ACE works so well for me in helping me recover my credits hours. I start to see the hope.

All our subjects taught at ACE pertain to building the house. We talked about the history of house building and how math and science are used in building construction. We have a lot of opportunities for hands-on learning. We understand better when the subjects are taught relevant to what we are doing every day. When you have questions, you turn to your teachers or your fellow students.

We are treated like an adult here and were given a lot of privileges. We are respected and we also have responsibilities. We are trusted with expensive equipment. In my pervious school, we were given a lot dumb rules as if we are small kids. We are too mature for that. I feel I am working at ACE and there is not time for us to goof. Here teachers talked with you and helped you make your decisions. We feel we are responsible for our own learning. We have so many activities and so much work to do every day.

My probation officer told me about this school. Last year, I came to ACE and I was kicked out after I got into a fight. After some discussions with our school principal, I was allowed to come back. I have learned a big lesson. Compared to other schools I attended, this is a much safer school. I have a daughter; she is going to be a year old in a few months. All teachers here are trying to help me graduate.

In my previous school, they seemed to set me to fail. I failed in one math class and then they sent me to another level without giving me any help. Here at ACE teachers make sure they know your stuff before you move to another level. However, rules are pretty clear here. We spent one week when we first came here talking about rules and expectations. No misconceptions at all!

All students interviewed appreciated the small size of the classes at ACE, usually around 20. Some of the students complained that math class in their previous school exceeded 80 students. The small class size at ACE allows teachers to give more individual attention to their students. Charter School Law in Nevada allows students at ACE to participate in sports activities in the school zones they came from and . Students are also allowed to take extra classes from any district school.

It was mentioned by students several times during the interview that classes at ACE end at noon but they are allowed to stay in the afternoon to get individual assistance and recover credits. Students obviously enjoyed such a schedule, especially since most of them work part time in the afternoon.

Parent Survey and Focus Group

To obtain feedback regarding the effectiveness of ACE High School, all parents of the school's students were surveyed. In addition, the NWREL evaluator conducted a focus group with 12 parents of ACE High School students in different grade levels.

Fifty-seven parents responded to the survey. Approximately 70 percent are mothers, 25 percent fathers, and rest of them identified themselves as guardians (five female and three male). Thirty-three percent of parent respondents have children at the ACE school who are sophomores, 39 percent have their children who are juniors, and the rest have children who are seniors. One in three parent respondents were involved in planning for the school. About 75 percent had post-secondary education (see Table 5).

Table 5
The Highest Level of Education Parent Respondents Have Obtained

Highest Level of Education Received	Percent of Respondents
4-year college degree or higher	15.8
Some college, but less than a four-year college degree	49.1
2-year college degree	10.5
1-year trade school	5.3
High school diploma	12.3
GED	1.8
Less than high school	5.3
Total	100

Parents' rating of their children's academic status mirrors the students' self-rating. About 14 percent of parent respondents rated their children and 12 percent of students rated themselves as "A" or "B" students in the previous school; 79 percent of parent respondents rated their children and 77 percent of students rated themselves as "A" or "B" students at ACE High School. The similar ratings given by students and parents suggests

that students were truthful in rating themselves academically and parents are fully aware of their children’s academic performance.

Table 6
Parents’ Rating of Their Children’s Academic Status in the
Previous School and at ACE High School

Academic Status	At Last School Attend (%)	At ACE High School (%)
“A” Student	1.8	33.3
“B” Student	12.3	45.6
“C” Student	40.4	19.3
“F” Student	45.6	1.8
Total	100	100

Sixty-two to 81 percent of parent respondents rated the following as “very important” reasons for their children to choose ACE High School: the curriculum of the school (81 percent), the school schedule (79 percent), an opportunity for a new start (73 percent), interest in construction trade (70 percent), small school size (65 percent), and poor performance in previous schools (62 percent). Figure 7 compares “very important” ratings by percentages of students and parents for each of the reasons. Students and parents agreed on a number of reasons as “very important” for enrolling at ACE High School. These reasons include an opportunity for a new start, the curriculum of the school, and the schedule of the school. While 88 percent of parent respondents felt this school is a better place for their children, about half of the student respondents agreed.

Table 7
Parents’ Reasons for Their Children to Choose ACE High School

Reason	Importance of reasons rated by percent of students		
	Not Important	Somewhat Important	Very Important
My child is interested in the construction trade.	3.5	45.6	50.9
My child likes the schedule of the school.	0	24.6	75.4
My child likes the curriculum of the school.	1.8	17.5	80.7
My child likes the small size of the school.	3.5	8.8	87.7
I thought this school is better for me.	1.8	14.0	84.2
My child was not doing well in my last school .	9.1	14.5	76.4

Teachers at my child’s previous school did not help me enough.	7.0	21.1	71.9
My child’s friends/brothers/sisters were attending this school.	66.1	21.4	12.5
This school is an opportunity for my child to get a new start.	5.3	19.5	75.4

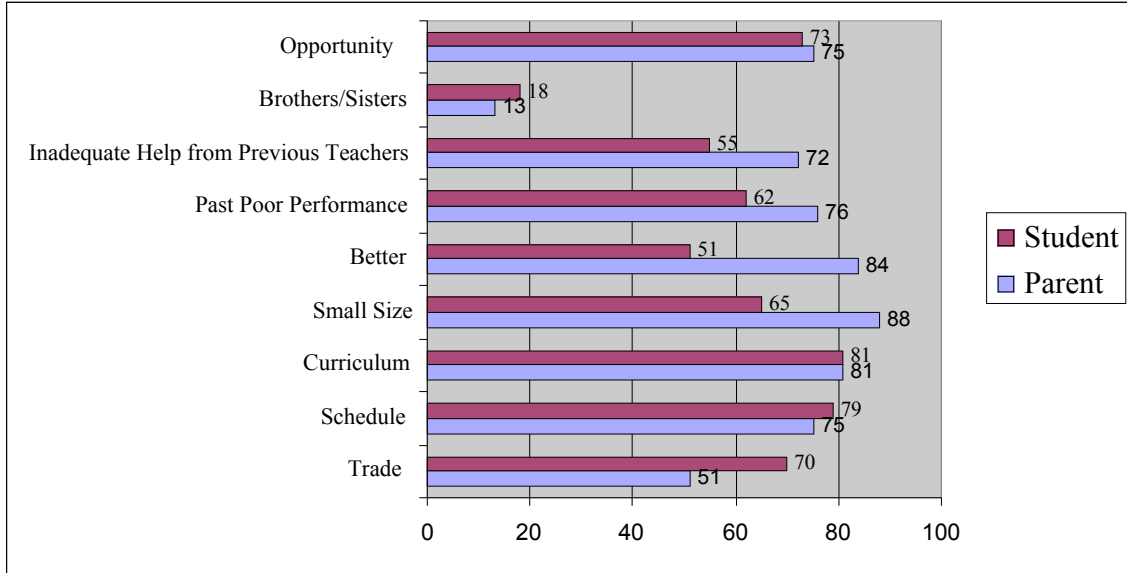


Figure 1. Parent and Student Rating of “Very Important” for Various Reasons to Enroll in ACE High School

To obtain their feedback on various aspects of the school, parents were asked to respond to a series of statements relating to their children’s experiences in ACE High School on a scale of 1 to 4 (1 = strongly disagree and 4 = strongly agree). As summarized in Table 8, parents gave high marks for ACE High School. They were very satisfied with the quality of the instruction and individual attention their children received in the school. When parents were asked whether ACE High School has met their overall expectations, 97 percent indicated “yes.”

Table 8.
Parents' Rating on Various Aspects of ACE High School

Statement	Percent of Parents		
	Strong Agree	Agree	Total
My child is motivated to learn.	35	58	93
The quality of instruction is high.	49	46	95
My child received sufficient individual attention.	59	38	97
Students are diverse.	22	61	83
The school is meeting my child's needs.	66	30	96
There is good communication between the school and my household.	61	34	95
Support services (i.e., counseling, health care, etc.) are available to my child.	28	53	81
The school is supportive of innovative practices.	33	58	91
Parents have the ability to influence the direction of the school.	32	44	76
Teachers and school leadership are accountable for student performance.	41	54	95
Expectations for students are clear in the school	67	32	99
All students are expected to follow the same rules.	70	28	98

The parent survey includes the same open-ended questions as the student survey regarding the strengths and weaknesses of ACE High School. Parents' responses echoed students' responses. Most parents were very thankful for the great opportunity that ACE has created for their kids. Most parent respondents were believers in the meaningful and relevant curriculum with a lot of hands-on learning activities. Some parents were keenly aware of their children's hands-on learning style and this is one of reasons they felt ACE High School is perfect for their kids.

Parents listed the following as strengths of ACE High School: the small size of the school with individual attention to students needs, an integrated curriculum with the construction trade as a theme, hands-on learning experiences, great communication between the school and parents, and the quality and dedication of the school staff. The following are some testimonials from parents:

ACE gives the student a specific direction and all of the classes are geared toward that direction. I like the fact that they don't have to take a lot of unneeded classes. I think this especially for boys.

Students have the opportunity to learn a trade that will help them for the rest of their lives. There is more individual attention at ACE to keeping kids from “falling through cracks.”

Finally, my child desires to go to school. To see him up on time and ready with little or no push from me is a great thing.

Staff at ACE have built a great confidence in each of their students. The time each teacher spent on each student is amazing. The opportunities await each student in the community and beyond because of the skills learned at ACE.

ACE did a great job in motivating my son and making him excited to learn. I also appreciate a strong tie between what is taught in the classroom and the application in the workplace.

I believe the size of the school is a strength. Also the hands-on construction trades skills taught at ACE are invaluable.

They [the ACE Staff] worked with the students individually and kept them on track so they remained focused. Students have got great self-esteem and sense of accomplishments via ACE High School.

The ability to take unmotivated teenagers and turn them around by giving them goals, directions, and sense of purpose have been clearly demonstrated at ACE High.

Since the student to teacher ration is low at ACE. I feel that the extra attention my child gets made him excel in his education and has contributed to the enthusiasm for going to school.

This school has given my son the ability to succeed in his academics while leaning a trade so that he may be able to enter the world already equipped. My son’s self-esteem has increased dramatically because he has been able to increase his GPA. This school is the ONLY school that has been able to match and meet his needs and learning ability. This school is truly “a life saver.”

ACE has done so much for my daughter. Not only have her grades improved immensely, she has changed her circle of friends (to “much better type of

people”), her self-esteem has sky rocketed and so much more. Her life is brand new. I have recommended ACE to many parents as well as their children.

My son is excited about graduating. I just wish that ACE was in existence when my older son dropped out of high school.

Parents also listed a number of weaknesses of ACE High School. Among them are no lunch program, the location of the school, limited parking spaces, no transportation provided for students, and limited number of female students. Like other public schools, ACE High School is open to all students. However, some parents have a different view on this and were asking for stricter screening of incoming students. Here is a comment made by one parent:

Allowing kids to attend this school (ACE High School) should be considered as a privilege and a positive experience. However, it seems that some kids are enrolled just to take up space and their disrespectful and negative attitudes make it hard for those who really want to be there. I don't think this kind of opportunity should be wasted on kids who can't succeed at a regular school because of their behavior problems, when there is a waiting list with kids who want to attend ACE and learn a trade.

A Focus Group Interview with Parents

Almost all parents who participated in the focus group were unhappy with the previous school their children attended, chiefly because they felt that their children did not get adequate help or attention. One parent told her story:

In the previous school my son attended, the algebra class has 77 students and the teacher has to use a microphone. He is not bad kid, but he was struggling in the high school and did not get the help he needed. In fact, the school never returned my calls.

Parents were impressed by the efforts ACE teachers have made in reaching out to parents. They felt they were invited to get involved in their children's education in the school. The school sends student progress reports to homes every two weeks. One parent commented:

This is first time I have an instructor call me to ask whether my daughter can move to another level of math.

Other parents echoed such comments and told the NWREL evaluator that the ACE staff not only shares with parents when their kids were in trouble, but also contacted parents when their children were doing well in the school. One parent taped to her refrigerator a postcard sent to her by one of the ACE teachers and told everyone in the family and guests that her son is doing well ACE High School.

I used to dread phone calls from the schools, always negative things. I have got a phone call from a ACE teacher and a postcard telling me how good my son is doing. Everyone in our house sees the post card on refrigerator.

Even though it is a small school, students at ACE High School are diverse, with different backgrounds and needs.

I come from California. I have adopted two kids who are not interested in going to college. ACE exposes kids to all kinds of building trades and it is a perfect school for my son. He has ADD and he learns things by doing. It was a wonderful experience for him. I am encouraged to see the kids graduate from this school and get a job.

I have a 10th grader at ACE. One thing I found about a traditional school is that they have enough staff to tend the children, but they are not equipped to deal with students who are different. My son is a non-traditional student and he thinks different than other students.

I have hearing problems and my two sons have speech problems. They pulled out of regular classrooms in their previous school. When we got here, we got a lot of support from ACE staff. They let me come in and sit in the school all day.

Parents are very supportive of the hands-on approach that ACE High School has adopted in incorporating academics into the workplace. Parents were very excited about the progress their children have been making at ACE. They were thrilled to see their children back on the track academically.

I have two kids and one boy got a GPA of 1.8 from his previous school. He is now 4.0 now at ACE High School. He has four construction companies waiting for him to graduate. He is a hands-on learner.

My son is two and half years behind in his credit hours and now he is back on track with credits at the 12th-grade level

ACE High School certainly attracts more boys than girls. Some parents would like to see more girls in the school. They felt there are a lot of facets to this school that could be applicable to everyone. They also felt there are a lot of opportunities for girls because only a few of them are in the construction business. They believe encouraging girls to get into non-traditional roles in our society is important. Parents appreciated various opportunities their children have for taking extra classes at other district schools and getting credits from local colleges while still enrolled in ACE High School.

Based on focus-group data from students and parents and survey data, not all students at ACE High School are going to pursue careers in the construction trade; some wanted to be doctors and movie makers. They reported they are still benefiting from attending ACE High School. In the view of some students and parents, the focus on construction at ACE High School is a venue or a tool to build connections between academics to the real world of the workplace, and that the focus will certainly be a plus for students who are interested in building construction as a career.

Focus Group with Teachers

The NWREL evaluator conducted a focus-group interview with all seven ACE teachers during the site visit. One teacher is one of the founders of the school. One is a special education teacher. Others are teaching different subjects at ACE High School. All were teaching at regular public schools before they came to ACE. All of them believe that ACE High School is a great option for students who are not doing well in regular high schools, but they also felt ACE was not designed for everyone. All of them share a similar educational philosophy: making education relevant for students. These teachers are on the same pay scale as they were at their sponsoring school district and are subject to the same the same teacher union agreement.

When asked about their experiences while teaching at ACE, the “collegiality” was cited most frequent. They reported that the school administrators are very open minded and supportive of innovative practices. They were encouraged to take risks to better serve students. Because of the small size of the school, teachers are able to share and cooperate more frequently. Because the school day ends at noon, teachers are able to prepare and coordinate with each other during the afternoon. Staff meetings are held every Friday afternoon.

We work as a team all the time instead of being departmentalized as we were in regular high schools. This allows us to catch those failing students

in time to provide needed help instead of letting them fall behind for a number of weeks. Teachers share information about their students.

All the teachers are familiar with Nevada academic standards and are required to align these standards to the classes they are teaching at ACE. For example, math is taught at ACE using a computerized program called “Accelerated Math” and each section of the program is aligned with Nevada math standards. English, math, science, and physics are all integrated using building construction as a theme. Students learned how to write a contract or bid proposal for a roof repair in English class; roof repair is taught along with geometry and wiring is taught during the study of electricity during physics. All students are required to be at the construction site for the house building. At the worksite, students earn points for attendance, for following safety rules, and for getting the work done properly. Students are held accountable for their work. Safety rules are enforced constantly.

We teach our students employability skills, coming to work prepared. We use industry standards in designing our assessment criteria. Students are taught safety and liability in building construction.

When asked what kind of staff development they have at ACE High School, teachers reported that are paid to attend national conferences or other trainings. Compared with their experiences in regular high schools, they enjoy more freedom in picking and choosing their staff-development opportunities. At their Friday meetings, they share what they have learned from these conferences or trainings and share materials with each other.

From the perspective of these teachers, ACE High School faces a series of challenges:

- The small size of the school has produced many benefits for students but it is a challenge to be cost effective. Limited access to resources available in the sponsoring school district has made it even more challenging. For example, ACE has to find its own school psychologist even though such specialists are available in the school district.
- The school is founded without money for facilities, which has created an enormous pressure for the overall funding for the school. The school constantly has to look for additional funding to make ends meet.
- As one teacher observes, “Even charter schools are public schools, but we are treated differently. There is a kind of stigma associated with charter school. It is an

uphill battle for us to project the correct image for ourselves. One failing charter school in Nevada could tarnish images of all charter schools in the state.”

- Some teachers in the school district are still uncertain about the growth of charter schools and perceive that charter schools are taking money away from their schools.

Nonetheless, ACE teachers are very encouraged by the support they have received from parents and community members, particularly those leaders from construction business.

Focus Group with School Board Members

The ACE High School Board consists of 14 members. One is a CPA, one is an attorney, three are educators and rest are local construction or construction-related business representatives. The board-member focus group took place before the board’s monthly meeting at ACE High School. Members describe themselves as an action committee rather than merely a policy-making board. These members are very active in raising money for the school and provide feedback on the school curriculum, particularly in areas related to construction. They provide the school with direct connections to local businesses and their expertise and training. Most business representatives sitting on the board are also business owners and they voice concerned about the lack of a quality workforce. They view this school as a great opportunity to prepare a quality workforce for construction business. They witnessed the decline of vocational programs in the school district and low ranking of the construction business as a career by young people.

ACE High School is a great opportunity for our young people to understand the needs in our industry and various careers they can pursue in this area. A construction focus curriculum will bring relevance to the classroom and lot of kids will benefit from hands-on experiences.

Board members understand the initial animosity between this charter school and the school district, but they feel the early success of the school has changed the view of some administrators in the district. Board leaders are in close communication with the new school district superintendent and some the district board members. ACE High School board members have a grant plan for the growth of the school. They proposed to two Nevada senators a plan to spend \$15 million to buy a piece of land for building a new high school that can accommodate 300 students and offer more programs. They are confident that when the school grows, they will be able to provide transportation for students and give students more choices in the school. Board members think they have

brought a business sense to the school and they are proud that ACE High School has balanced its budget each year since the beginning.

Student Academic Performance

To assess student academic performance at ACE High School, students were asked to rate their academic status in the previous schools they attended and at ACE High School, and parents were asked to rate their children in a similar manner. In addition, the NWREL evaluator examined the Nevada High School Proficiency Examination results for the ACE High School Classes of 2003, 2004, and 2005.

Student Self-rating

About 88 percent of 95 student respondents reported that they were “C” or “F” students in the schools they had previously attended. This decreased to 23 percent when they reported their academic status at ACE High School (see Table 9).

Table 9
Self-Rating of Academic Status in the
Previous School and at ACE High School

Academic Status	At Last School Attend (%)	At ACE High School (%)
“A” Student	2.1	29.5
“B” Student	9.6	47.4
“C” Student	41.5	21.1
“F” Student	46.8	2.1
Total	100	100

Parents’ Rating

The Parents’ rating of their children’s academic status mirrors the students’ self rating. About 14 percent of 57 parent respondents rated their children and 12 percent of students rated themselves as “A” or “B” students in the previous school; 79 percent of parent respondents rated their children and 77 percent of the students rated themselves as “A” or “B” students at ACE High School. The similar rating given by students and parents suggests that students were truthful in rating themselves academically and parents are fully aware of their children’s academic performance in schools.

Table 10
Parents' Rating of Their Children's Academic Status in the
Previous School and at ACE High School

Academic Status	At Last School Attended (%)	At ACE High School (%)
"A" Student	1.8	33.3
"B" Student	12.3	45.6
"C" Student	40.4	19.3
"F" Student	45.6	1.8
Total	100	100

Nevada High School Proficiency Exam

The Nevada High School Proficiency Exam is a series of norm-referenced tests for determining mathematics, reading, and writing proficiency. Currently Nevada high school students have to pass these tests to receive a high school diploma. ACE High School graduates enjoyed a very high rate of passing these tests. The following table summarizes the percentage of ACE High School graduates who demonstrated proficiency in math, reading, and writing on these tests in comparison with statewide passing average.

Table 11
Percent of ACE High School Graduates Who Passed the High School Proficiency Exam in
Comparison with the Statewide Passing Average

Class	Math		Reading		Writing	
	ACE (24 students)	State	ACE (27 students)	State	ACE (26 students)	State
2003	96%	**	100%	**	100%	**
2004	100%	55%	100%	75%	100%	80%
2005	100%	**	96%	**	100%	**

** Data unavailable

Between the classes of 2003 and 2004, 51 students graduated from ACE High School. Forty-four of them are currently employed in the construction industry and/or attending post-secondary education or advanced training such as apprenticeship programs. Two graduates joined the Marines.

CONCLUSION

Given its short history of three years, ACE High School has proved to be a solid option for high school students who do not do well in a regular school setting. This school has demonstrated that academics can be taught in connection with vocational skills. Data collected from various sources for this study clearly support the following conclusions:

- On state academic measures, the performance of ACE High School students meets or exceeds required standards for academic success in the State of Nevada.
- ACE has met the expectations of students and their parents and is on the right track for meeting the charter agreement with the sponsoring school district.
- The small size of the school, its hands-on and relevant curriculum, and its class schedule were cited by students and parents as most the important features that attract students.
- A significant number of students in the school have proved themselves to be better learners though hands-on experiences.
- Students showed great academic growth as indicated by a comparison of their grades at ACE to those at their previous schools, and by the results of the Nevada High School Proficiency Exam.
- Most graduates of ACE are employed in the construction industry and/or are taking post-secondary education classes or are in advanced training, such as apprenticeship programs.

The evaluation data also suggest that there is a series of challenges that ACE has to deal with in the future years:

- As with many other charter schools, ACE has to raise funds all the time to maintain the operation of the school. The current school site, with limited parking space and busy warehouse activities, is limited as to what students can do in the school (there is no space for sports activities, for example).
- The requirement for students to drive to the worksite on their own on daily basis has created pressure for a single-car families.

- Small size has many benefits for students, but also has its limitations, such as a lack of choices for classes and extracurricular activities. Some of the problems have been alleviated by allowing students to take extra classes in their zoned schools. ACE has to continue to work with sponsoring district schools to provide more choices for students.
- As a public school, ACE has to keep a good balance between an open enrollment and screening students to maximize educational benefits for those students in need.
- The business side and the education side of running a school do not always go hand in hand. It will make good business sense to expand the program with more career choices and more students. However, while doing this, ACE will have to retain the most important features of the school that attract most students: small size, individual attention, and relevant curriculum with hands-on activities.