

# reporter

## **NPRI's 2007 Roundtables: *Career & Technical Education in Nevada***

**by Robert Schmidt, Ph.D. and John Ziebell**

### **Executive Summary**

**P**ublic education in Nevada operates under an increasingly widespread assumption that all high school students must attend college. The reality, however, is that many of the state's high school graduates are more inclined toward — and perhaps better suited for — an education that emphasizes technical and practical skills, rather than academics. Unfortunately, the current system remains blind to this reality.

There are two basic dangers in proceeding with the current approach: First, students who would benefit most from a career-oriented education are effectively being denied the opportunity to pursue one. By some accounts, as many as 80 percent of students in the Silver State can look back, a few years after graduation, and recognize that, for them, such a course would have been superior.

Second, Nevada employers looking to add skilled, young workers to their payrolls repeatedly find themselves facing a dearth of qualified candidates.

This crisis in career and technical edu-

cation (CTE) in Nevada was the subject of four roundtable sessions held around the state by the Nevada Policy Research Institute early this year. They were designed to generate discussion about the subject of CTE in Nevada, and used a recent study conducted for the Institute by Dr. Robert Schmidt as a springboard. That study — titled, “Teaching the Forgotten Half: Career and Vocational Education in Nevada’s High Schools” — was distributed to roundtable participants in advance of the sessions.

The Schmidt study features a close look at a changing employment marketplace facing Nevada high school graduates. Given that reality, it notes, specific vocational and career training programs can provide significantly valuable alternatives to a traditional high school and college education. Under a more flexible and market-sensitive approach to career and technical education, young Nevadans will be more able to go directly from high school into successful and rewarding careers — whether technical and vocational or even strictly academic.



---

## **Nevada Policy Research Institute**

**The Nevada Policy Research Institute** is an independent research and educational organization dedicated to improving the quality of life for all residents of the Silver State through sound free-market solutions to state and local policy questions. The Institute assists policy makers, scholars, business people, the media and the public by providing non-partisan analysis of Nevada issues and by broadening the debate on questions that for many years have been dominated by the belief government intervention should be the automatic solution.

Committed to its independence, the Nevada Policy Research Institute neither seeks nor accepts any government funding. It enjoys the support of individuals, foundations and businesses who share a concern for Nevada's future and recognize the important role of sound ideas.

The Institute is a nonprofit, tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code. For more information on programs and publications of the Nevada Policy Research Institute, please contact:

**Nevada Policy Research Institute**  
1700 E. Desert Inn Road  
Suite 405A  
Las Vegas, Nevada 89169  
(702) 222-0642 ♦ Fax (702) 227-0927  
[www.npri.org](http://www.npri.org) ♦ [office@npri.org](mailto:office@npri.org)

---

**NPRI's 2007 Roundtables:**  
*Career & Technical Education  
in Nevada*

*Spring 2007*

**Conducted**  
by  
**Robert Schmidt, J.D., Ph.D.**

**Discussion Minutes**  
by  
**John Ziebell**

The tables and charts that follow are elements from Dr. Schmidt's presentation, included to help provide context for the remarks of roundtable participants.

## INTRODUCTION

**I**n his presentation of the study during the roundtable sessions, Dr. Schmidt offered a brief historical overview of the last half-century of education in the United States. He noted that in 1969, half of the U.S. workforce had less than a high school education, as training for many vocational careers occurred in the home or through apprenticeship programs.

Education reform efforts begun in the 1980s (coinciding with the publication of “A Nation at Risk”) focused on making college education an achievable goal for all, through an increased core curriculum, a broader social scope of courses, and more academic classes. Recent studies, however, indicate that these reforms actually did nothing to change the performance levels of students in the key areas of reading, math and science.

Additionally, dividing all students into two perceived groups — the “college bound” and the “workforce bound” — continues to be problematic, and especially so in Nevada. Here, almost 75 percent of ninth-graders enter the workforce with a high school credential of completion or less, and 43 percent of those who complete college report underemployment within two years.

The study makes further statistical arguments for strengthened career and technical education (CTE) tracks by noting the mismatch in education and jobs that has an overall result of downward occupational mobility, charting the radical growth of careers that require less than a college education, and wage scales indicating that with the exception of legal and medical professionals, col-

lege graduates do not earn significantly more than non-graduates.

Traditionally, a key question in any discussion of education reform is this: Are schools delivering qualified, capable candidates to the local marketplace, or are we out of touch with employment-skill demands? Schools are not necessarily getting worse, the proposal argues; the demands of the workforce are simply increasing so rapidly that the schools cannot keep up as the skill sets demanded by employers become increasingly sophisticated. Additionally, traditional attributes of the workplace itself are changing: Career pathways disappear, the “shelf life” of skills decreases, and part-time and casual employees equal or outnumber full-time workers

Dr. Schmidt’s study evaluates four successful school-to-work programs in terms of their distinguishing characteristics: the Minnesota High School CTE, the Swiss system of certification, Finland’s Transition to Work system, and India’s highly successful, government-supported software engineering program. All are shown as viable models of school-to-work programs that offer alternative paths to the workplace while always maintaining higher education as an option that can be pursued before, during, or even after career choices are made.

In his presentations, Dr. Schmidt summarized what he sees as five central implications.

First, data from the National Research Center on Career and Technical Education show that expanding academic coursework has not had a significant

**Are schools delivering qualified, capable candidates to the local marketplace, or are we out of touch with employment-skill demands?**

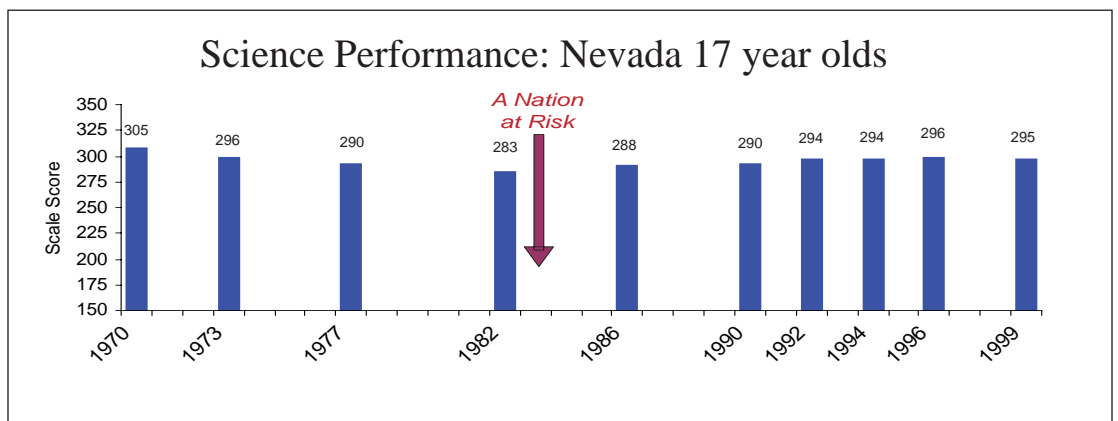
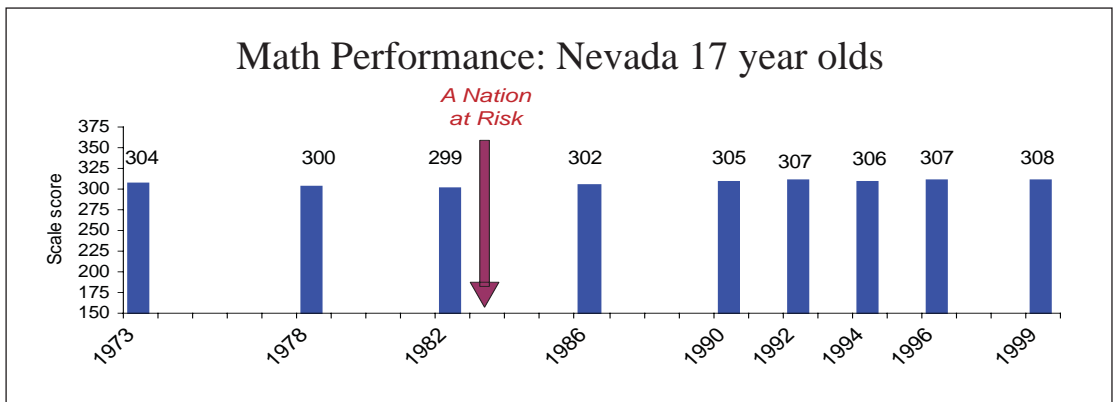
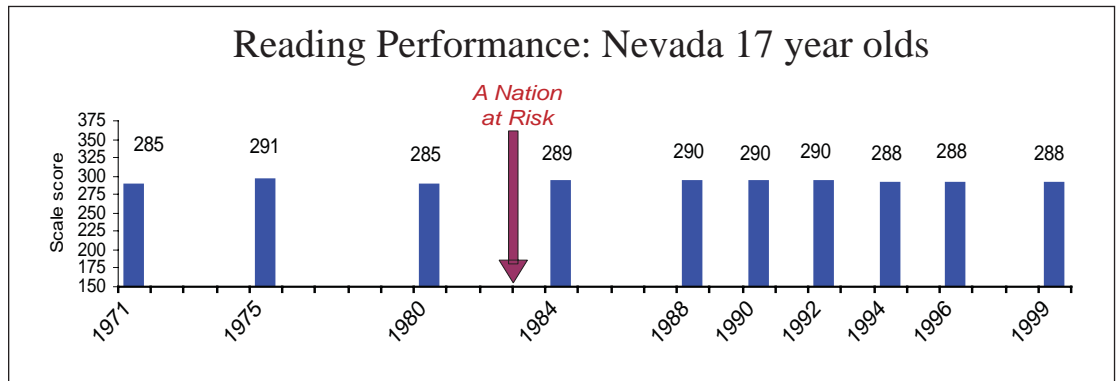
impact on academic learning, and that participation in career and technical education does not prevent students from pursuing higher education. In fact, for many students, CTE keeps kids engaged in learning.

Second, CTE and similar contextual learning strategies have the potential to impact the learning of a large segment of the population – more than three-fourths

of high school students participate.

Third, an effective CTE program helps students understand processes of work, but addresses those processes as a means to achieving broad concept understanding and transferability of skills, not just simple procedures.

Fourth, an effective education program should integrate academic instruction with technical skill development, but



instructors need to take time to help students understand both the academic concepts *and* the applications that are being used.

And fifth, college should not be seen as an “end,” but rather as a means to an end.

Citing two recently published studies on education reform, Dr. Schmidt proposed a series of specific reforms suitable for Nevada. The first study he cited was ACTE’s *Reinventing the American High School for the 21<sup>st</sup> Century*. The nine reform points of this study are:

- Establish a clear system goal of career and college readiness for all students
- Create a positive school culture that stresses personalization in planning and decision making
- Create a positive school culture that stresses personalization in relationships
- Dramatically improve how and where academic content is taught
- Create incentives for students to pursue the core curriculum in an interest-based context
- Support high-quality teaching in all content areas
- Offer flexible learning opportunities to encourage re-entry and completion
- Create system incentives and supports for connection of CTE and high school redesign efforts
- Move beyond “seat-time” and narrowly defined knowledge and skills

The other study he cited was *Tough Choices or Tough Times*, a December 2006 report published by the New Commission on the Skills of the American Workforce, which offers reform recommendations that would allegedly save \$60 billion annually. The

Commission is a blue-ribbon panel of academics, government officials and researchers from both political fronts, supported by numerous liberal funds. Reforms recommended by the *Tough Choices* report are:

- Students ready for college by age 16 (10<sup>th</sup> grade)
- Redeploy funds for teachers, childhood education and the disadvantaged
- Recruit top high school students to become teachers
- Develop curriculum for tomorrow’s needs
- Schools as independent contractors
- Restructure Total Education System
- Pupil-weighting funding formula
- Adult education
- Regional Competitiveness Councils
- New GI Bill for all

Dr. Schmidt’s report includes recommendations for reforming Nevada schools and sets forth the requirements for reform to take place. Specifically, reforms require:

- Understanding the reforms
- Evaluating world-class proven practices
- Understanding Nevada’s economy today
- Understanding Nevada’s potential
- Accepting political risk

General Nevada reforms recommended:

- Traditional education must redesign learning for all students to provide instruction that makes certain that students are prepared and have acquired the “essential skills” necessary for success in life in the 21st century
- High schools should capitalize on the experience of career and techni-

**College should not be seen as an “end,” but rather as a means to an end.**

## Nationally, Who are the Workbound?

### Of the 100% entering the 9th grade:

- ◆ 88% complete HS
- ◆ Up to 95% plan college
- ◆ 60% start college
- ◆ 8% obtain a 2-year degree
- ◆ 25% of these will complete a 4-year degree

### The “Cohort”:

- ◆ 12% of Cohort are immediately work bound *without* a HS diploma
- ◆ 35% of Cohort are now work bound *with* a HS credential
- ◆ 40% of Cohort are now work bound with *some* college
- ◆ 13% of Cohort are now work bound with a 4-year college degree

## In Nevada, Who are the Workbound?

### Of the 100% entering the 9th grade:

- ◆ 62% complete HS on time
- ◆ Up to 95% plan college
- ◆ 27% immediately start college (59% of these in a 2-year school)
- ◆ 58% of these will complete a 2- or 4-year college degree

### The “Cohort”:

- ◆ 38% of Cohort are immediately work bound *without* a HS diploma
- ◆ 73% of Cohort are now work bound *with* a HS credential
- ◆ 90% of Cohort are now work bound with a 2-year or 4-year college degree

cal education in providing a learning environment that fosters a deeper understanding of academic knowledge and essential skills

- High schools should recognize the importance of contextualizing curriculum for most students most of the time
- Encourage distance learning and collaborative models
- Market to industry, students, parents and the community
- Establish a process to create, review and revise industry certification programs
- Seek industry sponsorship and/or

other funding mechanisms

Tasks of Nevada reform:

- Realign control of schools with communities (governments, businesses & parents)
- Redesign the Nevada education system with best practices from around the world
- Re-orient vocational education to local (regional) requirements, both current and prospective
- Establish new higher vocational educational institutions – colleges designed to successfully realize higher vocational education non-academic programs



## THE DISCUSSIONS

**D**r. Schmidt's presentations to participants in the roundtables sparked discussion that featured a wide-ranging dialogue between civic leaders, members of the business community, educators, consultants and other experts. Participants were assured that, to ensure their ability to speak freely, none of their comments would be attributed.

In the four roundtable panels — two in Reno and two in Las Vegas — solid consensus prevailed on a critical point: that career and technically oriented education has a powerful ability to add context to the instruction young people receive. Moreover, when education is presented in a real-world, practical career context, it becomes significantly more effective, as students experience the subject — say, math or science — as personally relevant. Notably, when more academically marginal students get to participate

in career and technical education, their drop-out tendency declines substantially.

In the Las Vegas sessions, conversation focused on issues at both the K-12 and higher-education levels. In each case, the topic was the failure of the system to provide the kind of educational opportunities that would allow students to more directly transition into employment. Essentially all participants acknowledged that the K-12 system, especially at the high school level, was not facilitating the transition, for students who were not going on to college, into entry-level jobs. Similarly, at the state's public colleges and universities, students were rarely able to build skill sets allowing them smooth entry into more technically advanced job markets.

In the Reno sessions, participants were largely focused on creating a viable vocational/career training program at the high school level. After years of false

**When education is presented in a real-world, practical career context, it becomes significantly more effective, as students experience the subject — say, math or science — as personally relevant.**

### **Counseling: College for All Policy**

- ◆ 66% of students encouraged to go to college  
(27% of those in lower academic half)
- ◆ 31% leave college with NO credits  
(52% of those in the lower academic half)
- ◆ HS remediation rates of 46% (4yr) — 64% (2yr)
- ◆ After 10 years, 37% had obtained degree  
(14% of lower academic half)
- ◆ 43% of graduates report underemployment two years later

**All sessions agreed that Nevada's current system is failing both its kids and the state economy and needs to attend to CTE with much more constancy.**

starts and disappointments, the top local priority appeared to be finding a way to construct a genuine community “formula for success” — defined as an honest collaboration between the business community and public school districts.

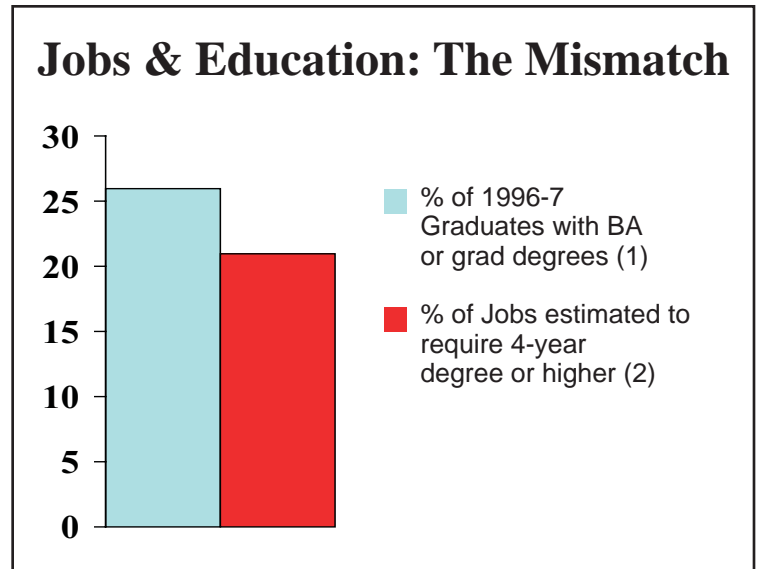
All sessions agreed that Nevada’s current system is failing both its kids and the state economy and needs to attend to CTE with

much more constancy. Notwithstanding this consensus, however, it became clear that the state’s lag in CTE is largely a self-inflicted wound. In both the Las Vegas and Reno metropolitan school districts, public school vocational education programs in recent decades had essentially been dismantled. Behind that abandonment — as also now behind the current re-embrace of CTE — was only the shifting winds of political favor.

One question Dr. Schmidt asked, to get the discussions going, was: “What are the significant implications to be drawn from the fact there has been no change over the last 25 years in Nevada reading, math and science scores?” — notwithstanding an effective doubling of per-pupil funding. Was the failure that we didn’t do it right? Or was it that we weren’t being realistic in attempting to make essentially all scores, across the board, above average?

Many roundtable participants had anecdotes to share on related subjects.

One state lawmaker noted personal experience of how youth coming out of Nevada schools can’t write. “We have new-model kids, but we continue to design schools like we did 100 years ago. We are teaching in the same way,



and institutionally driving teachers and principals back to the old ways.”

A recent remark of Microsoft founder Bill Gates was noted with approval. Gates, speaking to the National Governors Association, had observed that, “... in many schools you need radical institutional change.” Said the lawmaker, it is long past the time when merely modifying Nevada’s system will work. “Instead, the props under it need to be blown up.”

Nevada ought to look globally and see what is working elsewhere — especially in the Asian countries, it was suggested. “Our kids need to be able to go worldwide, to Asia, for example. Nevada sometimes thinks much too small.”

### **The Road to Oblivion**

Nevada’s need for a much more flexible and adaptive system for career and technical education found no overt opponents in the discussions. That the state of Nevada will face heavy costs down the road if its chronic educational failures continue was universally acknowledged. One participant even used the phrase, “road to oblivion.”

School district officials, however, nearly always avoided the “big picture”

## U.S. Occupations with the Largest Job Growth, 2004 to 2014, in Rank Order

Rank	Occupation	Employment		Change		May 2004	Training
		2002	2012	Number	%	Median wage	Source
1	Retail-Salespersons	4,256,000	4,992,000	736,000	17.3	\$18,680	ST- OJT
2	Registered Nurses	2,394,000	3,096,000	703,000	29.4	\$52,330	Bach./Associate Degree
3	Postsecondary Teachers	1,628,000	2,153,000	524,000	32.2	VH Quar-tile*	Doctoral
4	Customer Service Representatives	2,063,000	2,534,000	471,000	22.8	\$27,020	Moderate OJT
5	Janitors & Cleaners	2,374,000	2,813,000	440,000	18.5	\$18,790	ST OJT
6	Waiters & Waitresses	2,252,000	2,627,000	376,000	16.7	\$14,050	ST OJT
7	Food Prep/Serving & Fast Food	2,150,000	2,516,000	367,000	17.1	\$15,690	ST OJT
8	Home Health Aids	624,000	974,000	350,000	56.0	\$18,330	ST-OJT.
9	Nursing Aides, orderlies attendants	1,455,000	1,781,000	325,000	22.3	\$20,980	Post Sec. Voc
10	General & Operations Mgs	1,807,000	2,115,000	308,000	17.0	\$77,420	Bachelor's/Exp
11	Personal & home care aides	701,000	988,000	287,000	41.0	\$16,900	ST-OJT
12	Elementary teachers except Special Ed	1,457,000	1,722,000	265,000	18.2	\$43,160	Bachelor's deg
13	Accountants & Auditors	1,176,000	1,440,000	264,000	22.4	\$50,770	Bachelor's deg.
14	Office Clerks, general	3,138,000	3,401,000	263,000	8.4	\$22,770	ST-OJT
15	Laborers -freight, stock, movers hand	2,430,000	2,678,000	248,000	10.2	\$20,120	ST-OJT
16	Receptionists & Information clerks	1,133,000	1,379,000	246,000	21.7	\$21,830	ST-OJT
17	Landscape & Groundskeeping Workers	1,177,000	1,407,000	230,000	19.5	\$20,420	ST OJT
18	Truck drivers, heavy & tractor trailer	1,738,000	1,962,000	223,000	12.9	\$33,520	Moderate-OJT
19	Computer Software engi-neers	460,000	682,000	222,000	48.4	\$74,980	Bachelor's
20	Maintenance / Repair workers, general	1,332,000	1,533,000	202,000	15.2	\$30,710	Moderate--OJT
21	Medical Assistants	387,000	589,000	202,000	52.1	\$24,610	Moderate-OJT
22	Exec. Secretaries & Adm. Assistants	1,547,000	1,739,000	192,000	12.4	\$34,970	Moderate-OJT
23	Sales Reps, Wholesale/Manufacturing	1,454,000	1,641,000	187,000	12.9	\$45,400	Moderate-OJT
24	Carpenters	1,349,000	1,535,000	186,000	13.8	\$34,900	Long -term-OJT
25	Teacher assistants	1,296,000	1,478,000	183,000	14.1	\$19,410	ST-OJT
26	Child Care Workers	1,280,000	1,456,000	176,000	13.8	\$16,760	ST-OJT
27	Food preparation workers	889,000	1,064,000	175,000	19.7	\$16,710	ST-OJT

**That the state of Nevada will face heavy costs down the road if its chronic educational failures continue was universally acknowledged.**

**Business community participants saw the success of the ACE charter school in Sparks as an important model for how Nevada could successfully implement career and technical education statewide.**

arguments coming at them. Regularly upbeat, their focus was on recent or pending projects that they presented as quite promising. In response to the concern that, even at the best, the new district programs being designed would only scratch the surface of the need, they were usually silent. On other occasions they would smoothly move to a “What can we do?” demeanor, while touching on the now-familiar argument that Nevadans can never expect significant improvement in their public education system until and unless the districts begin receiving much more tax money and then sit back.

In one instance, however, that recitation — for years a refrain in all public education discussions — elicited a sharp challenge from a participating business leader. Indicating some exasperation at district officials’ easy, habitual recourse to this excuse, this seminar participant energetically and emphatically promised to personally find the funding for expanded and superior CTE education in the district. Notably, the district officials did not immediately rush to take up that

offer or even start seeking to explore it. Instead, they appeared flustered and at a loss. To some observers the episode suggested that, even in some of Nevada’s best school districts today, resistance and paralysis have become reflexive. Yet more than any other kind of education, CTE requires partnerships between the business community and schools.

### **Partnership models**

Especially in the Reno discussions, it was clear that business community participants saw the success of the ACE charter school in Reno — officially, the Academy of Career Instruction — as an important model for how Nevada could successfully implement career and technical education statewide. Yet the reticence of district officials on that front was clear. Evidently, the small amount of exemption from district controls that charter schools are allowed under Nevada law continues to be seen by districts as problematic.

Another partnership model discussed at the roundtables was the highly successful Manchester/Bidwell career educa-

### **Math & Science Employment in the United States 2004-2014**

Occupational Areas	U.S. 2004 Employment	U.S. 2014 Employment	%	Change	%	Number/ Job Titles
Architecture	220,000	255,000	3.4	38,000	17.8	4
Engineers	1,440,000	1,644,000	22	195,000	13.4	18
Engineering Technicians	532,000	595,000	7.9	63,000	11.8	12
Physical Scientists	250,000	281,000	3.8	30,000	12.2	7
Life Scientists	232,000	280,000	3.7	48,000	20.8	12
Physical & Life Technicians	342,000	291,000	3.9	49,000	14.4	10
Computer Occupations	3,046,000	4,003,000	53.6	957,000	31.4	11
Math Scientists & Tech.	107,000	117,000	1.6	10,000	9.7	6
Totals	6,758,000	7,469,000	99.9	891,000	13.5	80
Total U.S. Employment	145,612,000	164,540,000		18,928,000	13.0	760
Percent Total U.S. Employment	4.6 percent	4.5 percent				

Source: Bureau of Labor Statistics, *Occupational employment projections to 2014*, Monthly Labor Review, November 2005.

## U.S. occupations with the largest job growth, 2004 to 2014

Training Source	Number	2004	Employment Percent	2014	Percent
Short Term On-the-Job	15	26,163,000	56	30,568,000	55
Moderate Term On-the-Job	6	8,521,000	18	9,998,000	18
Bachelor's Degree	5	5,387,000	12	6,599,000	12
Associate Degree	1	2,394,000	5	3,096,000	6
Doctoral	1	1,628,000	3	2,153,000	4
Post Secondary Vocational	1	1,455,000	3	1,781,000	3
Long-Term On-the-Job	1	1,349,000	3	1,535,000	2
Totals	30	46,897,000		55,729,000	

tion program in North Pittsburgh, a joint endeavor created between entrepreneur Bill Strickland and the Pittsburgh school district. Strickland initially created this partnership as a fine arts school for disadvantaged kids. When the vocational training program was incorporated — providing training mainly in culinary arts and medical technology — it remained linked to the fine arts. It was so successful, however, that it led to the creation of its own restaurant and catering firm, among other services. From the perspective of one roundtable participant, the key reason that the Strickland model was so successful was that the school district did not have control over whether or not there would be innovation. Because its administrators were not making fundamental decisions, the standard institutional roadblocks did not exist — allowing unique opportunities to cut through bureaucracy and do what was best for kids. Notably, the same essential approach has been successful all across Europe.

In this context, one roundtable participant observed that in many ways the American system seems designed to insure stasis and an absence of genuine

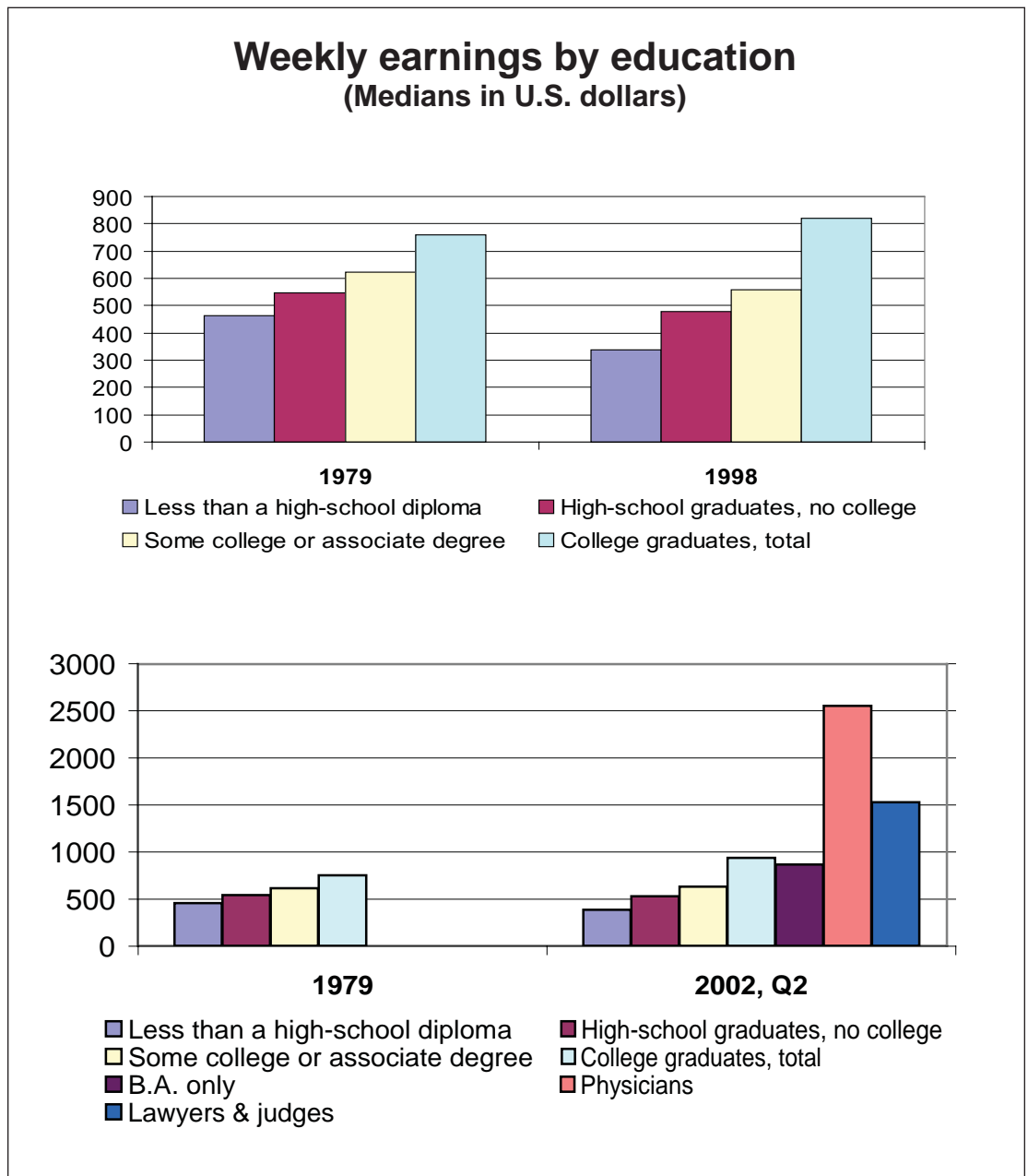
progress. School district superintendents not only are charged with leading systemic reforms, but at the same time they must minister to a huge number of demanding constituencies that have fundamentally conflicting interests and that seek fundamentally contradictory goals. Indeed, given the fact that superintendents normally are expected to please school trustees, teachers, parents, teacher union officials, administrator union officials, classified staff, elected politicians and taxpayers, to simply keep one's job requires huge amounts of obsessive tap-dancing. Yet if keeping one's job actually turns out to be a superintendent's top priority, he or she is almost certainly fated to fail, because the actual needs of students then, necessarily, become an ever-lower priority.

### Costs of the programs

Vocational and technical education courses, it was agreed, are the most expensive individual classes in any school. The programs that comprise these courses, therefore, are very costly. While the Clark County School District can afford to build four vocational-focused magnet high schools, that will cope with

**School district superintendents are not only charged with leading systemic reforms, but at the same time must minister to a huge number of demanding constituencies that have fundamentally conflicting interests and that seek fundamentally contradictory goals.**

## *The Drive for a Baccalaureate*



only a minuscule part of existing student demand. To build just one high school, said one official, nowadays costs \$80 million.

And the situation is even more dire for many smaller districts in the state: Even when combining funds and efforts with neighboring small districts who share their intentions, they cannot afford such

construction. Notably, while Strickland's Manchester/Bidwell program boasts a true grassroots beginning, currently it is well funded by Pittsburgh locals who also happen to be some of the nation's most significant donors: the Heinz Endowment and Mellon Bank.

An additional aspect of this financial problem is retaining the qualified faculty

required to teach subjects like automotive technology or carpentry. As in the computer or medical industries, a high school instructor, even at the high end of the pay scale, can make double the money on the outside.

### **Solutions to cost issue**

As a potential source of additional funding, some participants mentioned grants from the federal government. Others, however, pointed out that this course involves a risk. It was argued that problems almost always attach to federal money, usually due to the accompanying federal mandates and the funding's unreliability.

More than one roundtable participant stated that Nevada's education system is not under-funded — the money is simply misallocated. If state funding sources were restructured so that the money followed the student, as in Europe, it was suggested, then schools could specialize. The resulting competition would most likely lead to much better service for the large number of students who want career skills and also improved accountability.

A Clark County School District official explained how that district recognizes it needs business benefactors and consciously recruits them. "We facilitate 16 joint business/educational committees," said that participant, noting that if a firm or industry were willing to contribute a certain percentage of a project or building, it would be offered "naming rights" for the resulting facility.

One participant argued that the state should go much further in this direction, allowing tax credits to Nevada businesses that support career and technical academies. That would certainly produce more resources for public, private and charter CTE efforts, went the argument. Deductions against various Nevada business taxes, it was suggested, would allow the widely acknowledged successes of

Washoe County's ACE Charter School — which has close ties to the construction industry — to be replicated state-wide. Such an arrangement, went the argument, could offer significant professional-level accountability standards, plus real-world integration with the business community. As part of the approach, reforms to Nevada's charter school laws would be important.

### **Rudderless Nevada education**

In Nevada, one legislator noted, education is more or less directionless. The governor has no direct control over the system, and while lawmakers have power over funding, it is the school districts which have become active political operators that continue to grow and fight for turf and money. More than one roundtable participant suggested that, right now, "Everybody just wants to let the school districts do everything — they're not willing to fix things themselves." Put another way, the status quo faces no serious challenge.

Another point of consensus was the need for legislators themselves to know more. Otherwise, participants suggested, lawmakers' good intentions often end up restricting or otherwise frustrating any kind of forward-looking development. An example given was that legislators currently want more traditional requirements in the K-12 arena, especially added math and science courses. However, when legislators stress math and science, "electives" always lose out, and in the school districts those electives are thought to include vocational and technical education.

### **The 'cultural' problem**

Little will change in Nevada K-12 education, several participants suggested, until educators begin explaining to students that they have viable options other than going to college. Most drop-outs, looking back, own their mistakes,

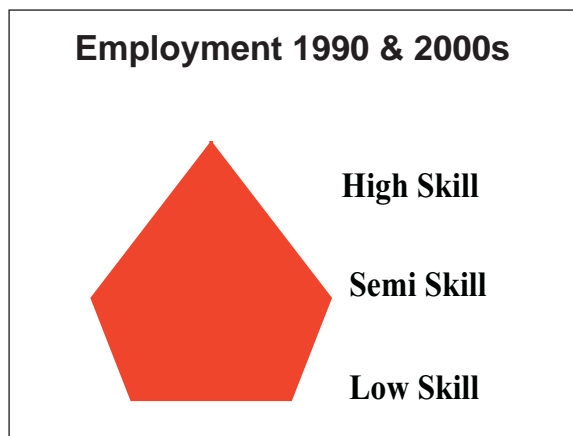
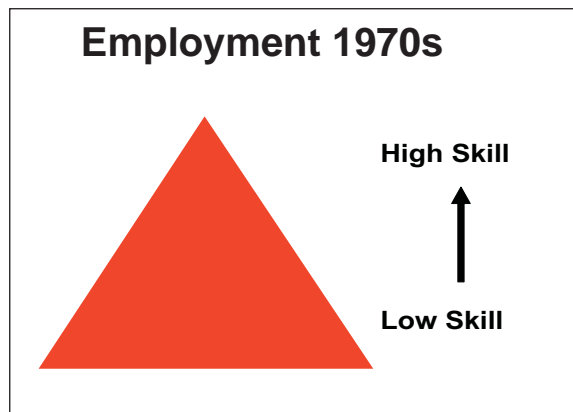
**More than one roundtable participant stated that Nevada's education system is not under-funded — the money is simply misallocated.**

When discussing education options, parents are never really given the full story, and the perception remains that young people must attend college to have any chance at success.

a participant added insightfully, and most usually say they quit school because they were bored. Counselors never tell students or parents that students can succeed in a multitude of areas without going to college. It was also suggested that educators should talk to parents differently; when discussing education options, parents are never really

given the full story, and the perception remains that young people must attend college to have any chance at success. Parents' expectations are an issue. They should be made aware that their kids have a variety of viable options that are alternatives to an immediate, traditional college degree.

Yet the humanities and the traditional baccalaureate approach had its advocates also. In certain ways, Nevada's exceptionally low demand or compensation for liberal arts graduates is not representative of the wider economy, it was argued. And isn't college a time in a student's life, it was asked, when the student gets to decide what he or she *really* wants to do? Shouldn't a traditional college degree broaden us in a positive way? Are these vocational paths really elective, or are they somehow imposed?



### Successful CTE

Still, there was little disagreement that the danger to Nevada school-age youth is much more in the area of too little career and technical education, rather than too much. Indeed, experience shows that vocational, or career and technical, education in Nevada will not survive as long as the courses are merely high school electives, offered on a class-by-class basis. In order to serve the mammoth appetite in Nevada currently being unmet, these courses would have to be reorganized into viable programs. And to be viable, local business and industry must be significantly involved.

Successful vocational and career programs, it was explained, actively ask what local employers need, and then attempt to deliver that. Effective business-focused high schools offer training in numerous skill sets to large numbers of students. Community colleges, too, should focus on teaching



employability skills.

A participant from Washoe noted that while that district has embraced career education, it has not yet been able to successfully implement it. The district

now recognizes that it is simply not practical to put shop classes in all the high schools, because students won't take those individual courses. It also recognizes that, as the ACE model demonstrates, successful vocational and career education needs to be programmatic in design. Important synergy comes from the relevance a single site offers to its programs, and multiple sites lose that. Thus, what would be ideal would be single phenomenal programs, at single specific sites, devoted to single career orientations.

One example of programmatic curriculum design repeatedly referred to was how common core curriculum requirements — such as “four years of math” — often are more successfully achieved by *not* following the traditional model, but adapting the instruction for the practical, concrete need of a CTE project. As demonstrated and pioneered by ACE, the need is for more English and history teachers talking to shop and construction teachers to see what they can do for each other — and for their students.

While evidence suggests we should all be supporting plans for more flexibility and fewer restrictions, it's clear that traditional school districts find it very difficult to give up old, familiar patterns of centralized command and control. This shows up distinctly in the districts'

### Understanding the New Workforce Requirements

- ◆ Traditional career pathways are disappearing
- ◆ Increased focus on general, generic, transportable skills such as learning to learn
- ◆ Permanent full time employment accounts for only half the workforce
- ◆ Part-time employment accounts for 11% of the workforce

systematic de-prioritizing of approaches, like ACE, that do not fit the institutional mold.

### Conclusion

Roundtable participants agreed on the connection between vocational or technical education and the successful learning and motivation of dropout-prone students. But old paradigms that are second-nature to Nevada school districts and in which, after all, they were built to operate continue to produce institutional resistance.

The old mindset, for example, that this all is merely about “shop class,” has to change. That approach to CTE, convenient for school district officials, maintains the institution's pre-eminence and discounts the shifting educational needs of real individuals. It fails to come to terms with the nature of successful career learning.

Educational success is not about the imperatives of ever-larger district budgets, career advancement and maintaining institutional conduits running into the public treasury.

Educational success is when students emerge from completed levels of education — from whatever source or venue — now armed with significant and fully transferable skills.

**Successful vocational and career programs, it was explained, actively ask what local employers need, and then attempt to deliver that.**

## APPENDIX

*Prior to the sessions, roundtable participants received NPRI's "Teaching the Forgotten Half" education study, the executive summary of which is reprinted below. The full study, which provided some of the context for the discussions, may be downloaded from NPRI's website, [www.npri.org](http://www.npri.org).*

### Teaching the Forgotten Half

#### *Career and Vocational Education in Nevada's High Schools*

Public education in Nevada for years has ignored the particular nature of its community job base. The Las Vegas labor market, for example, is unique in manifesting the lowest demand for college professionals of any labor market in America.

What are in demand instead are individuals who have good practical and technical skills. Yet, of Clark County School District's 280,000 students last year, only 6,000 were able to pursue vocational education within the district.

This situation — a curriculum designed to almost completely discount the actual employment needs of Southern Nevada — is a particular instance of a more general problem that underlies all of Nevada's education woes. Because K-12 education is almost entirely government-based rather than market-based, it naturally and habitually ignores the kind of marketplace signals that private-sector businesses actively adapt themselves to serve. By convention we call this education system "public," but it actually operates on statist principles that disregard the choices that the public, as individuals, would prefer to make.

In this white paper we address just one consequence of that institutional indifference: the plight, in Nevada, of what are increasingly referred to as "the forgotten

half" — the high-school youth predominantly bound, immediately at least, for the work-force, rather than college. These are the individuals who would most immediately benefit if alternative career and technical educational options were made available within the current system.

Actually, "the forgotten half" is a misnomer. In 2005, about seven out of ten jobs in the U.S, and nearly eight out of ten jobs in Nevada, privileged on-the-job training or work-related experience over a traditional high school education. And despite rhetoric from some quarters of the education community, Nevada has an abundance of college graduates — given the fact that only around 15 percent of jobs require a bachelor's degree or more. Indeed, many current college graduates are employed in positions that do not require a college degree and where compensation is below average.

In recent decades the assumption has spread in America that most students must attend college. For many students, of course, the best education does mean college-level academics. For others, however, the most meaningful, fulfilling and enabling education, upon leaving high school, is less academic than practical and technical. Much data, therefore, suggest that a significant segment of our young would be better prepared for success if allowed to pursue skills preparation in areas of vocational technology (including basic math and literacy skills) — rather than being tracked into the current higher education environment.

For these reasons, this report examines the state of contemporary vocational education and the alternatives available to Nevada education.

## **Robert Schmidt, J.D., Ph.D.**

Robert Schmidt is a cofounder and president of The Theodore Roosevelt Institute. Bob holds advanced degrees in economics, sociology and law. He has numerous academic appointments including Senior Research Fellow, Claremont Graduate University, School of Politics and Economics; Visiting Professor of Management and International Corporate Governance, Helsinki School of Economics, International Business Campus, and Assistant Professor and Graduate Faculty, UNLV. He is the author of numerous articles and treatises on regional and urban issues including education and financing of urban infrastructure. He has served as an advisor to numerous federal, state and local governments and commissions.

Prior to founding The Theodore Roosevelt Institute, Bob held several senior level positions in the private sector, including COO of Dytel Corporation, a mid-sized telecommunications firm, and CEO of Reynolds and Taylor, a mid-sized manufacturing firm. He also was Senior Manager-in-Charge of Management Consulting with Price Waterhouse and Assistant Vice President for ECOLAB Europe.

---

## NEVADA POLICY RESEARCH INSTITUTE

(702) 222-0642  
Fax (702) 227-0927

1700 East Desert Inn Rd., #405A  
Las Vegas, Nevada 89169

office@npri.org  
www.npri.org

