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**James M. Jeffords Center's
*Vermont Legislative Research Service***



Graduation Rates & Apprenticeship Programs

In 2008, U.S. high school graduation rates climbed to 72%. This is the highest percentage seen in the U.S. over the past 20 years, but many argue that it is still not high enough. Approximately 1.2 million students fail to graduate high school each year.¹

As seen in Table 1, twelve states have substantially increased their graduation rates since 2002.² There was no one particular set of policies or practices adopted to explain these improvements, but each state did make reforms such as increasing the legal dropout age, creating small learning communities in large high schools, increasing the number of disabled students who receive diplomas, and making increasing graduation rates a priority.³ Some states are also implementing apprenticeship programs as a strategy to increase graduation rates.

Table 1: High School Graduation Rates in 2002 and 2006 and the Percent Increase.

State	Graduation Rate 2002	Graduation Rate 2006	Increase
Tennessee	61	72	11.2%
Delaware	70	76	6.8%
Kentucky	71	78	6.8%
South Dakota	79	85	5.3%
Arkansas	75	80	5.2%
Alabama	62	66	4.1%
North Carolina	68	72	3.6%
New York	64	67	3.5%

¹ EPE Research Center, "Diplomas Count 2011" Press Release, Education Week 30 (2011), accessed January 2, 2012, <http://www.edweek.org/ew/toc/2011/06/09/index.html?intc=EW-DC11-FL1>.

² Robert Balfanz and Thomas C. West, "Raising Graduation Rates: A Series of Data Briefs," The Everyone Graduates Center, Center for Social Organization of Schools at Johns Hopkins University., accessed January 2, 2012, <http://www.every1graduates.org/PDFs/StateProgressReport.pdf>.

³ National Education Association, "12 States Increase Graduation Rates," National Education Association, accessed October 10, 2011, <http://www.nea.org/home/31697.htm>.

Hawaii	72	76	3.4%
Missouri	78	81	3.4%
Nebraska	84	87	3.1%
New Hampshire	78	81	3.0%

Source: Robert Balfanz and Thomas C. West, "Raising Graduation Rates: A Series of Data Briefs," The Everyone Graduates Center, Center for Social Organization of Schools at Johns Hopkins University., accessed January 2, 2012,

<http://www.every1graduates.org/PDFs/StateProgressReport.pdf>.

Note: Each number signifies total percent of graduation per state

Vermont

Vermont experiences a high level of high school graduation rates. For the 2009-2010 Academic Year, the Vermont high school graduation rate was as high as 87%.⁴ The national graduation rate in 2008 was 75%.⁵ In Vermont, once a student reaches the age of 16, they have the option to dropout.⁶

Raising the Legal Age for Dropping Out

One strategy currently implemented to increase graduation rates is increasing the legal dropout age in various states. A 2007 report from Civic Enterprises, a public policy firm, states:

[m]any current state efforts to keep young people in school are dealing with the compulsory school age⁷ because there is a growing, shared understanding that raising the age requirement is also a way to raise expectations among students, their parents, school authorities, and the general public.⁸

Raising the dropout age, however, is disfavored by some as they fear students will continue to drop out regardless of the legal age, provide increased disruptions in classrooms, or that the government will interfere with parental decisions over their children's education.⁹

⁴ Vermont Department of Education, "Vermont Public School Dropout and High School Completion Report," Vermont Department of Education, revised July 2010, accessed October 20, 2011,

[http://education.vermont.gov/new/pdfdoc/data/dropout/EDU-Dropout and High School Completion Report 2009 2010.pdf](http://education.vermont.gov/new/pdfdoc/data/dropout/EDU-Dropout%20and%20High%20School%20Completion%20Report%202009%202010.pdf).

⁵ Civic Enterprises and Everyone Graduates Center, "Building A Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic," November 2010, accessed December 5, 2011,

http://www.americaspromise.org/our-work/grad-nation/~media/Files/Our%20Work/Grad%20Nation/Building%20a%20Grad%20Nation/Building%20a%20Grad%20Nation_FullReport_FINAL%2011-30-10.ashx.

⁶ United States Department of Labor, "Wages and Hours Division," Employment Standards Administration, January 1, 2011, accessed October 25, 2011, <http://www.dol.gov/whd/state/schoolattend.htm>.

⁷ Compulsory school age is a set period of time, determined by each state, that a child is required to attend school.

⁸ John M. Bridgeland and John J. Dilulio Jr. and Ryan Streeter, "Raising the Compulsory School Attendance Age: The Case for Reform," Civic Enterprises,

http://www.eric.ed.gov/ERICWebPortal/search/detailmini.jsp?_nfpb=true&_ERICExtSearch_SearchValue_0=ED503356&ERICExtSearch_SearchType_0=no&accno=ED503356, p. 6.

⁹ John M. Bridgeland and John J. Diulio and Ryan Streeter, "Raising the Compulsory," p. 7.

As of December 2010, twenty-two states and the District of Columbia require individuals to stay in school until the age of eighteen. Nine states require students to attend high school until they reach the age of seventeen. Nineteen states, including Vermont, only require students to remain in school until sixteen. Of the twelve states who experienced the highest increases in graduation rates from 2002-2006, only four states (Delaware, Kentucky, North Carolina, and New York) allowed students to drop out at the age of sixteen. Hawaii, Nebraska, Nevada, South Dakota, and Tennessee require students to attend high school until they reach the age of eighteen. Individuals must be seventeen in order to dropout in Arkansas, Alabama, and Missouri.¹⁰

Creating Learning Communities

Another strategy to increase graduation rates has been creating small learning communities. Small learning communities, or SLCs, can take many forms and often

include structures such as freshman academies, multi-grade academies organized around career interests or other themes, 'houses' in which small groups of students remain together throughout high school, and autonomous schools-within-a-school, as well as personalization strategies, such as student advisories, family advocate systems, and mentoring programs.¹¹

SLCs are created by building new schools of limited size or building multiple SLCs within a larger high school. Most SLCs are given some degree of autonomy in handling their budgets, hiring, and curriculum.¹²

Studies on small learning communities have demonstrated positive impacts on students. SLCs have been found to be safer, create a stronger sense of affiliation, and provide more diverse curricula than larger schools. Additionally, SLC students were found to have increased attendance, improved attendance, engagement, and graduation rates.¹³ For example, in New York City, graduation rates in new SLCs in 2007 were over 70%, exceeding the district average. These graduation rates doubled the 35% graduation rate that was being achieved by these schools before they were replaced with SLCs.¹⁴ The Bill & Melinda Gates Foundation is a major contributor of this strategy in the United States and provides a substantial amount of funding and research related to SLCs.¹⁵

¹⁰ United States Department of Labor, "Wages and Hours Division," Employment Standards Administration, January 1, 2011, accessed October 25, 2011, <http://www.dol.gov/whd/state/schoolattend.htm>.

¹¹ U.S. Department of Education, "Small Learning Communities Program," U.S. Department of Education, accessed October 25, 2011, <http://www2.ed.gov/programs/slcp/index.html>.

¹² Jeffrey T. Fouts and Duane B. Baker and Carol J. Brown and Shirley C. Riley, "Leading the Conversion Process," Bill & Melinda Gates Foundation, September 2006, accessed October 25, 2011, <http://www.gatesfoundation.org/learning/Documents/LeadingtheConversionProcess.pdf>, p. 1-2.

¹³ Kathleen Cotton, "New Small Learning Communities: Findings From Recent Literature," Northwest Regional Educational Laboratory, December 2001, p. 13-15.

¹⁴ Bill & Melinda Gates Foundation, "College-Ready For All," Bill & Melinda Gates Foundation, accessed October 25, 2011, <http://www.gatesfoundation.org/learning/Documents/College-ready-for-all-education-plan.pdf>.

¹⁵ Bill & Melinda Gates Foundation, "College-Ready For All," Bill & Melinda Gates Foundation,

Disabilities

From 2004-2007, 28 states increased their graduation requirements for receiving a diploma for both students with and without disabilities. All 50 states and the District of Columbia offered regular diplomas to students with and without disabilities.¹⁶ Special education for students with disabilities can be defined as any academic program aimed at serving students who have mental, physical, or emotional disabilities. The Individuals with Disabilities Education Act (IDEA), passed in 2004, regulates most aspects of special education.¹⁷ Under IDEA, “public schools are required to provide special education services for all children with disabilities ages three through twenty-one at no cost to the families.”¹⁸ Developing appropriate graduation policies and testing approaches for students with disabilities continues to be a challenge for all states. One of the main goals of state education agencies has been to treat students with and without disabilities as equals.¹⁹

A study done for the Center for Public Education researched the number of students with disabilities receiving diplomas. According to the results, the percentage of students served under IDEA who graduated with a regular diploma increased from 41% in 1993 to 57% in 2006.²⁰ While the numbers are low, it has still been an upward trend. The study’s findings suggest that “students with disabilities are now more likely to graduate from high school with [some form] of a certificate or academic credential.”²¹ Both studies prove that states are becoming more aware of the needs of students with disabilities, thus helping to raise graduation rates.

Graduation Rates as a Priority

Multiple states have vowed to make increased high school graduation rates for every student a state priority. In 2009, the Vermont Department of Education passed Act 44, which included the “One Hundred Percent by 2020” Initiative.²² This act made it a “priority of the general assembly and the department of education to take all necessary measures to increase the Vermont secondary school completion rate to 100% by 2020.”²³ The initiative strives to make an accessible pathway towards graduation for every student in Vermont.²⁴

<http://www.gatesfoundation.org/learning/Documents/College-ready-for-all-education-plan.pdf>

¹⁶ Paula Burdette, “Diploma Options for Students with Disabilities,” inForum, October 2007, p. 2-3.

¹⁷ *Individuals with Disabilities Education Act of 2004*, Congressional Record of the 108th Congress, Session 1, HR 1350,

<http://www.cec.sped.org/Content/NavigationMenu/PolicyAdvocacy/IDEAResources/PublicLaw108-446.pdf>

¹⁸ Ulrich Boser, “Special education: a better perspective,” The Center for Public Education, October 15, 2009.

¹⁹ Ulrich Boser, “Special education.”

²⁰ Ulrich Boser, “Special education.”

²¹ Ulrich Boser, “Special education.”

²² Vermont Department of Education, “One Hundred Percent by 2020 Initiative,” Act 44, June 22, 2010, accessed November 4, 2011, <http://education.vermont.gov/new/html/laws/act44.html>.

²³ Vermont Department of Education, “One Hundred Percent by 2020 Initiative.”

²⁴ Vermont Department of Education, “One Hundred Percent by 2020 Initiative.”

Other states have set similar goals to help raise their high school graduation rates. Governor John Lynch of New Hampshire has made increasing the state's overall high school graduation rate a priority and has set a goal of reducing the New Hampshire dropout rate to 0% by the 2012-2013 school year. Governor Lynch has said that he wants to "ensure that New Hampshire workers have the skills they need to compete and that New Hampshire businesses have the educated workforce they need to grow."²⁵ During the 2009-2010 school year, New Hampshire had a .97% annual high school dropout rate.²⁶

Another state that has striven to raise high school graduation rates is Tennessee. A study done by Johns Hopkins University and the America's Promise Alliance published that from 2002-2006, Tennessee's high school graduation rates increased from 60% to 75%.²⁷

Apprenticeships

Apprenticeship programs have helped to increase graduation rates across the nation. These programs are a "combination of on-the-job training and related classroom instruction in which workers learn the practical and theoretical aspects of a highly skilled occupation."²⁸

Apprenticeships encourage students to stay in school and graduate while preparing them for a specific career path; the student is guaranteed full-time employment with the expectation that they graduate.²⁹ All programs that have been accredited by the US Government are sponsored by an employer. All 50 states, the District of Columbia, Puerto Rico, and the US Virgin Islands have apprenticeship programs registered through either the Office of Apprenticeship (OA) or the State Apprenticeship Agency (SAA).³⁰ The US government's role in apprenticeship programs is to "safeguard the welfare of the apprentices, ensure the quality and equality of access to apprenticeship programs, and to provide integrated employment and training information to sponsors and the local employment training community."³¹

²⁵ Communications Director, "Governor Lynch Announces 44 Percent Drop in High School Dropout Rate," Press Release, published March 8, 2011, accessed November 4, 2011, <http://www.governor.nh.gov/media/news/2011/030811-dropout-rate.htm>.

²⁶ Communications Director "Governor Lynch Announces."

²⁷ Civic Enterprises and Everyone Graduates Center, "Building A Grad Nation: Progress and Challenge in Ending the High School Dropout Epidemic," November 2010, accessed December 5, 2011, http://www.americaspromise.org/our-work/grad-nation/~media/Files/Our%20Work/Grad%20Nation/Building%20a%20Grad%20Nation/Building%20a%20Grad%20Nation_FullReport_FINAL%2011-30-10.ashx.

²⁸ United States Department of Labor, "Employment and Training Administration: Apprenticeship," accessed October 17, 2011, <http://www.doleta.gov/jobseekers/apprent.cfm>.

²⁹ California Department of Industrial Relations, "Overview of CAC (California Apprenticeship Council)," California Department of Industrial Relations, accessed November 16, 2011, http://www.dir.ca.gov/das/cac_overview.html.

³⁰ United States Department of Labor, <http://www.doleta.gov/jobseekers/apprent.cfm>.

³¹ United States Department of Labor, <http://www.doleta.gov/jobseekers/apprent.cfm>.

Canada

High school apprenticeship programs have been an increasing trend in Canada.³² The Ontario Youth Apprenticeship Program (OYAP) offers students over 135 apprenticeship opportunities in motive power, construction, industrial, and services sectors. Apprentices who complete the required hours for their trade are awarded a Certificate of Qualification/Apprenticeship (depending on the trade). OYAP also offers an accelerated program that allows students Level One apprenticeship training in just two semesters.³³ Level One pertains to intermediate-level apprenticeships, where students work towards work-based learning qualifications; Levels Two and Three are more advanced apprenticeships.³⁴ The Fraser Valley District Education School (FVDES) Apprenticeship program of British Columbia requires students to complete 90 to 120 hours of paid or unpaid trade experience as well as 30 hours of related coursework as an apprentice. Students are apprenticed to chefs, plumbers, electricians, mechanics, and other technical workers. Additionally, students who graduate with 1,100+ hours of trade experience become eligible for a \$1,000 scholarship.³⁵ The High School Apprenticeship Program (HSAP) of Manitoba provides students with the opportunity to combine traditional high school instruction with a part-time, paid apprenticeship. Students are encouraged to continue their apprenticeship after graduation, use the money earned to attend college, or start their own business. HSAP apprentices can also earn tuition exemptions for future technical training. Hiring incentives offer employers up to \$2,000 in tax credits for hiring HSAP apprentices.³⁶

Effectiveness of Apprentice Programs

A 1999 study on the effectiveness of the Earthwatch Institute's Student Challenge Awards Program (SCAP), a field-based, science research apprenticeship program, showed the effectiveness of apprenticeship programs for high school students. The researchers issued pre- and post-field trip questionnaires to the students consisting of 1-5 scale ratings and open-ended questions about their experiences. The results featured multiple, positive recurring themes in the responses, namely that "students reported an increased interest in pursuing a science-related major in college or a career in science."³⁷ Other general findings included that the students reported a positive shift in their perception of science and that the social aspect of the program had just as much of an impact as the academic aspect such as "making friends...developing self-confidence in group situations...and learning to work more

³² Council of Ministers of Education, Canada, "Education in Canada," CMEC, accessed November 4, 2011, <http://www.cmec.ca/pages/canadawide.aspx>.

³³ Ontario Youth Apprenticeship Program, "What Is OYAP?" Ontario Youth Apprenticeship Program, accessed November 1, 2011, <http://www.oyap.com/index.cfm?fuseaction=content&PageID=19&PageCategory=16&SchoolBoardID=100>.

³⁴ Apprenticeships, "Levels of Apprenticeships," Apprenticeships, accessed November 16, 2011, <http://www.apprenticeships.org.uk/Parents/Levels-of-Apprenticeships.aspx>.

³⁵ Fraser Valley Distance Education School, "FVDES Apprenticeship/Work Experience Programs," accessed November 1, 2011, http://www.fvdes.com/programs/workexp_apprenticeship.

³⁶ Manitoba, "Apprentice," Manitoba, accessed November 1, 2011, http://www.gov.mb.ca/tce/apprent/apprentice/apprenticeship_hs.html.

³⁷ Linda M. Abraham, "What do high school science students gain from field-based research apprenticeship programs?" p. 229.

cooperatively.”³⁸ While this was only a specific program based in the sciences, it shows that there may be a correlation between field experience such as apprenticeships and increasing student interest in education.

The Canadian Council on Learning conducted a study in 2009 on the impact of experiential learning programs on student success. Apprenticeships emphasize the importance of “hands on,” or experiential learning. The executive summary states that “experiential learning complements students’ academic learning and provides youth with experiences and knowledge that maximize their growth and development while meeting their needs for career exploration.”³⁹ The results of this study suggest that “high school students who experienced any type of EL program demonstrate psycho-social benefits in terms of self-esteem, engagement in workplaces or schools, socialization and leadership, and motivation.”⁴⁰ The study did not conclusively find a positive connection between experiential learning and academic success, claiming that “it is likely that moderator variables, such as prior academic achievement or the type of outcome measure (GPA versus test scores, etc.) have an effect on overall results.”⁴¹

Apprenticeship programs have also been shown to increase the probability of students finding employment after graduation from high school. A study done by David Neumark, an economics professor at University California-Irvine and Director for the Center for Economics and Public Policy, found that a “school-to-career” program, such as apprenticeships, boosts the probability of postsecondary employment by seven percent, giving these high school graduates an advantage over other graduates who did not participate in an apprenticeship.⁴² We could not find any studies correlating apprenticeship programs to graduation rates.

Conclusion

States across America are attempting to increase their high school graduation rates. States who have succeeded at substantially reducing their dropout rates implemented policies like increasing the legal dropout age, building small learning communities, increasing the number of students with disabilities who receive diplomas, and making high graduation rates a priority.⁴³

Apprenticeship and other experiential learning programs have been linked to increased student interest in academia and future career pursuits.⁴⁴ Likewise, these school-to-career programs

³⁸ Linda M. Abraham, “What do high school science students gain,” p. 230.

³⁹ Canadian Council on Learning, “The Impact of Experiential Learning Programs on Student Success,” May 7, 2009, http://www.ccl-cca.ca/pdfs/OtherReports/ExperientialLearningReport_EN.pdf, p. 1.

⁴⁰ Canadian Council on Learning, “Impact of Experiential Learning,” p. 2.

⁴¹ Canadian Council on Learning, “Impact of Experiential Learning,” p. 2.

⁴² David Neumark, “How Effective are School-to-Career Programs?” Public Policy Institute of California, published May 2004, accessed November 4, 2011, http://www.ppic.org/content/pubs/rb/RB_504DNRB.pdf.

⁴³ National Education Association, “12 States Increase Graduation Rates,” National Education Association, accessed October 10, 2011, <http://www.nea.org/home/31697.htm>.

⁴⁴ Linda M. Abraham, “What do high school science students gain from field-based research apprenticeship programs?” 2002, p. 229, accessed November 4, 2011, <http://www.jstor.org/stable/30189749>.

have been shown to increase the probability of finding post-school employment for participating students.⁴⁵ Additionally, students who participate in apprenticeship programs are likely to experience increased self-esteem, motivation, and engagement.⁴⁶ States have a variety of tools and methods at their disposal when it comes to increasing graduation rates.

This report was completed on January 2, 2012 by Monica Johnson and Michael Lawliss under the supervision of graduate student Kate Fournier and Professor Anthony Gierzynski in response to a request from the Senate Education Committee.

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Disclaimer: This report has been compiled by undergraduate students at the University of Vermont under the supervision of Professor Anthony Gierzynski. The material contained in the report does not reflect the official policy of the University of Vermont.

⁴⁵ David Neumark, "How Effective are School-to-Career Programs?" Public Policy Institute of California, published May 2004, accessed November 4, 2011, http://www.ppic.org/content/pubs/rb/RB_504DNRB.pdf.

⁴⁶ Canadian Council on Learning, "Impact of Experiential Learning," p. 2.