

**Educational Opportunities in Washington's
High Schools Under State Education Reform:
*Background and Student Outcomes***

VOLUME 1

Edie Harding

with

Mason Burley

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Institute for
Public Policy*

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WASHINGTON STATE INSTITUTE FOR PUBLIC POLICY

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The Institute's mission is to carry out practical research, at legislative direction, on issues of importance to Washington State. The Institute conducts research activities using its own policy analysts, academic specialists from universities, and consultants. New activities grow out of requests from the Washington legislature and executive branch agencies, often directed through legislation. Institute staff work closely with legislators, as well as legislative, executive, and state agency staff to define and conduct research on appropriate state public policy topics.

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The 2000 Legislature enacted Engrossed House Bill 2487. Section 607(4) of the bill directs the Washington State Institute for Public Policy to conduct a study of public high school programs in Washington and report its findings in an interim and final report. This interim report (Volume 1) provides background for the study placing special emphasis on high school student outcomes and performance. The final report (Volume 2) will focus on educational opportunities and programs provided by Washington State public high schools and how these opportunities and programs are changing as a result of the state's education reform.

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EXECUTIVE SUMMARY

Background

The 2000 Washington State Legislature requested that the Washington State Institute for Public Policy (Institute) conduct a study on public high school programs in Washington:

The study shall examine what high school educational opportunities are currently available for students. Information shall be gathered on program attributes, student demographics, and outcomes for high school programs including, but not limited to, college credit (e.g. advanced placement and running start), tech prep, distance learning, and career pathways.¹

The Institute must report its findings on public high school opportunities and programs to the Legislature in an interim report due January 1, 2001, with a final report due September 15, 2001.

This interim report provides background for the study with a special emphasis on high school student outcomes and performance. The final report will focus on educational opportunities and programs provided by Washington State public high schools and how these opportunities and programs are changing as a result of the state's education reform.

The key research questions addressed in this interim report are:

- **National Trends: *Why Reform High School?***
- **Public High Schools in Washington: *What Are Their Characteristics, and What Are the State's Policies?***
- **High School Student Performance: *What Do We Know?***

National Trends: Why Reform High School?

- Over the last two decades, the traditional American high school has come under criticism for lacking a clear curricular focus, not expecting high achievement for all students, and not providing personalized learning environments to engage students.
- A variety of reforms of high school are being tried across the country. Some focus on creating a demanding and standards-based curriculum, others on encouraging students to link what they learn in school with their future educational and career plans, and still others on changing the school environment. The aims of some reforms appear contradictory. Some reforms attempt to accomplish multiple objectives.

¹ Chapter 1, Laws of 2000 (EHB 2487 §607(4)).

- The challenge in sorting through this information for high school administrators and policymakers is to determine which reforms matter, which will work in their communities, and which will address educational needs, not just of some students, but of all students.

Public High Schools in Washington: What Are Their Characteristics, and What Are the State’s Policies?

- Seventy-two percent (291) of Washington’s 406 high schools have students in “standard high schools” with grades 9 through 12 or 10 through 12. Of these 291 standard high schools, 45 percent have enrollments of over 1,000 students. The average size of standard high schools is 912 students. Twenty-three percent of all high school students are people of color.
- The legislature and the State Board of Education (SBE) are responsible for setting policies for high school requirements. Current policies address the following topics: compulsory attendance, subject standards, assessments, Certificate of Mastery, educational pathways, and subjects and competencies needed for graduation.
- Over the last 30 years, the state has asserted more control over local school districts by establishing policies that follow national trends, such as increased graduation requirements and standards-based reform for all students. Standards-based reform in Washington shifts the expectations for high schools; they will be required to ensure all students, not just college-bound students, master high-level standards.
- Significant questions remain unanswered. Will high school change for 11th and 12th grade students through widespread use of educational pathways, culminating projects, and student plans? Will students who complete the Certificate of Mastery decide to leave school and start college or a job? Will students who cannot master the proficiencies on the Washington Assessment of Student Learning (WASL) drop out of school, pursue an alternative credential, or spend 11th and 12th grades in remediation?

High School Student Performance: What Do We Know?

How much education do Washington students attain?

- The Office of the Superintendent of Public Instruction’s annual dropout rate for 1998-99 ranged from 4 percent for 9th graders to 7 percent for 12th graders. The Institute found that 24 percent of the 1995-96 9th grade class, expected to graduate in 1998-99, could not be located. This finding indicates that annual dropout rates might underestimate the cumulative percentage of students who do not complete school over a four-year period.
- An estimated three-quarters of youth under age 19 in Washington graduate “on time.” These percentages have remained constant for the last 35 years.

- Young adults continue to finish high school after age 18. The Office of Financial Management's State Population Survey (1997) estimates that 91 percent of young adults aged 25 to 29 have completed high school.
- Sixty-five percent of young adults aged 25 to 29 in Washington have had some additional education after high school. Of these young adults, 9 percent received an associate's degree, and 31 percent received a bachelor's degree or higher.
- Approximately 18 percent of Washington's high school juniors and seniors took college-level learning classes (i.e., Running Start, Advanced Placement, International Baccalaureate, and College in the High School) in which students earn both high school and college credit) in 1998.

How well do Washington students learn?

- The percentage of 10th graders who passed the WASL in 1999-00 included: 60 percent in reading, 35 percent in math, 32 percent in writing, and 78 percent in listening.
- Students of African American, Hispanic, and Native American backgrounds were less likely to pass the 10th grade WASL than Caucasian or Asian American students in 1999-2000.
- Over the last five years (1995-99), Washington students had higher average SAT verbal and math scores than the national average. Washington students' average SAT verbal and math scores have also increased during those five years.
- First-year college students in 1999 received more college credit from Running Start while in high school than from Advanced Placement, International Baccalaureate, or College in the High School courses.
- Former Running Start students entering college in 1999 had high school GPAs above 3.0. During their first year in college, they had GPAs above 2.7.
- According to the 1998 High School *Graduate Follow-Up Study*, 51 percent of college students enrolled in Washington's two-year community and technical colleges and 22 percent enrolled in four-year public universities (excluding Western and Evergreen) took at least one remedial course.
- The percentage of college students who passed the math placement tests in 2000 at four-year public universities ranged from 32 percent to 66 percent.

What are the barriers to learning more about high school student performance?

- Reported dropout rates lack accuracy because there has been no uniform student identifier to match students who may have transferred to another school or dropped out and re-entered school. OSPI expects to have a voluntary statewide uniform student identifier ready to test in the 2001-02 school year.
- Currently, it is not possible to assess individual gains in student performance through a statewide test that measures the students' annual progress.
- With the exception of vocational courses, the state does not collect records on the kinds of courses high school students take to assess the changes in levels of coursework (e.g., remediation and advance placement).
- *The Graduate Follow-Up Study* cannot provide a complete and accurate picture of what happens to high school graduates because there are limitations on matching graduates to college and employment databases.
- Four-year public higher education institutions use different methods to provide data. Some institutions' data cannot be compared over time, such as cumulative GPA.
- The quality of policy-relevant outcome data on high school students is mixed and does not currently provide state policymakers with a solid baseline to determine what impacts education reform will have on Washington's high school students.

Next Steps

The Institute's final report will create a baseline to document what high school educational opportunities and programs are currently available for students and whether these are changing as a result of education reform.

- Eight case studies and a statewide survey will document the strategies high schools are using to help students master the proficiencies described in the state's learning goals: the Essential Academic Learning Requirements (EALRs) and the Washington Assessment for Student Learning (WASL).
- How high schools use educational pathways and other learning opportunities (such as culminating projects and portfolio assessment) will be explored.
- Available information (e.g., national studies, state reports, field data, and other resources) will be summarized regarding educational programs, such as Advanced Placement, Tech-Prep, School-to-Work, and vocational education.
- Student enrollment in selected courses (e.g., college-level learning, math courses, distance learning, and vocational courses) will also be documented.

I. INTRODUCTION

The 1993 Washington Education Reform Act set high expectations for improving student learning. This study explores educational opportunities provided by Washington State public high schools and how these opportunities are changing as a result of the state's education reform.

Background

The 2000 Washington State Legislature requested that the Washington State Institute for Public Policy (Institute) conduct a study on public high school programs in Washington:

The study shall examine what high school educational opportunities are currently available for students. Information shall be gathered on program attributes, student demographics, and outcomes for high school programs including, but not limited to, college credit (e.g. advanced placement and running start), tech prep, distance learning, and career pathways.²

The Institute must report its findings on public high school opportunities and programs to the Legislature in an interim report due January 1, 2001 and in a final report due September 15, 2001.

The state's 1993 education reform law has three key components that influence the educational opportunities and programs provided in high schools:

- High schools must teach students the knowledge and skills identified in the state's education standards: the four Basic Education goals³ and the Essential Academic Learning Requirements (EALRs).⁴ High school students' knowledge and skills in meeting the state's standards will be measured using the Washington Assessment for Student Learning (WASL).
- After the State Board of Education determines that the WASL is valid and reliable, high school students, beginning with the class of 2008, must pass the WASL as a part of their graduation requirements to receive a diploma.⁵

² Chapter 1, Laws of 2000 (EHB 2487 §607(4)).

³ RCW 28A.150.210. Abbreviated version of goals: Goal 1: Read with comprehension, write with skill, and communicate effectively. Goal 2: Know and apply the core concepts and principles of math; social, physical, and life sciences; civics and history; geography; arts; and health and fitness. Goal 3: Think analytically, logically, and creatively and integrate experience and knowledge to form reasoned judgments. Goal 4: Understand the importance of work and how performance directly affects future career and educational opportunities.

⁴ RCW 28A.655.060(3)(a). The EALRs are derived from Goals 1 and 2. The timetables for implementation of the EALRS and WASL throughout the K-12 education system vary. Currently, high school students are tested on the WASL for EALRs in reading, writing, communication, and math.

⁵ RCW 28A.655.060(3)(c).

- High schools are expected to develop educational pathways for students to explore and prepare for their educational and career options after high school. These pathways include a variety of both academic and vocational programs.⁶ Students must be allowed to choose any pathway and change it during high school without delaying their graduation.

In addition, the State Board of Education (SBE) recently changed high school graduation requirements to encourage high schools to examine student competencies rather than just the accumulation of seat time and credits. The SBE has also added requirements for students to complete an individual education plan and a culminating project.⁷

These legislative and SBE policy directions and changes provide a context for the Institute's study of what educational opportunities and programs are available for high school students. A policy advisory committee and a technical advisory committee are guiding the Institute's work. The study is divided into two parts:

- An interim report (due January 2001) which provides information on national trends on reforming high schools, the characteristics of Washington's public high schools, state education reform policies on public high schools, student outcomes (using data from the Office of the Superintendent of Public Instruction and the public institutions of higher education), and a preview of the final report.
- A final report (due September 2001) which will examine high school programs and strategies for improving student learning using a statewide survey of public high schools, case studies of selected high schools, data on student enrollment in selected programs, and national and state research on various educational programs.

Interim Report

This interim report provides information on the first three research questions outlined below and describes the methodology to answer the fourth question for the final report:

1. **National Trends: *Why Reform High School?***

- What are the characteristics of American high schools?
- Why reform high school?
- What reforms of high school have been tried in the last 20 years?

⁶ RCW 28A.655.060(3)(c). Educational pathways may include, but are not limited to, work-based learning, school to work transition, tech prep, vocational-technical education, running start, and college preparation.

⁷ WAC 180-51. High school graduation requirements.

2. Public High Schools in Washington: *What Are Their Characteristics, and What Are the State's Policies?*

- What do Washington's public high schools look like?
- What are the current state expectations for high school students?
- How has state policy for high school changed?
- What are some potential barriers to reforming high schools?
- How might state education reform affect high schools?

3. High School Student Performance: *What Do We Know?*

- How much education do Washington students obtain (high school completion, dropouts, education after high school)?
- How well do Washington students learn (graduation requirements, college-level learning, high school test performance, Running Start student performance in college, and remediation in college)?

4. High School Reform in Washington: *What Educational Opportunities and Programs Are Available for Students?*

- What strategies are used to improve student learning?
- What curriculum, instructional, and assessment changes are occurring in response to education reform?
- What educational pathways and learning opportunities are available for students (e.g., culminating projects, career pathways, portfolios, plans, college credit, and vocational programs)?
- How are families and community members involved in supporting student learning?
- What are the student demographics and enrollment in certain high school programs?

II. NATIONAL TRENDS: *WHY REFORM HIGH SCHOOL?*

This section summarizes national research on high schools and national results of 20 years of efforts to reform high school. For an expanded review of this research literature, see Appendix A. Additional analyses of the reform efforts in Washington high schools, and available research results regarding specific programs and opportunities for high school students, will be presented in the final report.

What Are the Characteristics of American High Schools?

Over time, the opinions of parents, educators, prospective employers, colleges, and the general public have helped shape the curriculum and organization of American high schools.⁸

A Curriculum With “Something for Everyone.” High schools are expected to offer a wide range of courses tailored to the diverse abilities and interests of students. It has generally been assumed that not all students need or are capable of rigorous academic coursework.⁹ Students tend to be separated into college preparatory, vocational, or general educational “tracks” based on the type and level of difficulty of courses selected. By 1993, 86 percent of high schools surveyed nationwide reported they structured their curriculum around classes of varying levels of difficulty.¹⁰

Large, Multi-Purpose Institution. Due to the economies of scale necessary to offer a curriculum and extra-curricular activities that cater to the diverse student body, many high schools have grown quite large. Nationally, high schools average 1,200 or more students.¹¹ In Washington, the average enrollment in a standard high school is 912 students.¹² In addition, high schools serve multiple functions as social centers for teens and the community.

Why Reform High School?

Many continue to believe high schools should offer a comprehensive curriculum and serve as a multi-purpose institution. However, by the early 1980s the quality of the product—a high school education—was increasingly called into question.

⁸ David Angus and Jeffrey Mirel. 1991. *The Failed Promise of the American High School*. New York: Teacher's College Press. 2.

⁹ David Marsh and Judy Coddling. 1999. *The New American High School*. Thousand Oaks, CA: Corwin Press. xiii.

¹⁰ National Center for Education Statistics. December 1994. *Curricular Differentiation in Public High Schools* (NCES 95-360). Washington, DC: U.S. Department of Education. 5. Eighty-six percent of 10th graders in surveyed schools were in a tracked math class, and 72 percent were in a tracked English class.

¹¹ Joseph Murphy, et al. Forthcoming. *The Productive High School: Empirical Evidence*. New York: SUNY Press. 297 of draft manuscript.

¹² A standard high school is defined as a high school with grades 9-12 or grades 10-12 and does not include alternative high schools, juvenile detention schools, or high schools that are combined with a grade lower than 9th. See additional information in Section III regarding enrollment in Washington public high schools.

Lack of Academic Rigor. In 1983, *A Nation at Risk*¹³ highlighted falling math, science, and reading scores of American high school students along with declining expectations for academic achievement and an increasing need for college remediation.

Lack of Preparedness for Work. At the same time, other groups criticized both poor preparation and lack of opportunity for the 70 percent of students then unlikely to complete a four-year college degree.¹⁴ Concerns expressed at the time included declines in wages for adults with only a high school degree, changes in the economy driving a need for all workers to receive additional training, and employer complaints about inadequate workforce preparedness of high school graduates.

Low Quality of General Education. By 1982, 58 percent of high school graduates were not specializing in either college preparatory or vocational programs.¹⁵ Researchers who studied tracking practices found that students taking the general education track largely took an unconnected array of courses with no objective, generally received lower-quality instruction, and were more likely to come from minority and low-income backgrounds.¹⁶

Low Student Engagement in Learning. Surveys of students report low interest or aspiration in academic achievement, little time spent on homework, and a sense of limited relevance between school and the world outside the classroom.¹⁷ Furthermore, some researchers suggest the large size of many high schools creates an impersonal atmosphere where students do not feel connected to the people and purpose of school.¹⁸

What Reforms of High School Have Been Tried in the Last 20 Years?

Since the 1980s, parents, schools, states, and the federal government have engaged in a wide range of activities aimed at reforming high schools.

Increased Graduation Requirements. In the 1980s, 45 states either increased or initiated statewide graduation requirements. Forty-two states expanded the number of courses required in mathematics, science, or both. The Washington Legislature adopted statewide high school graduation requirements in 1984.¹⁹

¹³ National Commission on Excellence in Education. 1983. *A Nation At Risk: The Imperative For Education Reform*. <http://www.ed.gov/pubs/NatAtRisk/risk.html>

¹⁴ William T. Grant Foundation Commission on Youth and America's Future. January 1988. *The Forgotten Half: Non-College Youth in America* (EDRS 290-822). Washington, DC. 36.

¹⁵ National Center for Educational Statistics. February 2000. *Vocational Education in the United States: Toward the Year 2000* (NCES 2000-029). Washington, DC: U.S. Department of Education, Washington, DC. 51.

¹⁶ Jeannie Oakes. 1992. *Educational Matchmaking: Academic and Vocational Tracking in Comprehensive High Schools*. Berkeley, CA: National Center for Research in Vocational Education. 42.

¹⁷ Laurence Steinberg. 1996. *Beyond the Classroom: Why School Reform Has Failed and What Parents Need to Do*. New York: Simon & Schuster. 67.

¹⁸ Murphy, 298.

¹⁹ See Appendix D for the history of Washington's statewide high school graduation requirements.

Research Results:

- Between 1982 and 1998, the average number of total credits earned by high school graduates increased by more than 13 percent; the increase was due to students taking more academic courses. The proportion of students who take mid-level and advanced math and science courses has also increased steadily since 1982.²⁰ Taking a more rigorous curriculum has been clearly associated with successful college completion.²¹
- Student scores on national math and science tests have shown a steady increase since 1982 (particularly in math), although reading scores have not changed.²²
- By 1992, nationwide dropout rates between 10th and 12th grade were half what they had been in 1982.²³ However, some studies say increased graduation requirements might lead to higher dropout rates.²⁴
- More high school graduates are starting college compared with ten years ago (two-thirds in 1997, and one-half in the early 1980s).²⁵ However, the rate of completion of a four-year degree has not increased at the same pace as college entrance.²⁶

Efforts to Link School and Career. Federal initiatives in the early 1990s, such as Tech Prep and School-to-Work, attempted to increase the academic rigor of vocational education, improve the preparation of students for careers that require post-secondary training, and create programs and strategies to help students transition successfully to work or further education after high school. Strategies include integration of academic and vocational education, creation of career pathways, and work-based learning opportunities where students learn to apply their knowledge and skills in a work environment. Washington has received federal grants to implement both Tech Prep and School-to-Work initiatives.

Research Results:

- In order to avoid being associated solely with vocational education (and thus have limited appeal to students and parents), Tech Prep and School-to-Work efforts have been expanded to appeal to all students. However, this has made it difficult to determine how many students have participated or whether these strategies are

²⁰ National Center for Educational Statistics. February 2000. *The Condition of Education 2000* (NCES 2000-029). Washington, DC: U.S. Department of Education. 44, 157.

²¹ Office of Educational Research and Improvement. June 1999. *Answers in the Toolbox: Academic Intensity, Attendance Patterns, and Bachelor's Degree Attainment*. Washington, DC. <http://www.ed.gov/pubs/Toolbox>

²² National Center for Educational Statistics. June 1999. *The Condition of Education 1999* (NCES 1999-022). Washington, DC: U.S. Department of Education. 3-4.

²³ National Center for Educational Statistics. October 1996. *A Comparison of High School Dropout Rates in 1982 and 1992* (NCES 96-893). Washington, DC: U.S. Department of Education.

²⁴ *Education Week*. March 29, 2000. "Study Links Dropout Rates With Course Requirements." Researchers from Cornell University and the University of Michigan analyzed data on high school dropouts compared with changes in Carnegie units required for graduation.

²⁵ Samuel Halperin, ed. 1998. *The Forgotten Half Revisited*. Washington, DC: American Youth Policy Forum. 94.

²⁶ National Center for Educational Statistics, *The Condition of Education 2000*. 157.

effective.²⁷ Nationally, few students are taking courses organized around career goals or are participating in workplace experiences linked to school.²⁸

- More vocational students nationwide are also taking a core academic curriculum (an increase from 5 percent in 1982 to 45 percent in 1998)²⁹ and are improving their achievement on math and reading scores.³⁰
- Nationally, student enrollment in vocational courses declined by nearly every measure between 1982 and 1994. Most attribute this to increased high school graduation requirements and more academic course-taking: students have less time to take vocational courses.³¹

Redesigning High Schools. Reforms of high school have occurred through national efforts such as the Coalition of Essential Schools, New American High Schools, and High Schools That Work. Only a few Washington high schools currently participate in these national efforts.³² Reforms have also occurred at the district and building level through the creation of alternative high schools, smaller schools or schools-within-schools,³³ magnet schools with specialized curriculum, and Career Academies. In addition, parents and teachers in 36 states and the District of Columbia have created their own high schools through the charter school process. Many of these efforts, in addition to establishing new curricula, attempt to change the overall environment of the school in order to increase student engagement in learning.

Research Results:

- In the High Schools That Work project, integration of academic and vocational courses for students seeking careers after high school has raised student achievement in math, science, and English. However, implementation of these rigorous courses has been uneven.³⁴

²⁷ Mathematica Policy Research Inc. 1998. *Focus for the Future: The Final Report of the National Tech-Prep Evaluation*. Washington, DC: U.S. Department of Education. 5; and Mathematica Policy Research, Inc. July 1998. *Building Blocks for a Future School-to-Work System: Early National Implementation Results. Executive Summary*. Washington, DC: U.S. Department of Education. 2-3.

²⁸ Mathematica Policy Research, Inc. *Building Blocks for a Future School-to-Work System*. 62. Twelve percent of students perceived their courses were organized around a career goal; 16 percent had work experience linked to school; only 2 percent participated in all three: career development, career-oriented courses, and work-based learning.

²⁹ *Education Week*. September 27, 2000. "Mix of Academics, Technical Skills Heralds 'New Day' in Voc Ed.;" and National Center for Educational Statistics. *Vocational Education in the US: Toward the Year 2000*. 63.

³⁰ National Center for Educational Statistics. *Vocational Education in the US: Toward the Year 2000*. 79.

³¹ *Ibid*, 49-51.

³² See Appendix B for more information on these national efforts.

³³ See Appendix C for a review of research on small schools and schools-within-schools.

³⁴ Southern Regional Education Board. 1996. *The 1996 High Schools That Work Assessment*. 1. http://www.sreb.org/Programs/hstw/96_assessment

- Most research shows that students in smaller high schools do better in school than students in larger schools.³⁵ This result may be in part because other reforms are easier to achieve with fewer students and fewer teachers.³⁶ Intentionally creating smaller groups of students and teachers by creating schools-within-schools seems to have a positive effect on student attitudes, but the effect on student achievement is less clear.³⁷ (See Appendix C for an in-depth review of small schools research and programs.)
- Minority and low-income students benefit the most from such redesign efforts as Career Academies and small schools. Even where research findings show mixed results on improving student achievement, the performance of minority and low-income students clearly improves.³⁸

High Standards for All Students. In the 1990s, 49 states (including Washington) began setting high standards for what students should know and be able to do and started developing assessments to measure progress. For high schools, standards-based reformers have advocated a more common core curriculum, at least through 10th grade, capped by a demonstration of competency in the standards before graduation.³⁹ Some also recommend students complete a project or culminating activity that shows they can use their knowledge and skills outside the classroom.⁴⁰

Research Results:

- Standards-based reform is new for most high schools, so its effect is largely unknown. As of 2000, eight states require their graduates to master 10th grade standards; 12 additional states (including Washington) report they will require this in the future.⁴¹
- Although high schools are experimenting with a wide range of performance assessments, such as senior projects, portfolios, and culminating activities, it is largely unknown whether they are reliable measures of what students know and can do or how well they predict future performance outside the school.⁴²

³⁵ Kathleen Cotton. 1996. "School Size, School Climate, and Student Performance." *Close-Up #20*. Portland, OR: Northwest Regional Educational Laboratory. About half the research shows smaller school size is linked to improved student achievement (the other half shows no effect). Most research shows a positive effect of small school size on student engagement, attitude, behavior, and participation in school activities. Both types of effects are even greater for disadvantaged students. "Smaller" generally means 300 to 800 students, although there is limited research to support a particular size. See Appendix C.

³⁶ Valerie Lee and Julia Smith. October 1995. "Effects of High School Restructuring and Size on Early Gains in Achievement and Engagement." *Sociology of Education* 4 (68) 16; and Kathleen Cotton. December 1996. "Affective and Social Benefits of Small-Scale Schooling." *ERIC Digest*, EDO-RC-96-5. 3.

³⁷ Mary Anne Raywid. 1996. "Taking Stock: The Movement to Create Mini-Schools, Schools-Within-Schools, and Separate Small Schools." ERIC Clearinghouse on Urban Education. <http://eric-web.tc.columbia.edu/monographs/uds108/outcome.html>, pp. 1-2.

³⁸ Kathleen Cotton. "School Size, School Climate, and Student Performance." 5; and Mathematica Policy Research Inc. March 1999. *Key High School Reform Strategies: An Overview of Research Findings*. Washington, DC: Office of Vocational and Adult Education. 68.

³⁹ Marsh and Coddling. *The New American High School*. 20.

⁴⁰ Ibid, 53.

⁴¹ Craig Jerald. January 13, 2000. "The State of the States." *Education Week: Quality Counts 2000* XIX (18). 73.

⁴² Mathematica Policy Research Inc. *Key High School Reform Strategies*. 77.

Synopsis: Conclusions Difficult to Draw From Multiple Reform Efforts. When trying to determine the effectiveness of a particular reform, researchers are hampered by the fact that high schools usually try more than one restructuring strategy at the same time.

Some reform efforts are intended to accomplish multiple objectives. For example, creating career pathways within high schools is an effort to link school and career by having students explore different career and education options. When pathways are organized around subject areas or themes (such as “business” or “social services”), they are also an attempt to increase student engagement in learning and reduce tracking of students. Students are encouraged to explore pathways based on their interests; students with different post-high school plans (e.g., four-year college, technical college, work) may be grouped into the same pathway.

At the same time, the aims of some reforms appear contradictory, such as increasing academic rigor while addressing the learning needs of students not likely to complete college. The challenge for high schools and policymakers is determining which reforms matter, which will work in their communities, and which will address the educational needs, not just of some students, but of all students.

Summary of National Trends

- Over the last two decades, the traditional American high school has come under criticism for lacking a clear curricular focus, not demanding high achievement from all students, and not providing personalized learning environments to engage students.
- A variety of high school reforms are being tried across the country. Some focus on creating a demanding and standards-based curriculum, others on encouraging students to link what they learn in school with their future educational and career plans, and still others on changing the school environment. The aims of some reforms appear contradictory. Some reforms attempt to accomplish multiple objectives.
- The challenge in sorting through this information for high school administrators and policymakers is to determine which reforms matter, which will work in their communities, and which will address educational needs, not just of some students, but of all students.

III. PUBLIC HIGH SCHOOLS IN WASHINGTON: *WHAT ARE THEIR CHARACTERISTICS, AND WHAT ARE THE STATE'S POLICIES?*

This section examines Washington's public high schools from a statewide perspective in five areas: (1) characteristics of Washington's public high schools, (2) state expectations for high school students, (3) a history of state policies for high schools, (4) some potential barriers to high school reform, and (5) potential impacts of education reform on high schools.

What Do Washington Public High Schools Look Like?

Categories of High Schools. There are 406 public schools in Washington that have high school students. Ninety-two percent of the students are enrolled in a standard high school configuration of 9th through 12th grades or 10th through 12th grades (see Table 1).

Table 1
Categories of Public High Schools, 1998-99 School Year

Categories	Number of Schools	Percent of Schools	Percent of Student Enrollment
Standard high schools (grades 9-12 or 10-12)	291	72%	92%
Alternative high schools ⁴³	84	21%	6%
High school combined with middle school or elementary school	20	5%	2%
Institutional school in juvenile detention facility	11	2%	< 1%
Total	406	100%	100%

Source: OSPI 1998 High School Building Data

High School Size. Of the 291 standard high schools, enrollment ranges from under ten students to 2,500. Of these standard high schools, 45 percent have enrollments of over 1,000 students. The average enrollment in standard high schools is 912 students (see Table 2).

⁴³ Alternative high schools are defined as schools using a non-traditional curriculum according to OSPI supervisor of alternative education, Martin Mueller, in an e-mail dated October 10, 2000.

Table 2
Standard High School Size, 1998-99 School Year

High School Student Enrollment	Number of Schools	Percent of Schools	Average Enrollment	Percent of Total Enrollment
More than 2,000	7	2%	2,209	6%
1,501 – 2,000	53	18%	1,685	34%
1,001 – 1,500	74	25%	1,241	35%
501 – 1,000	56	19%	718	15%
251 – 500	60	21%	368	8%
250 or less	41	14%	156	2%
Total	291	100%	912	100%

Source: OSPI 1998 High School Building Data

Student Enrollment by Race and Ethnicity. In the 1998-99 school year, there were 302,481 students enrolled in grades 9 through 12. The proportion of the K-12 student population from a non-Caucasian background has increased from 7 percent to 22 percent in the last 30 years.⁴⁴ Table 3 shows the total 9th through 12th grade enrollment during the 1998-1999 school year by race and ethnicity. Twenty-three percent of high school students are students of color.

Table 3
High School Enrollment by Race and Ethnicity, 1998-99 School Year

	African American	Asian and Pacific Islander	Native American	Hispanic	Caucasian	Total
Number of Students	13,714	22,818	7,695	22,063	236,191	302,481
Percent of Total	5%	8%	3%	7%	77%	100%

Source: OSPI Data on Enrollment by race and ethnicity for 1998-99 in grades 9 through 12.

What Are the Current State Expectations for High School Students?

The state has laws regarding compulsory school attendance and statewide learning goals and assessments for high school students. The State Board of Education (SBE) is responsible for establishing minimum high school graduation requirements. Key expectations established by the state for high school students are described in Table 4.

⁴⁴ OSPI website: www.k12.wa.us/dataadmin, Public School October Enrollment Comparisons.

Table 4
What the State Expects of High School Students for 2000-2001

Requirement	Description
Compulsory Attendance	Students must attend school at least until the age of 16 unless they meet certain conditions. ⁴⁵
Subject Standards	Students will be taught the knowledge and skills necessary to meet the statewide learning goals and Essential Academic Learning Requirements (EALRs) at Benchmark III ⁴⁶ in reading, writing, math, communication, science, social studies, art, health, and fitness. ⁴⁷
Assessments (Tests)	Students will take the Iowa Test of Educational Development (ITED) in the 9th grade and the Washington Assessment of Student Learning (WASL) during high school, usually in 10th grade. ⁴⁸ There will also be locally determined assessments on the EALRs.
Certificate of Mastery	When the State Board of Education determines that the WASL is valid and reliable, students who meet the standards on the WASL will receive a Certificate of Mastery. ⁴⁹ (The class of 2008 is expected to be the first class that will be affected by this requirement.)
Educational Pathways	After students complete a Certificate of Mastery, they will have the opportunity to explore career and educational objectives through educational pathways. ⁵⁰
Graduation Requirements*	Students must take a minimum of 19 credits in certain subject areas to graduate from high school. ⁵¹ <ul style="list-style-type: none"> • English (3 credits) • Mathematics (2 credits) • Science (2 credits) • Social Studies (2.5 credits) • Occupational Education (1 credit) • Physical Education (2 credits) • Restricted credit preferably in the arts (1 credit) • Elective non-restricted credits (5.5 credits)

⁴⁵ RCW 28A.225.010. Conditions include that a 16-year-old is regularly employed, has parental agreement that child does not have to attend school, has met the graduation requirements, or has received a certificate of education competency.

⁴⁶ Benchmark III refers to the knowledge and skills students would be expected to demonstrate at approximately grade 10 in reference to each of the EALRs. Benchmarks I and II have been established for grades 4 and 7, respectively. An example of a Benchmark III expectation for reading would be: "Student reads a full range of texts purposefully and automatically (instructions, news articles, poetry, novels, short stories, professional materials that match career or academic interests)."

⁴⁷ RCW 28A.150.210 and 28A.655.060. Additional subjects will have EALRs established at later dates.

⁴⁸ RCW 28A.655.070. The law does not specify when the WASL must be taken, but the intent of the legislation is for most students who pass the WASL to receive their Certificate of Mastery by the age of 16. Currently, the high school WASL for 2001 covers reading, writing, listening, and math.

⁴⁹ RCW 28A.655.060 and WAC 180-51-063. The Certificate of Mastery becomes a graduation requirement for the Class of 2008.

⁵⁰ RCW 28A.655.070.

⁵¹ WAC 180-51-060.

How Has State Education Reform Policy for High Schools Changed?

Legislative Policies. Over the last 30 years, the legislature has asserted more state control over local school districts by establishing certain requirements for high schools and high school students in Washington. The legislature’s actions follow national trends to increase graduation requirements, link school and career, redesign the high school environment, and set high standards for all students.

Table 5
History of Legislative Policies for High Schools⁵²

Decade	Major Policies
1970	<ul style="list-style-type: none"> • Requested OSPI conduct the first statewide standardized tests on a sample of 8th and 11th graders. • Required school districts to develop student-learning objectives. • Provided substantial state funding to build skills centers to enhance the vocational education offerings available to high school students.
1980	<ul style="list-style-type: none"> • Created specific high school graduation requirements and required the SBE to develop a standardized high school transcript to enable a comparison between different schools’ credit systems (e.g., quarter, semester, and trimester). • Required public four-year baccalaureate institutions establish uniform minimum entrance requirements. • Provided grants through the Schools for the Twenty-First Century Program to foster change in the common school system and improve student performance at all levels.
1990	<ul style="list-style-type: none"> • Created a number of initiatives aimed at reforming high schools: <ul style="list-style-type: none"> ✓ Running Start, which allows dual credit enrollment in high school and certain colleges; ✓ Pilot projects to enhance academic/vocational integration; and ✓ Start-up grants for alternative education and internet-based curriculum. • Specified that certain information be collected on high school students: <ul style="list-style-type: none"> ✓ Graduation and dropout rates; ✓ Remedial courses taken in college; and ✓ Post-graduate experiences. • Removed high school credit requirements from the statutes to increase flexibility for the SBE to set policy. • Enacted the 1993 Education Reform Act which significantly increased the role of the state: <ul style="list-style-type: none"> ✓ Established Statewide Essential Academic Learning Requirements (EALRs) and standards that students should meet in benchmark grades;⁵³ ✓ Required students to pass the 10th grade WASL to earn a Certificate of Mastery and receive a high school diploma once the SBE has determined that the WASL is valid and reliable;⁵⁴ and ✓ Required schools to provide students who have earned a Certificate of Mastery with opportunities to pursue educational pathways.⁵⁵

⁵² See Appendix D for more in-depth information and statutory citations.

⁵³ The benchmark grades are 4, 7, and 10.

⁵⁴ Excluding Washington, 24 states have an exit exam in place, or planned for the future, for graduation. For more information see: www.ecs.org/ecs.

⁵⁵ RCW 28A.655.060(3)(c).

The state legislature has gradually increased its oversight role for high schools to establish some consistent performance expectations for students. However, the question remains: To what extent are high schools restructuring their curriculum and programs to meet state policy expectations?

State Board of Education Policies. In 1984, the Legislature established the first minimum state high school graduation requirements and assigned the SBE to oversee graduation policies. Since 1992, the SBE has had full responsibility for setting graduation requirements.⁵⁶ Students are required to take 19 credits in particular subject areas to receive a public high school diploma.⁵⁷ Local school districts have the option to require additional credits or activities. In June 1999, the SBE modified the definition of high school credit to allow for learning outside the classroom as approved by the district.

High School Graduation Requirements. In 1998, the SBE began to review high school graduation requirements to ensure alignment with the Education Reform Act. In October 2000, the SBE amended the state's minimum graduation requirements, beginning with the 9th grade class in 2004. Highlights of the SBE changes are discussed below:

- **Competencies.** The option for students to demonstrate competency as an alternative to earning credits through course hours reflects the SBE's commitment to promote performance-based education. However, no definitions or guidance are provided for how to translate competencies into credits. The Higher Education Coordinating Board (HECB) has worked on this task with a small number of high schools on a pilot basis (see discussion below). It is unclear how many districts will use the competency option to award credits toward graduation.
- **Culminating Projects and Education Plans.** The new requirement for culminating projects is somewhat controversial. The SBE heard conflicting testimony about whether the state will overburden high schools as they attempt to meet other expectations of education reform. The SBE's decision to adopt a culminating project was based on the desire for students to use their knowledge and skills to pursue a specific interest in a way that regular coursework might not provide. The "high school plus" education plan allows students to plan what coursework and experiences they want to have in high school as well as what they might want to do in the year following high school graduation. The projects and plans are also intended to highlight Goal 3 and Goal 4 of the Basic Education Act.⁵⁸ The specifics of what high schools require of students in preparing their culminating projects and education plans are left up to local school districts.

⁵⁶ Chapter 278, Laws of 1984 set graduation requirements in statute and made the SBE responsible for developing and establishing procedures for students to meet equivalencies of the required courses and credits. The Legislature removed the requirements from statute in 1992, giving the SBE complete authority over graduation requirements.

⁵⁷ One credit equals 150 hours of planned instructional activities approved by the district.

⁵⁸ RCW 28A.105.210. Goal 3: Think analytically, logically, and creatively, and integrate experience and knowledge to form reasoned judgments and solve problems. Goal 4: Understand the importance of work and how performance, effort, and decisions directly affect career educational opportunities.

Table 6 outlines the major changes made by the SBE to high school graduation requirements.⁵⁹

Table 6
Changes to High School Graduation Requirements Adopted in 2000⁶⁰

Changes to Graduation Requirements	
Competencies	Minimum state credits by subject area were not changed, but high schools have the option to award credits toward graduation based on demonstrated competencies rather than accumulated hours spent in courses. ⁶¹
Alignment With EALRs and WASL	For each subject area, minimum required content was defined to include Benchmark III ⁶² of the EALRs. Additional content can be defined locally. High schools must assess the required content using the WASL (for tested subjects).
Culminating Project	Each student must complete a culminating project to demonstrate learning competencies and preparations related to state learning goals 3 and 4.
High School Plus Education Plan	Each student must create an education plan for the four years of high school plus one additional year to plan for what the student wants to do after high school graduation.

Certificate of Mastery. The SBE is also responsible for determining if the high school WASL is reliable and valid. Once this determination is made, successful completion of the WASL leads to the award of a Certificate of Mastery. By statute, receiving the Certificate of Mastery is a requirement for graduation.⁶³ The SBE has established that the initial Certificate of Mastery will become a graduation requirement for the class of 2008. The initial Certificate of Mastery will require students to pass the WASL successfully in the four subject areas currently tested: reading, writing, communications, and mathematics.⁶⁴ An advisory committee is currently reviewing the reliability and validity of the WASL and will submit its findings to the SBE in May 2003. The committee may also make further recommendations about whether to retain the requirement for a Certificate of Mastery to graduate.⁶⁵

⁵⁹ For the new SBE administrative rules, see www.k12.wa.us/sbe/gradrq/NewGradRe.doc.

⁶⁰ WAC 180-51-003, 005, 050, 061, 135.

⁶¹ In addition, student transcripts for the class of 2003 will indicate which subjects the student passed on the WASL, as well as the student's attendance record.

⁶² Benchmark III refers to the knowledge and skills students would be expected to demonstrate at approximately grade 10 in reference to each of the EALRs. An example of a Benchmark III expectation for reading would be: "Student reads a full range of texts purposefully and automatically (instructions, news articles, poetry, novels, short stories, professional materials that match career or academic interests)".

⁶³ RCW 28A.655.060.

⁶⁴ WAC 180-51-063.

⁶⁵ WAC 180-51-064.

Higher Education Coordinating Board Policies. The Higher Education Coordinating Board (HECB) is responsible for setting minimum college admissions requirements for entry into Washington State public institutions. After the 1993 Education Reform Act passed, the HECB convened an advisory committee to work on aligning college admissions policies with state education reform.⁶⁶ The HECB has adopted the following policies in support of K-12 reform.

Competencies for College Entrance. Since 1995, the advisory committee has been working to develop a competency-based approach for college admission. Like high school graduation requirements, HECB college admissions requirements are based on numbers of credits earned in particular subject areas.⁶⁷ The advisory committee first translated the minimum credits into descriptions of subject area content students are expected to master for college entrance (i.e., competencies). The HECB adopted the committee's recommended competencies in English, math, and world languages in June 1997. Competencies in science were adopted in March 2000.⁶⁸

A pilot project with four high schools was initiated to identify what types of student work (assignments, papers, tests) would demonstrate successful mastery of the content in each subject area. High school teachers and college faculty met to discuss and score samples of student work to reach a common understanding of how the competencies could be practically applied.⁶⁹ These four pilot projects continue, and the HECB has proposed expanding the number of participating schools to 12 in 2001.⁷⁰

When the HECB began its work, it was widely believed that state education reform would shift K-12 education entirely to a performance-based system. However, as mentioned, it is not clear how many high schools will pursue the SBE's new option of awarding graduation credits based on competencies. The experience of the HECB pilot projects suggests that creating a common understanding of what type and level of student performance meets a competency-based standard is time consuming (and, potentially, expensive).⁷¹

Certificate of Mastery. In adopting competencies in English, math, world languages, and science, the HECB has also adopted a requirement that Washington students attain a Certificate of Mastery in order to be admitted as a freshman to a four-year public institution.⁷² The HECB competencies assume that students will have achieved a level of knowledge and skills *beyond* Benchmark III of the EALRs. Benchmark III is currently the standard for receipt of the Certificate of Mastery. The competency-based admissions standards will be implemented beginning with the high school graduation class of 2008.⁷³

⁶⁶ RCW 28A.655.060 directed the Commission on Student Learning to study how college entrance requirements could be made consistent with the EALRs and Certificate of Mastery. Under these auspices, the HECB convened its advisory committee on competency-based college admission.

⁶⁷ The HECB requires four years of English, three years of math, three years of social studies, two years of science, two years of world language, and one year of arts, as well as specified content in the areas listed. Public four-year colleges also use an admissions index based on a combination of GPA and SAT/ACT test scores.

⁶⁸ National Center for Higher Education Management Systems (NCHEMS). May 15, 2000. *Washington HECB Competency-Based Admissions Evaluation Report*. Boulder, CO. 5.

⁶⁹ The pilot schools are Kamiakan (Kennewick), Selah, Mountlake Terrace (Edmonds), and Lake Washington.

⁷⁰ Conversation with Doug Scrima, HECB staff.

⁷¹ NCHEMS, 8.

⁷² Because home-schooled students, students from out-of-state, and students from private institutions have been legislatively exempted from having to earn a Certificate of Mastery, the HECB will continue to rely on existing minimum admissions standards for these students. Transfer students and returning adults will continue to be evaluated with criteria specific to their situation.

⁷³ Higher Education Coordinating Board. January 7, 1999. *Report to the Legislature on Competency-Based Admissions Standards*. Olympia, WA; and conversation with Doug Scrima, HECB staff.

What Are Some Potential Barriers to Reform in High Schools?

As the Institute proceeds to document high school educational opportunities through case studies and surveys, it is important to note potential barriers to change and reform in high schools. Transforming the state's intentions for education reform into reality represents a significant task. Some barriers to change exist in all schools, such as adequate leadership, resistance to the newest in a long series of reform initiatives, or concern about relying primarily on test results to gauge student learning.⁷⁴ However, many believe that high schools in particular have been slow to change in response to reforms initiated from outside the school. In attempting to change, high schools face a number of challenges:

- **Motivating students.** High schools must educate many different students. In an effort to keep as many students as possible enrolled, high schools offer a broad curriculum with a variety of electives, sports, and clubs to appeal to different interests. There is concern that focusing the curriculum on academic courses and expecting students to achieve at higher levels will cause more students to drop out.
- **Addressing low academic preparedness.** A number of students have been promoted from grade to grade despite deficiencies in basic skills. By the time these students reach high school, their learning deficits can prevent them from successfully participating in the core curriculum offered. Yet, the high school is expected to help them achieve and meet the new learning standards.
- **Overcoming the size and organization of the school.** Many high schools are large. Most are compartmentalized into subject matter departments. Teachers have an average of 100 to 150 students daily, making it difficult to create personal relationships between students and teachers. Teachers who are experts in their subjects and who believe they are successful with students may be reluctant to have their content dictated from outside their own classroom.
- **Competing demands from parents, colleges, employers, and students.** Different constituencies have competing expectations for high school students. Some want scholarship athletes, others place a priority on job skills, and others expect students to obtain a traditional academic background. An unprecedented proportion of high school students report that they want to go to college. But are students adequately informed about the demands of college or their other options?
- **Convincing students that academic accomplishments are worthwhile.** In the United States, students are encouraged to pursue a variety of activities in addition to academics. Many teens find more reward in excelling in sports, working at a job to make spending money, and socializing with friends than in doing well academically. Students know they can graduate from high school in spite of low grades; community colleges will accept all students who apply to give them another chance. Employers do not ask for high school transcripts to see how well students have done.⁷⁵

⁷⁴ The comments that follow were compiled from presentations and discussions on high school and standards-based education at the annual American Educational Research Association meeting in New Orleans, April 24-28, 2000.

⁷⁵ The Partnership for Learning and the Washington Roundtable have started an "Ask for Transcripts" campaign in local business communities around Washington.

How Might State Education Reform Affect High Schools?

The Institute's final report will examine what effect the state's education reform is having on the educational opportunities and programs available to high school students. Washington's education reform is part of a nationwide movement toward standards-based education. Under standards-based education, specific content standards for subject areas are defined, and all students are expected to master them. Mastery of the standards is demonstrated through a formal assessment. This represents a shift in expectations: high schools will be required to ensure that all students, not just college-bound students, master high-level standards.

Once students have mastered the expected proficiencies in the EALRs and achieved a Certificate of Mastery, high schools must provide them with a variety of educational pathways. Educational pathways are intended to assist students with education and career objectives for options beyond high school. Decisions about what constitutes a pathway, how they work, and how students pursue them are left to individual schools.

A number of significant questions remain unanswered as state education reform moves into high schools. Will high school change for 11th and 12th grade students through widespread use of educational pathways, culminating projects, and student plans? Will students who complete the Certificate of Mastery decide to leave high school and start college or get a job? Will students who cannot master the proficiencies on the WASL drop out of school, pursue an alternative credential, or spend 11th and 12th grades in remediation?

The study will set a baseline regarding the educational opportunities and programs offered in high schools. But it can only begin to answer the many questions people have about the effects of education reform. Washington's 1993 education reform has many requirements that will not be fully in place for almost another decade.

Summary of Washington's Public High Schools and State Policies

- There are 406 schools in Washington with high school students. Seventy-two percent are standard high schools with grade configurations of 9 through 12 or 10 through 12. Of the standard high schools, 45 percent have enrollments of over 1,000 students. The average size of the standard high school is 912 students. Twenty-three percent of all Washington high school students are people of color.
- The legislature and the SBE are responsible for setting policies for high school requirements. Policies already in place address the following topics: compulsory attendance, subject standards, assessments, Certificate of Mastery, educational pathways, and subjects and competencies needed for graduation.
- Over the last 30 years, the state has asserted more control over local school districts by establishing policies that follow national trends, such as increased graduation requirements, efforts to link school and career, redesign of the high school environment, and high standards for all students. Other policies have been shaped in Washington, such as the Legislature's creation of Running Start, the SBE's encouragement of competency-based learning and the requirement of culminating projects, and student education plans for graduation (for the class of 2008).

- High schools may have been slow to change in the past due to a number of factors, including lack of student motivation, few incentives for high academic achievement, differing expectations from parents and the community, and the organization and size of typical high schools.
- Standards-based reform shifts what is expected from high schools and what high schools expect from students. High schools will be required to ensure that all students, not just college-bound students, master high-level standards. But significant questions remain unanswered for the majority of high schools in the state. Will high school change for 11th and 12th grade students through widespread use of educational pathways, culminating projects, and student plans? Or, will students who complete the Certificate of Mastery decide to leave school and start college or a job? Will students who cannot master the proficiencies on the WASL drop out of school, pursue an alternative credential, or spend 11th and 12th grades in remediation?

IV. HIGH SCHOOL STUDENT PERFORMANCE: *WHAT DO WE KNOW?*

High school student performance⁷⁶ will be examined through two key questions:

- ***How much education do students attain (educational attainment)?***
- ***How well do students learn (educational proficiency)?***

The specific performance measures used to examine these questions are highlighted in the box below:

<p>Performance measures of <i>educational attainment</i> examined:</p> <ul style="list-style-type: none">• High school dropouts• High school completion• Education after high school• Course enrollment in high school• College-level learning for high school students	<p>Performance measures of <i>educational proficiency</i> examined:</p> <ul style="list-style-type: none">• High school test performance• Running Start student performance in college• Remediation in college
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Educational Attainment

Public High School Dropouts

The Office of the Superintendent of Public Instruction (OSPI) collects annual data on all enrolled public high school students including dropouts, transfers, graduations, and whether a student's status is unknown. The annual dropout rate for 1998-99 by grade level increases from 4 percent in 9th grade to 7 percent in 12th grade as shown in Figure 1.⁷⁷ Figure 2 shows the annual dropout rate is higher for certain racial and ethnic categories. Dropout rates in grades 9 through 12 are highest for Hispanics and Native Americans (9 percent).

⁷⁶ See Appendix E, Student Data Sources in Washington, for a description of the different data bases available.

⁷⁷ OSPI calculates annual dropout rates using high school students who have dropped out of school during the year reported. OSPI does not include an "unknown" category of students for whom there is no information available. The annual unknown status for grades 9-12 is approximately 6 percent. Currently, OSPI does not calculate a cumulative dropout rate to assess the impact of how many students drop out over a three- to four-year timeframe while in high school. The annual dropout number reflects a lower percentage than actually occurs over time.

Figure 1
Percent of Annual Public High School Dropouts by Grade, 1998-99

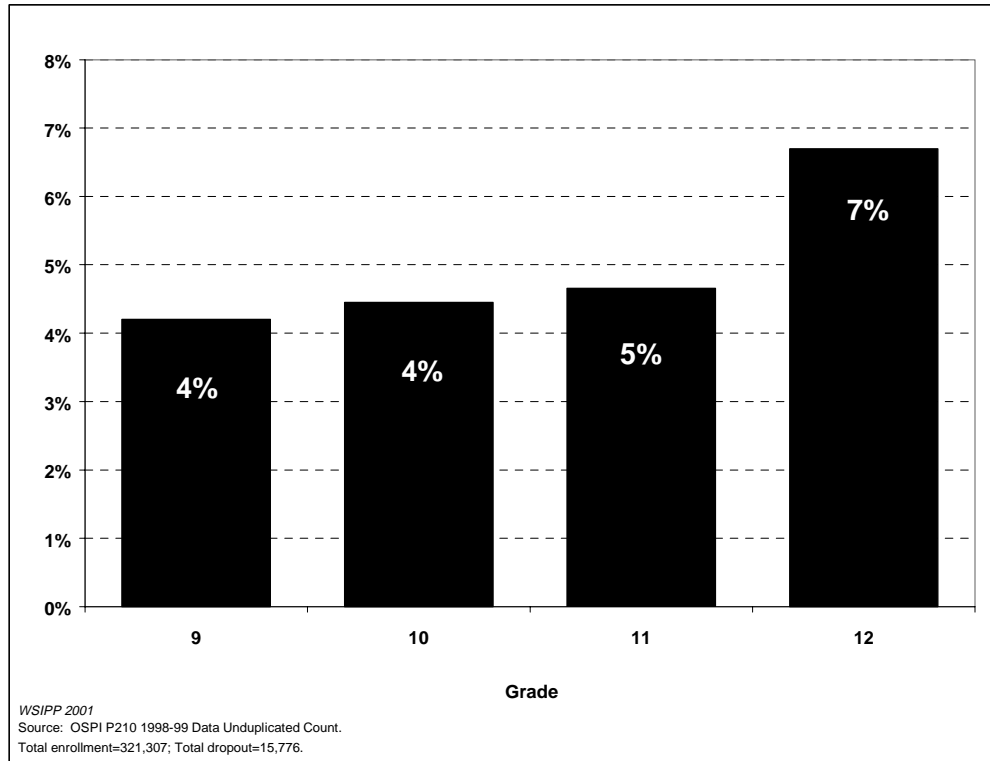
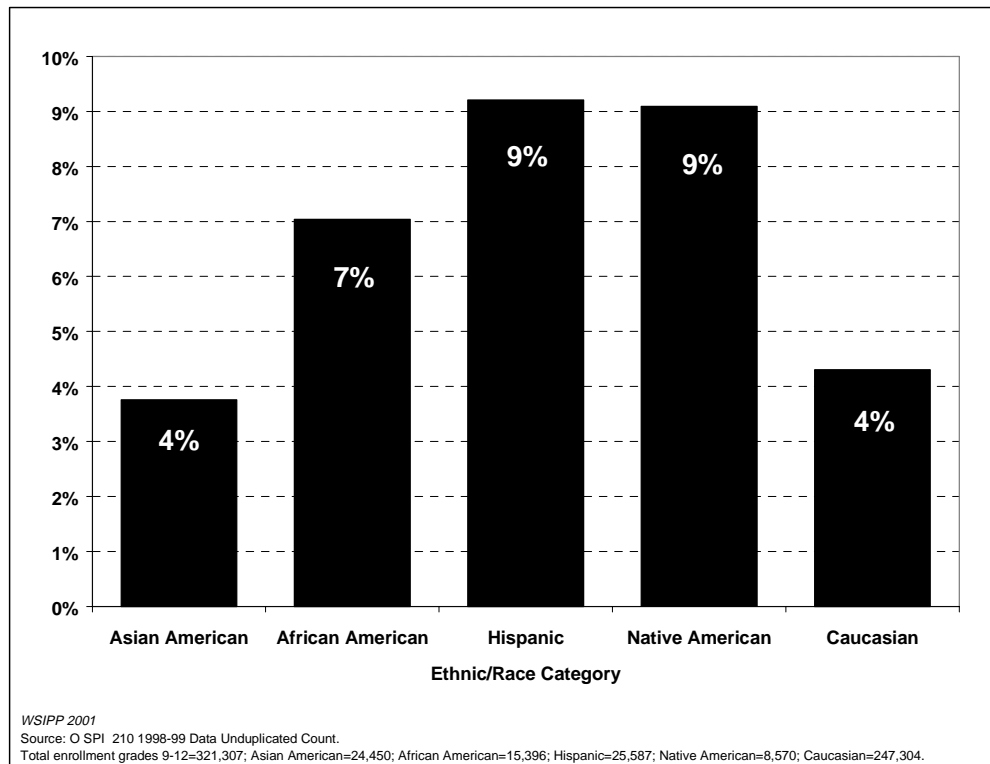


Figure 2
Percent of Annual Public High School Dropouts by Race/Ethnicity, 1998-99
9th – 12th Grades



In addition to dropout statistics, the OSPI database also records students whose status is unknown. These students may have enrolled under a different name while continuing to attend a public school in Washington, transferred out-of-state, enrolled in a private school or home schooling, or elected not to attend school. (Students are not required to attend school after age 16 based on certain conditions.⁷⁸)

On average, 6 percent of students in each grade in 1998-99 fall under this unknown status. Previous counts of enrollment statistics have revealed that some students classified with an unknown status one year reappear as enrolled students in subsequent years. One of the present difficulties in counting students arises from the lack of a common student identifier to monitor student mobility throughout the state.

The annual dropout and unknown status rates distort the number of students actually leaving high school. To address this problem, the Institute examined a class of 9th graders as they progressed through high school.⁷⁹ Figure 3 displays the four-year follow-up for 9th grade students enrolled in Washington public schools during the 1995-96 school year.⁸⁰

As displayed in Figure 3, the greatest numbers of students leave school between grades 9 and 10 (10 percent) and between grades 10 and 11 (9 percent). By the fourth year, 24 percent of 9th grade students in the class of 1995-96 could not be located.⁸¹

⁷⁸ RCW 28A.225.010.

⁷⁹ The 9th grade class of 1995-96 public school students' enrollment records were matched to three subsequent years (1996-99).

⁸⁰ This analysis does not account for students who may have enrolled in the subsequent three years but were not enrolled in 1995-96. In addition, students of the same age who entered Washington schools in later grades are not included in this follow-up. Between grades 9 and 12, students may: (1) remain in the same school district or transfer to another district within the state; (2) report a confirmed transfer to another public or private school system; (3) leave the school system without reporting their current status; or (4) leave the state.

⁸¹ The Institute was unable to provide the exact percentage of students who dropped out or transferred without confirmation by the state. Some of these students are likely to re-enroll during the following school year. Approximately 7 percent of 12th graders enrolled in 1997-98 were enrolled as 12th graders during the 1998-99 school year.

Figure 3
Four-Year Follow-Up of 9th Graders for 1995-96

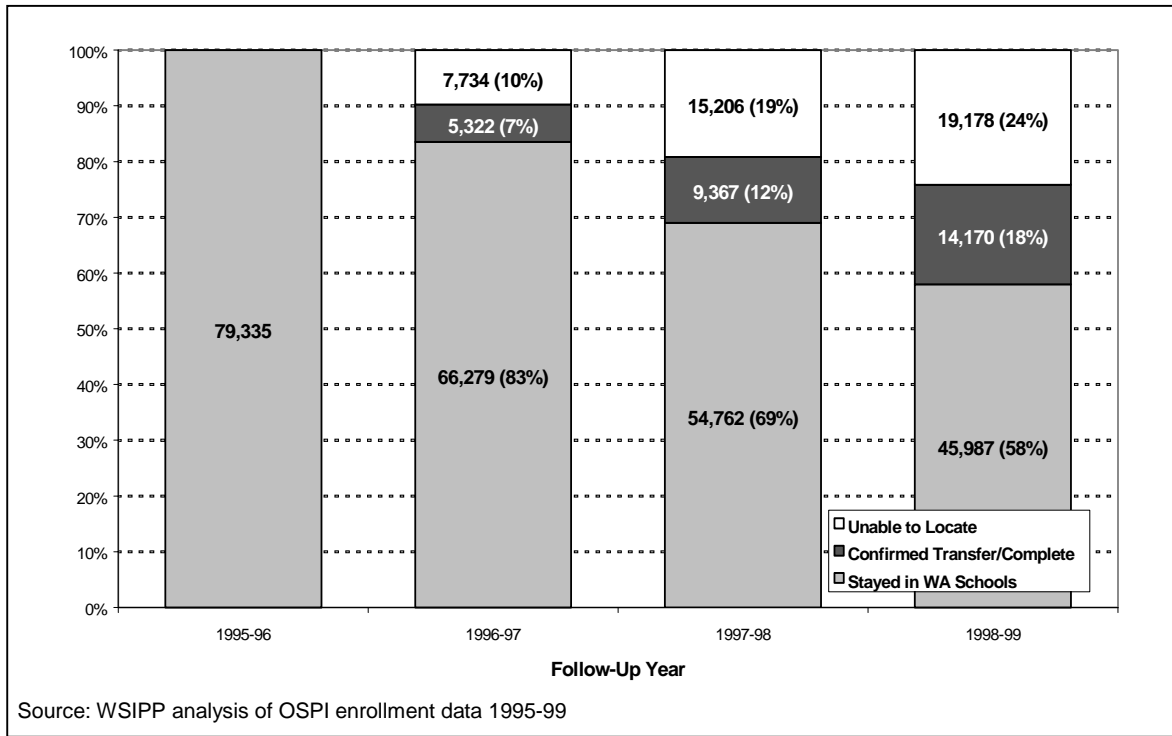
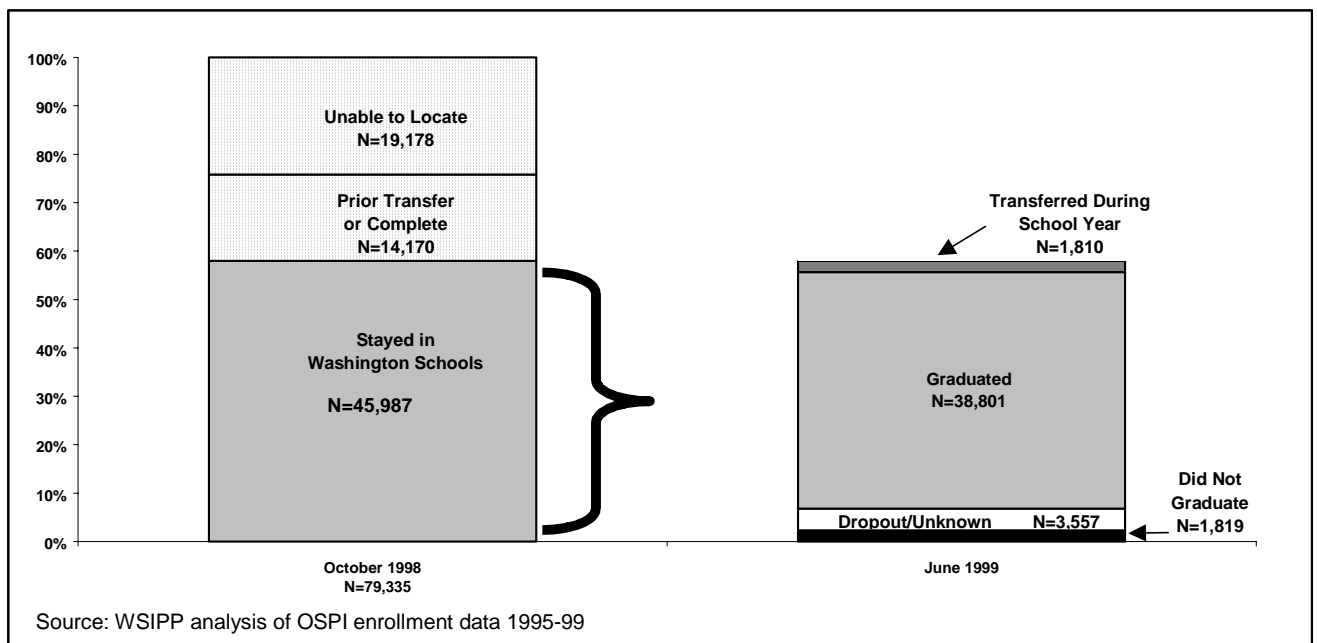


Figure 4 shows the year-end status of 1995-96 9th graders who remained in Washington schools by grade 12. Of the nearly 46,000 students still enrolled in Washington schools by the fourth follow-up year, 38,801 were reported as graduates. The remaining 7,186 students transferred during the school year, dropped out, or did not complete the present grade level.

Figure 4
Enrollment Status of 9th Grade Students (1995-96) After 12th Grade (1998-99)

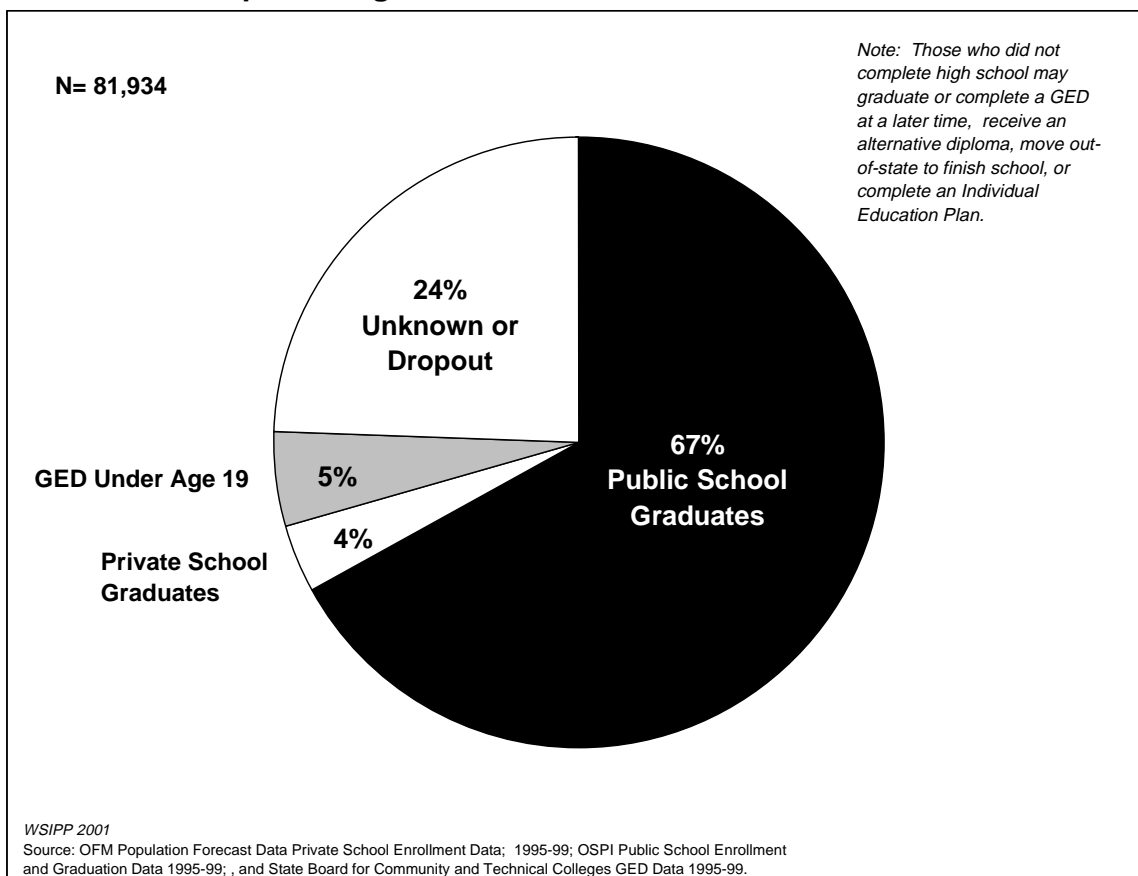


The lack of a uniform student identifier reduces the certainty of this follow-up. The analysis indicates that current reported dropout rates might underestimate the number of students who leave school each year and over time. A uniform student identifier would facilitate record keeping among districts in dealing with student transfers. Such an identifier would also allow policymakers to examine the level of student movement among schools and districts. This change would provide an accurate assessment of the student dropout rate in the state and help identify the factors that increase the risk that a student will leave school. OSPI is planning to implement a voluntary statewide student identifier during the 2001-02 school year.

High School Completion “On Time”

High school completion “on time” is defined as students who receive their high school diplomas or GEDs before their 19th birthdays. Figure 5 shows that an estimated three-quarters of Washington’s youth under 19 completed high school on time in 1997-98. This rate of completion has remained constant for the last 35 years.⁸²

Figure 5
Three-Quarters of Washington’s Students Under Age 19 Completed High School or a GED “On Time” in 1997-98



⁸² Steve Aos, et al. January 1996. *Trends in At-Risk Behaviors of Youth in Washington*. Olympia, WA: Washington State Institute for Public Policy. 19.

Table 7 lists the number of students who have completed high school since 1995-96.

Table 7
Washington Students Completing High School

	1995-96	1996-97	1997-98	1998-99	1999-00
Public School	49,241	51,741	54,472	52,372	NA
Private School	2,696	2,716	3,102	NA	NA
GED Completers Under Age 19	3,562	3,892	4,105	4,440	4,873

Source: OSPI Graduation and Dropout Statistics and State Board for Community and Technical Colleges GED Statistics

The State Board for Community and Technical Colleges (SBCTC) maintains the data for GEDs. In 1998, those under age 19 receiving a GED made up 5 percent (3,795 students) of the high school completers.⁸³

Education After High School

While an estimated 76 percent of youth under age 19 in Washington complete high school on time, young adults also continue to complete their high school credentials. Of the 25- to 29-year-old young adults surveyed in OFM's 1997 State Population Survey, approximately 91 percent had completed high school;⁸⁴ of those, 65 percent had some additional education after high school: 9 percent received an associate's degree and 31 percent received a bachelor's degree or higher. It is important to note that the data from the State Population Survey on young adults represents a different population than the enrollment data on high school completion described above because it includes migration of young adults in and out of the state after high school. Table 8 shows the degree level attained for young adults.

⁸³ State Board for Community and Technical Colleges' GED statistics 1995-99. The median age for GED completion is 20. Over the last five years, the percentage of students under 19 completing a GED has increased slightly from 34 percent to 39 percent of all GED completers. In addition to the community and technical colleges, public high schools and testing centers in four-year colleges also grant GED certificates and alternative high school diplomas.

⁸⁴ It is possible for young adults to be in vocational or some college programs without a high school diploma, so the percentage of high school completers may be slightly inflated.

Table 8
Level of Education Attained for Young Adults
Aged 25 to 29 in Washington

Educational Status	Percent
Less than High School	7%
High School Graduate	25%
GED	2%
Vocational	4%
Some College	20%
Associate Degree	9%
Bachelor's Degree	26%
Master's Degree	4%
Other Degree	1%
Unknown	2%

Source: OFM's State Population Survey 1997

Course Enrollment in High School

OSPI does not collect data on student course enrollment (with the exception of vocational education classes for vocational completers).⁸⁵ Because data are not available, the state is unable to analyze the change in student enrollment for different courses (e.g., more remediation, higher-level academic classes, or certain electives).

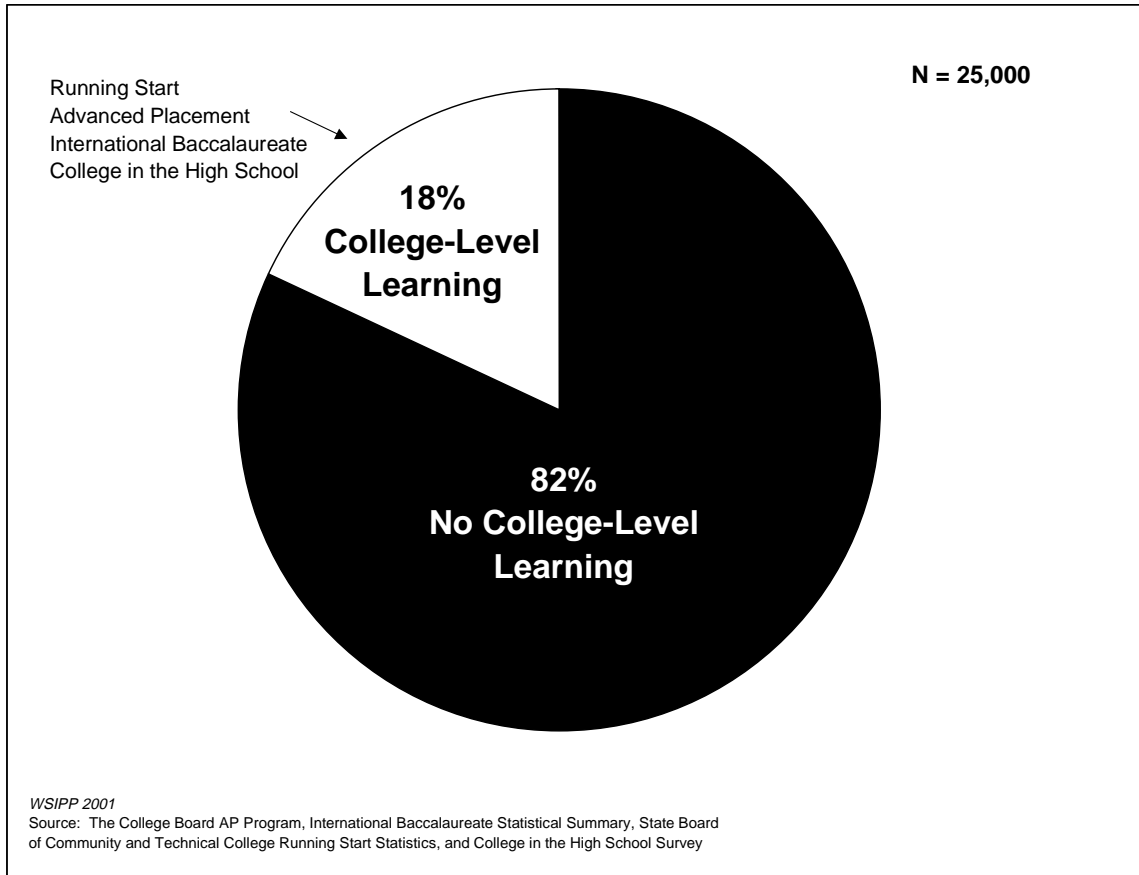
The Institute's final report will survey all high schools to determine course enrollment in math by grade level for all high school students. This information can serve as a baseline to determine if there are changes in the levels of math enrollment in future years due to the new higher math standards.

College-Level Learning for High School Students

Many high school students take courses to earn high school and college credit simultaneously. As shown in Figure 6, approximately 25,000 Washington State public school students in grades 11 and 12 were enrolled in college-level learning during the 1998-99 school year, representing 18 percent of the total 11th and 12th grade public school enrollment.

⁸⁵ OSPI discontinued its publication, *Washington High School Course Enrollment*, following the 1993-94 school year. This annual report provided the percentage of students enrolled in each high school course by grade. However, because schools do not use uniform course titles, there are difficulties with cataloguing. Some self-reported data on courses taken is available from tests such as the SAT and CTBS. It is likely that the SBE will consider using uniform course titles on state standardized transcripts.

Figure 6
18 Percent of 11th and 12th Grade Students
Participated in College-Level Learning in 1998-99



Four college-level learning programs enable students to earn college credit during high school. Three take place on high school campuses: Advanced Placement (AP), International Baccalaureate (IB), and College in the High School. The fourth program, Running Start, allows high school students to take classes at two-year community colleges and certain four-year public institutions.⁸⁶ Running Start is the state's fastest growing college-level learning program and has the largest high school student enrollment of all college-level learning programs.

⁸⁶ Some Running Start courses are held on high school campuses.

Table 9
Participation in College-Level Learning Courses

	Advanced Placement (AP) 1998-1999⁸⁷	International Baccalaureate (IB)⁸⁸ 1998-1999	Running Start 1998-99⁸⁹
Students Participating	10,120 (public school students: 8,715)	528 (private school students did not participate)	12,355
Minority Students⁹⁰	20%	Information not collected by IB	15%
Exams Taken in Washington	14,685	1,231	NA
State Average Exam Pass Rates	67%	84%	NA
National Average Exam Pass Rates	64%	81%	NA

No systematic information is collected on students enrolled in College in the High School programs, although a February 2000 survey by the Association of Washington School Principals estimates an enrollment of 3,500 students.

The Institute's final report, to be published in September 2001, will provide information on students enrolled in college-level learning courses by race and ethnicity in each high school, as well as the number of college-level courses offered.

⁸⁷ The College Board. 1995 and 1999. *1999 Advanced Placement Programs in Washington and National Summary Reports*. New York. These numbers represent only those students who took the AP exams; other students may have taken the courses and not taken the exams.

⁸⁸ International Baccalaureate Organization. 1999. *North American Statistical Summary May 1999 Session*. New York, NY.

⁸⁹ State Board for Community and Technical Colleges. 1999. *Running Start, 1998-99 Annual Progress Report*. Olympia, WA.

⁹⁰ Of the 20 percent minority AP candidates (as reported), 60 percent were Asian Americans.

Educational Proficiency

High School Test Performance

Test performance is the most common method of measuring educational proficiency. High school performance is reflected in a single snap of student performance and curricular material. Currently, it is not possible to measure the gains in individual student performance through a statewide test that measures the same students on the same test as they progress through high school (or elementary and middle school).

In Washington State, two major tests are administered to at least 80 percent of high school students: the Washington Assessment of Student Learning (WASL) in grade 10⁹¹ and the Iowa Test of Educational Development (ITED) in grade 11.⁹² The WASL is a criterion-based test that measures what individual students learn, based on Washington's standards. Results cannot be compared with other states' students. The ITED is a norm-referenced test that compares students' performance with their peers nationally.

Table 10
Testing in Washington State, 1999-2000

	WASL 10th Grade⁹³	ITED 11th Grade⁹⁴
Percent of Students Taking Test in 2000	91% Reading 90% Math 86% Writing 90% Listening	83% Reading 94% Quantitative 83% Expression
1999-2000 State Performance	Percent who met standard (Level 3 and 4): ⁹⁵ 60% Reading 35% Math 32% Writing 78% Listening	Mean National Percentile Rank (NPR): 54 in Reading 60 in Quantitative 55 in Expression

⁹¹ The 10th grade WASL was optional in 1998-99.

⁹² Prior to 1999, 11th grade students took the Curriculum Framework Assessment System (CFAS). Beginning in 2001, the ITED will be given in the 9th rather than the 11th grade.

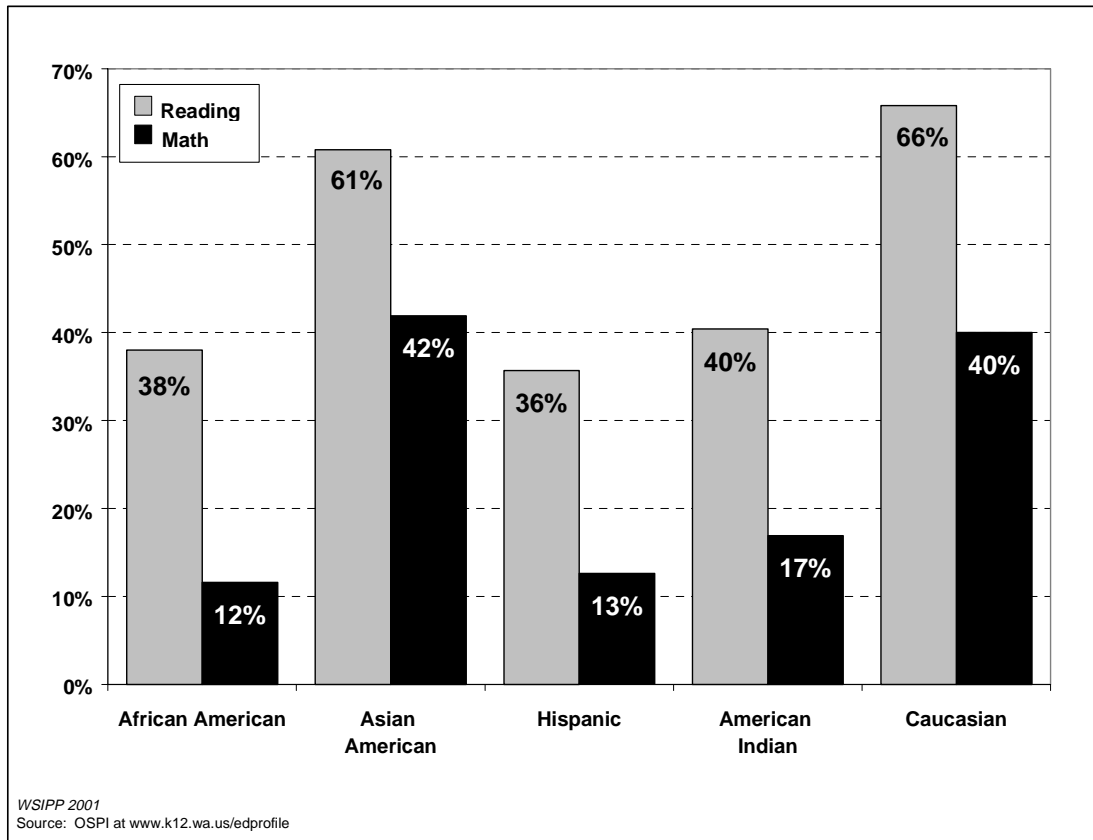
⁹³ <http://www.k12.wa.us/edprofile/stateReport.asp?sReport=stateWASL1999-2000>

⁹⁴ <http://www.k12.wa.us/edprofile/stateReport.asp?sReport=stateITBS1999-2000>

⁹⁵ Students are graded in four levels; to pass the WASL, students must reach level 3 or 4.

The 10th grade WASL scores for reading and math in 1999-2000 are broken down by ethnicity in Figure 7. African American, Hispanic, and Native American students were less likely to meet the WASL 10th grade standards than Asian American and Caucasian students.

Figure 7
Washington State High School Test Scores, 1999-2000
10th Grade WASL Standard Met by Ethnicity



Students who want to attend college take the Scholastic Achievement Test (SAT) in 11th and 12th grades.⁹⁶ Over the last five years (1995-99):

- 42 percent of Washington high school students took the SAT.
- Washington students have had higher average SAT verbal and math scores than the national average.
- Washington students' average SAT scores have increased in both verbal and math.

See Figures 8 and 9 for the average Washington State and national SAT scores.

⁹⁶ The Scholastic Assessment Test (SAT) in grade 12 is only taken by college-bound students (about 44 percent of Washington's students took it in 1999); comparisons with national averages can be made, but it is important to recognize that the percentage of students taking the test varies by state (less than 10 percent in some states). The National Assessment of Educational Progress is a better national comparison; however, it is no longer taken by representative samples of Washington students.

Figure 8
Washington's SAT Verbal Scores Have Increased From 1995 to 1999
and Remained Above the National Average

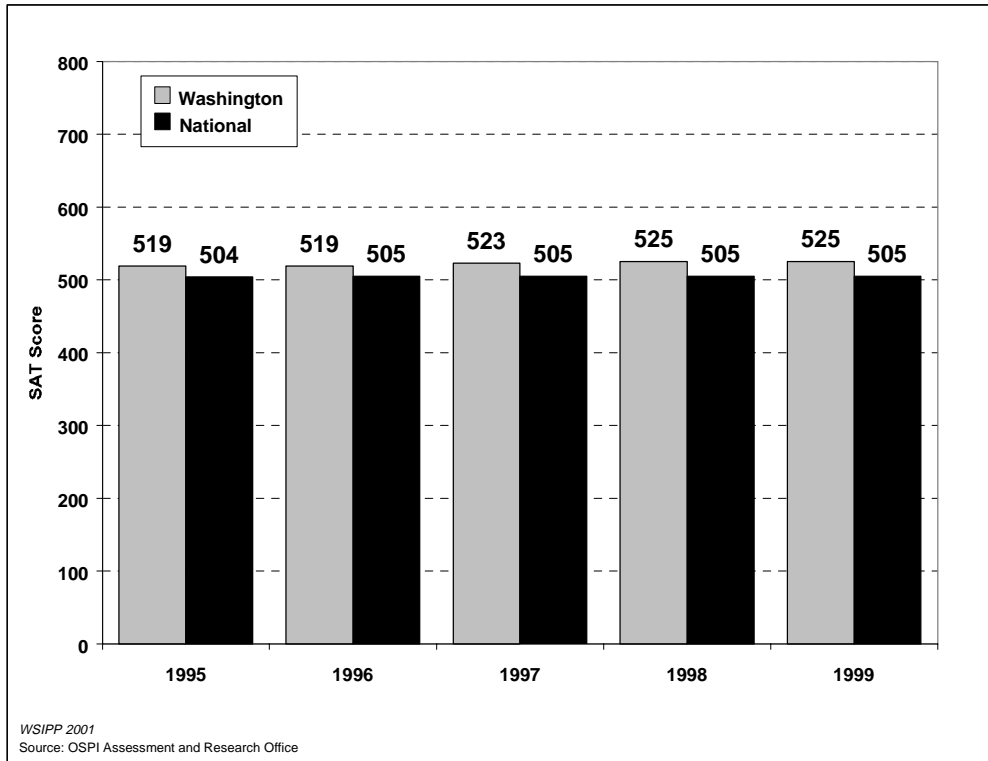
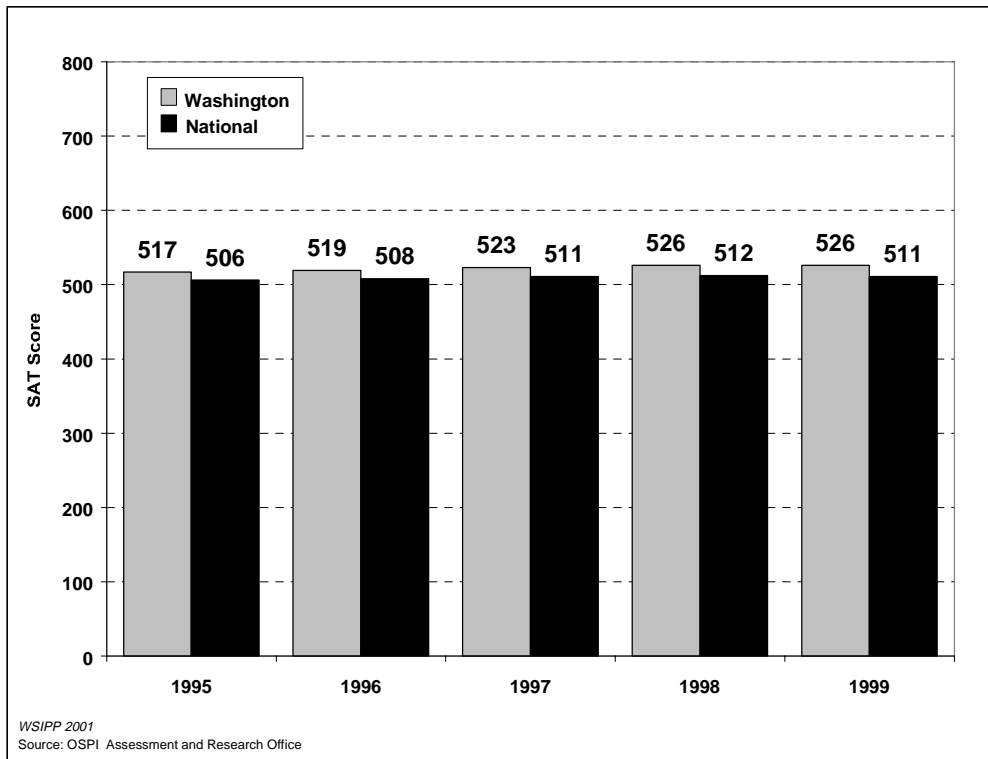


Figure 9
Washington's SAT Math Scores Have Increased From 1995 to 1999
and Remained Above the National Average



Performance of Former Running Start Students Who Enter College After High School

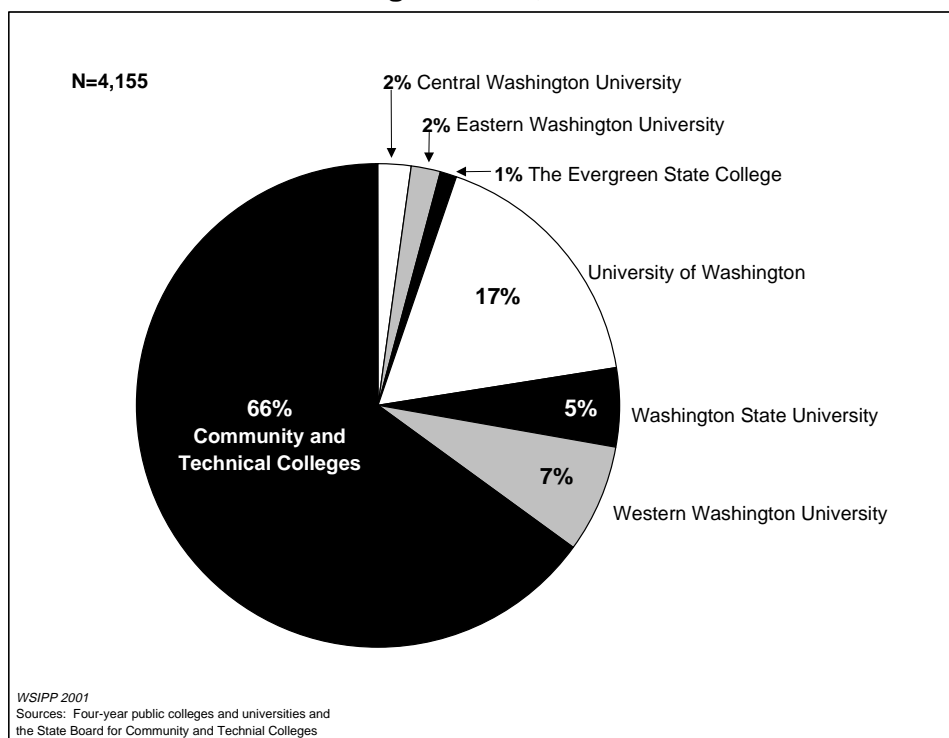
Public colleges and universities provide data⁹⁷ comparing first-year college students with Running Start credit to those first-year college students with no Running Start credit for the entering classes of 1995 through 1999 using the following factors. The students graduated in the previous year from a Washington public high school. The factors include:

- Gender
- Race/ethnicity
- Need-based financial aid
- High school GPA
- First-year college cumulative GPA
- Dropout rate
- Graduation efficiency index
- Credits accepted by college

Appendix F provides detailed data from each institution. Some comparisons could not be made due to incomplete data or data calculated in different ways by the various institutions. Information is provided on: (1) college enrollment of former Running Start students, (2) credits earned from college-level learning programs, and (3) high school and first-year college GPA for former Running Start students.

College Enrollment of Former Running Start Students. In the fall of 1999, two-thirds of former Running Start students subsequently enrolled in a community or technical college in their first year after high school.

Figure 10
Enrollment of Former Running Start Students in Washington's Public Universities and Colleges in Their First Year After High School, Fall 1999



⁹⁷ Not all four-year institutions were able to provide complete information.

Over the last five years, the percentage of first-year college students who received Running Start credit upon college entrance has increased in each college and university. Students attending the University of Washington and The Evergreen State College who received Running Start credit while in high school represented more than one-quarter of the total entering class in the fall of 1999.

Table 11
Former Running Start Students Enrolled in College After High School
Compared With Total First-Year College Enrollment, Fall 1999

	Students with Running Start Credit Enrolled in Public Universities and Colleges in Their First Year After High School	
	Number of Students	Percent of Total First-Year College Enrollment
Central Washington University	90	10%
Eastern Washington University	85	7%
The Evergreen State College	49	28%
University of Washington	709	27%
Washington State University	220	10%
Western Washington University	306	14%
Community and Technical Colleges	2,696	14%

Sources: Four-year public colleges and universities listed above and the State Board for Community and Technical Colleges.

Credits Earned From College-Level Learning. The college-level learning credits students earned in high school differed among programs. In 1999, first-year college students received more college credit from Running Start, while in high school, than from Advanced Placement, International Baccalaureate, or College in the High School courses.

Table 12
**Average College-Level Credit Earned in High School
 by Students Entering Public Universities and Colleges, Fall 1999**

	Average Credit From Running Start	Average Credit From Other Sources (AP, IB, College in the High School) ⁹⁸
Central Washington University	NA	NA
Eastern Washington University	26	NA
The Evergreen State College	28	21
University of Washington	32	10
Washington State University	51	20
Western Washington University	NA	NA
Community and Technical Colleges	35	28

Sources: Four-year public colleges and universities listed above and the State Board for Community and Technical Colleges.

⁹⁸ Tech prep credit could also be awarded by community and technical colleges.

High School and First-Year College GPA. When data were available, former Running Start students had high school GPAs above 3.0 and first-year college GPAs above 2.7 in 1999.

Table 13
High School and First-Year College Cumulative GPAs of Former Running Start Students Attending College in Their First Year After High School, 1999

	Former Running Start Students	
	High School GPA	First-Year College GPA
Central Washington University	3.28	NA
Eastern Washington University	3.56	3.13
The Evergreen State College	NA	NA
University of Washington	3.67	3.01
Washington State University	NA	2.91
Western Washington University	NA	NA
Community and Technical Colleges	NA	2.72

Sources: Four-year public colleges and universities listed above and the State Board for Community and Technical Colleges.

Remediation in College

The number of first-year college students enrolled in remedial classes was a topic of legislative interest during the 1990s.⁹⁹

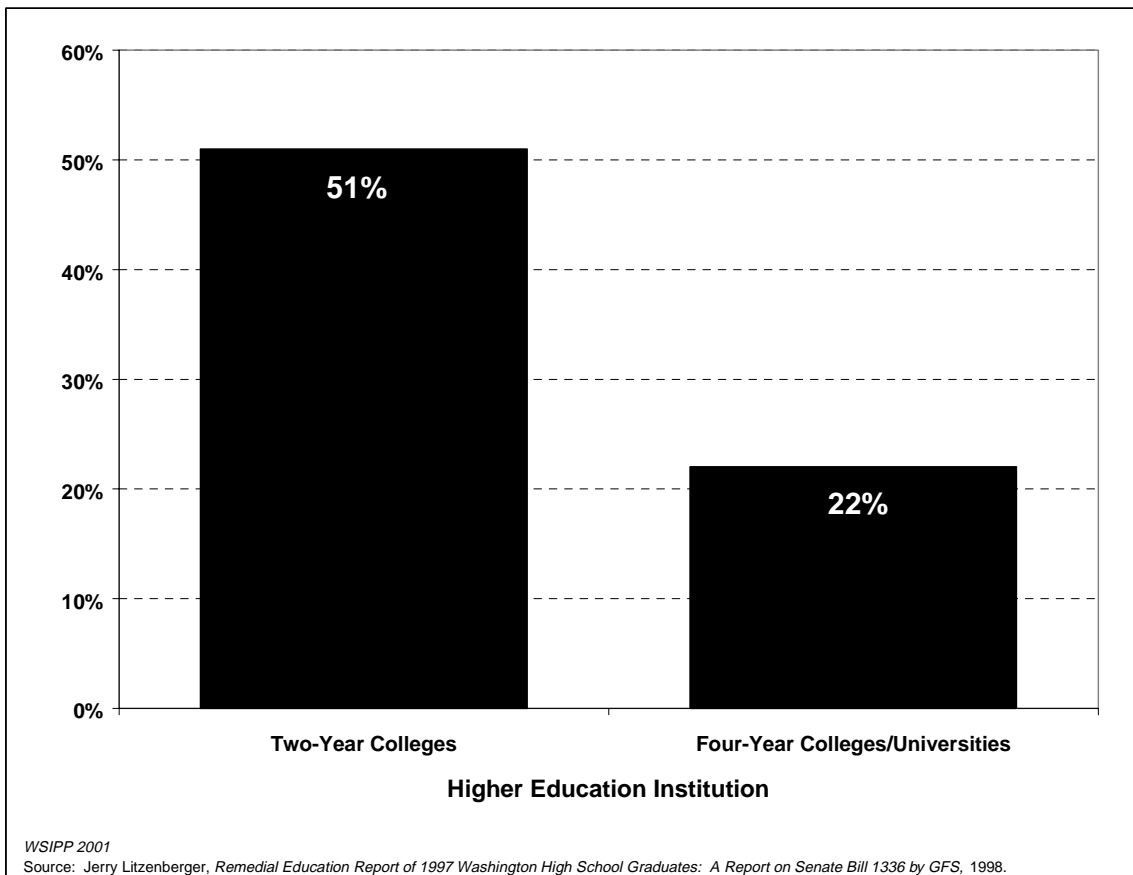
In 1996, the Legislature requested that the Higher Education Coordinating Board (HECB) examine the issue of remediation.¹⁰⁰ Subsequently, the HECB decided to include intermediate algebra (Algebra II) as a remedial course. This resulted in a larger remedial mathematics enrollment because high school students who had not taken intermediate algebra in high school consequently did not pass the math placement test.

⁹⁹ Higher Education Coordinating Board. June 1996. *Definition of Remediation Education*. Olympia, WA. This publication reports that the proportion of freshmen enrolled in remedial courses varied considerably at the four-year institutions. Reasons for this variation include different policies regarding the percentage of freshmen admitted through alternative admission standards, different cutoff scores for placement in remedial courses, mandatory or non-mandatory policies on taking remedial courses, and different methods for demonstrating proficiency.

¹⁰⁰ HB 1336.

Using data from the 1998 High School *Graduate Follow-Up Study*, Figure 11 shows that 51 percent of college students took one or more remedial courses at a community and technical college, while 22 percent took one or more remedial courses at one of Washington's major four-year universities.¹⁰¹ Mathematics was the most common area of remediation.

Figure 11
Remedial Course Enrollment for 1998 High School Graduates in Public Colleges and Universities



Community and technical colleges offer more remedial courses as a part of their open enrollment admission policy than four-year colleges and universities. Thus, a larger percentage of students are enrolled in remedial courses at community colleges.

¹⁰¹ Remediation information is from four universities: University of Washington, Washington State University, Eastern Washington University, and Central Washington University as reported by Dave Pavelchek with Washington State University's Social and Economic Sciences Research Center in a December 18, 2000, e-mail to the Institute.

Four-year institutions collect information on students who pass the state math placement test. Generally, students cannot enroll in math at a level above Intermediate Algebra (Algebra II) without passing the placement test.¹⁰² There are no statewide tests for English placement.¹⁰³ The most recent percent of students who passed the math placement test are found in Table 14. Students in four-year universities who are referred to community college for remedial math are not counted as remediation students at their university.

Table 14
Freshmen Passing the
Math Placement Test, 2000¹⁰⁴

	Percentage
Central Washington University	44%
Eastern Washington University	32%
University of Washington	66%
Washington State University	55%
Western Washington University	63%

Additional Student Performance Outcomes

This report provides the most readily available data on how much education students attain and how well students learn. Appendix E describes the data sources used. Appendix G provides several additional outcome indicators on student-reported data which the Institute received from OSPI and the Workforce Training and Education Coordinating Board.

The *Graduate Follow-Up Study*¹⁰⁵ provided another source of data on high school students in the early 1990s, at legislative request. This study follows high school graduates by matching high school graduate data with college and employment records. The study has been in place since 1992, and the number of schools participating has steadily increased. However, there are major limitations to the study—almost half the study’s students have no Social Security numbers or could not be located, which means their records could not be matched to college and employment data bases. Consequently, it is difficult to obtain an accurate picture of what happens to high school graduates.

¹⁰² Each university has its own cutoff score and policies on how to address students who do not do well on the statewide math placement test.

¹⁰³ Placement tests for foreign language were not a focus of this study.

¹⁰⁴ Communication with Jerry Gilmore, University of Washington, November 16, 2000. The students may not have enrolled in the college that records their scores. The Evergreen State College does not collect this information.

¹⁰⁵ The studies were originally conducted by Jerry Litzenberger and Renny Greenmun, but OSPI is now managing the study.

Summary of High School Student Performance

How much education do Washington students attain?

- The Institute matched the 9th grade class of 1995-96 for the subsequent four years and found that 24 percent of the class had dropped out or had an unknown status by the 12th grade.
- An estimated 76 percent of youth under age 19 in Washington complete high school on time. This percentage has remained constant for the past 35 years.
- Young adults continue to finish high school after age 18. OFM's State Population Survey (1997) estimates that 91 percent of young adults aged 25 to 29 complete high school.
- Sixty-five percent of young adults aged 25 to 29 in Washington had some additional education after high school: 9 percent received an associate's degree and 31 percent received a bachelor's degree or higher.
- Approximately 18 percent of junior and senior high school students were taking college-level learning classes in 1998.

How well do Washington students learn?

- The following percentages of 10th graders passed the WASL in 1999-2000: 60 percent in reading, 35 percent in math, 32 percent in writing, and 78 percent in listening.
- Minority students of African American, Hispanic, and Native American backgrounds in 1999-2000 were less likely to pass the 10th grade WASL than Caucasian or Asian American students.
- Over the last five years (1995-99), Washington students have had higher average SAT verbal and math scores than the national average. During the same period, their average SAT scores have also increased in both verbal and math.
- First-year college students in 1999 received more college credit from Running Start while in high school than from Advanced Placement, International Baccalaureate, or College in the High School courses.
- In 1999, former Running Start students had high school GPAs that were above 3.0 and first-year college GPAs above 2.7.
- According to the 1998 High School *Graduate Follow-Up Study*, 51 percent of college students enrolled in Washington's two-year community and technical colleges and 22 percent in four-year public universities (excluding Western and Evergreen) were enrolled in at least one remedial course. Mathematics was the most common area of remediation.

- The percentage of college students who passed the math placement tests in 2000 at four-year public universities ranged from 32 percent to 66 percent.

What are the barriers to learning more about high school student performance?

- Reported dropout rates lack accuracy because there has been no uniform student identifier from year to year to match students who may have transferred to another school or dropped out and re-entered school. OSPI expects to have a voluntary statewide uniform student identifier to test during the 2001-02 school year.
- Currently, it is not possible to measure individual gains in student performance through a statewide test that measures the same students on the same test as they progress through school.
- With the exception of vocational courses, the state does not collect records on the kinds of courses high school students take to assess the changes in levels of coursework (e.g., remediation, advance placement).
- The *Graduate Follow-Up Study* cannot provide a complete and accurate picture of what happens to high school graduates because there are limitations on matching graduates to college and employment data bases.
- Four-year public higher education institutions use different methods to provide data. Some institutions' data cannot be compared over time, such as cumulative GPA.
- The quality of policy-relevant outcome data on high school students is mixed and does not currently provide state policymakers with a solid baseline to determine what impacts education reform will have on Washington's high school students.

What additional information will be in the Institute's final report?

- The Institute will document a baseline on course enrollment in math, by grade level, in order to enable policymakers to observe the impact the state education reform requirements for a Certificate of Mastery have over time on student enrollment.
- Information will be collected from each high school on students enrolled in college-level learning courses by race and ethnicity, as well as the number of college-level learning courses offered.

V. HIGH SCHOOL REFORM IN WASHINGTON: *WHAT EDUCATIONAL OPPORTUNITIES AND PROGRAMS ARE AVAILABLE FOR STUDENTS?*

Scope of Work for Final Report

The purpose of the Institute's final report is to create a baseline to document what high school educational opportunities and programs are currently available for students and whether they are changing as a result of education reform. This baseline is important to establish because, as discussed in Section IV, there is currently no statewide systematic information available regarding available high school educational opportunities and programs.

The Institute is conducting eight case studies and a statewide survey of all high school principals to examine the following five research questions:

- (1) What strategies are used to improve student learning?**
- (2) What curriculum, instructional, and assessment changes are occurring in response to education reform?**
- (3) What educational pathways and learning opportunities (e.g., culminating projects, career pathways, portfolios, plans, college credit, and vocational programs) are available for students?**
- (4) How are families and community members involved in supporting student learning?**
- (5) What are the student demographics and enrollment patterns in certain high school programs?**

Methodology

A policy advisory committee and a technical advisory committee are guiding the Institute’s work on the case studies, surveys, and data collection efforts.¹⁰⁶

Case Studies. The Institute has selected eight high schools to participate as case study schools (see Table 15). Schools were selected based on the following criteria:

- **Size of School:** Two small schools (300 to 900 students), three medium schools (900 to 1,500 students), and three large schools (over 1,500 students);
- **Geography:** A balance of the west, central, and east sides of the state, as well as rural, suburban, and urban locations;
- **Demographics:** Schools with at least 20 percent of the student population eligible for free and reduced lunch and over 10 percent minority enrollment;
- **Grade Levels:** Schools with a 9th through 12th grade configuration, to maintain consistency in the types of issues discussed; and
- **Other Considerations:** Several schools identified as pursuing standards-based reform efforts.

Table 15
Case Study High Schools

High School (District)	Number of Students	School Size	Location	Percent Free and Reduced Lunch	Percent Minority
Nathan Hale (Seattle)	1,074	Medium	West	30%	44%
Moses Lake	1,745	Large	East	26%	26%
Fort Vancouver (Vancouver)	1,682	Large	West	40%	23%
Pasco	2,261	Large	Central	56%	45%
Sunnyside	1,304	Medium	Central	35%	69%
Sequim	901	Medium	West	18%	12%
Nooksack Valley	503	Small	West	30%	28%
Lake Roosevelt (Grand Coulee Dam)	341	Small	East	33%	47%

¹⁰⁶ See page ii for a list of policy and technical advisory committee members.

Institute staff are conducting two-day visits to each high school to interview the principal, teachers, students, parents, and community members. In addition, the Institute will review school documents, such as the building improvement and staff development plans.

High School Survey. A survey will be sent to all public high schools that enroll more than 20 students in the 10th grade (approximately 350 schools). The survey will cover many of the same questions and topics as the case studies. In addition, a portion of the survey will obtain information on student enrollment in college credit, distance learning, and math classes.

Educational Programs. Using national studies, state reports, field data, and other resources, the Institute will provide a brief review of the following educational programs:

- College-Level Learning (Running Start, Advanced Placement, International Baccalaureate); and
- Efforts to Link School and Career (Tech Prep, School-to-Work, Vocational Education, Career Academies, Integration of Academic and Vocational Coursework).

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