



Oregon
University
System

FACT SHEET

The First Year: Student Performance on 10th Grade Benchmark Standards and Subsequent Performance in the First Year of College (2001-02) *March 2003*

Summary of Study Findings and Implications

Oregon students' 10th grade benchmark performance is an early predictor of their academic performance in the first year of college (as measured by college GPA). Teachers, counselors, parents and students can use benchmark results to provide early diagnosis and targeted help that will improve students' opportunity for postsecondary success and completion.

Study Purpose in Brief

The purpose of the study was to determine how closely Oregon's 10th grade benchmark standards were aligned with college level academic work. The closer the alignment, the greater the value of the benchmark at providing a preparation stepping stone to support future college success and completion.

Study Questions and Findings

Question #1:

How does the performance of Oregon high school students assessed on the 10th grade benchmark compare with their subsequent performance in college?

Finding #1:

- Performance at the 10th grade benchmark is closely aligned with students' freshman year college performance two years later. This is true for students at Oregon's seven public universities¹ and seventeen community colleges².

¹ Eastern Oregon University; Oregon Institute of Technology; Oregon State University; Portland State University; Southern Oregon University; University of Oregon; Western Oregon University

² Blue Mountain Community College; Central Oregon Community College; Chemeketa Community College; Clackamas Community College; Clatsop Community College; Columbia Gorge Community College; Klamath Community College; Lane Community College; Linn-Benton Community College; Mt. Hood Community College; Oregon Coast Community College; Portland Community College; Rogue Community College; Southwestern Oregon Community College; Tillamook Bay Community College; Treasure Valley Community College; Umpqua Community College

- Students who met or exceeded the 10th grade benchmark achieved an average or above average college GPA at the end of their first year.
- Students who meet or exceed the standard at the 10th grade benchmark levels – as defined by the Oregon Department of Education – are more likely to earn a higher GPA in related college courses (see Table 1).

Table 1					
High School and College GPA of OUS Freshmen Who Completed 10th Grade Benchmarks at Three Measure Levels, and Non-Completers and Non-Residents					
OUS Measure (Average)					
	Not Met	Meets	Exceeds	No Score	Non-Oregon
Reading and Literature					
HS GPA	3.17	3.38	3.56	3.17	3.31
1 st Year GPA	2.45	2.77	3.14	2.80	2.82
1 st Year Arts/Letters GPA	2.36	2.74	3.11	2.64	2.64
Returned 2 nd Fall	74%	80%	83%	70%	72%
SAT 1	881	1032	1186	1044	1073
Writing					
HS GPA	3.25	3.46	3.64	3.18	3.31
1 st Year GPA	2.60	2.91	3.22	2.81	2.82
1 st Year Writing GPA	2.81	3.07	3.34	3.03	3.02
Returned 2 nd Fall	76%	80%	87%	72%	72%
SAT 1	977	1078	1169	1052	1073
Math Knowledge and Skills					
HS GPA	3.21	3.44	3.60	3.16	3.31
1 st Year GPA	2.52	2.87	3.17	2.80	2.82
1 st Year Math GPA	2.37	2.65	2.97	2.50	2.63
Returned 2 nd Fall	74%	80%	85%	71%	72%
SAT 1	917	1067	1215	1047	1073
Math Problem Solving					
HS GPA	3.28	3.44	3.58	3.18	3.31
1 st Year GPA	2.65	2.89	3.16	2.82	2.82
1 st Year Math GPA	2.37	2.65	2.87	2.50	2.63
Returned 2 nd Fall	77%	80%	81%	72%	72%
SAT 1	987	1075	1147	1050	1073

Question #2:

What is the relationship of 10th grade benchmark assessments, high school GPA, and the SAT I to first year college performance?

Finding #2:

- While there is no one perfect predictor of first year college success, the study found a positive relationship among state assessments, high school GPA, college GPA, and the SAT.
- Performance at the 10th grade benchmark was closely related to traditional indicators of college preparedness - the end of high school GPA and the SAT usually taken in the 11th or 12th grade. Students' performance on the combined 10th grade benchmark assessments (reading, writing, math problem solving, and

math knowledge and skills) and the SAT I correlated with first year college GPA at the same level (.375 and .381, respectively)³.

- For the students entering OUS institutions in Fall 2001 who were part of this study, high school GPA (HSGPA) was correlated with college GPA at a higher level than either the 10th grade benchmark performance or SAT I alone. Therefore, the entering high school GPA of OUS students who were part of this study included: 15% at 2.5-3.0; 36% at 3.0-3.5; 41% at 3.5-4.0; and 5% above 4.0.⁴

Table 2
Estimated Probability of College Freshman Overall GPA at OUS Related to Scores on 10th Grade Benchmark Assessments
Probability of Freshman GPA at OUS in percentages

10th Grade Assessments (score)	2.0 or Higher	2.5 or Higher	3.0 or Higher	3.5 or Higher
Math Knowledge and Skills				
Exceeds (249)	88%	75%	59%	25%
Meets (239)	81%	62%	41%	13%
Nearly Meets (229)	72%	46%	25%	6%
Low (219)	60%	31%	11%	3%
Reading and Literature				
Exceeds (249)	89%	73%	50%	22%
Meets (239)	80%	56%	29%	9%
Nearly Meets (230)	69%	38%	16%	4%
Low (214)	42%	16%	4%	1%
Math Problem Solving				
Exceeds (40)	87%	74%	57%	28%
Meets (32)	84%	67%	44%	18%
Nearly Meets (29)	82%	64%	39%	15%
Low (16)	74%	51%	22%	6%
Writing				
Exceeds (50)	92%	81%	65%	37%
Meets (40)	82%	64%	39%	15%
Nearly Meets (35)	74%	53%	27%	8%
Low (20)	42%	23%	7%	1%

Question #3:

What is the value of the state 10th grade benchmark assessment for predicting first year college performance (college GPA) and persistence beyond freshman year (staying in college and enrolling for sophomore year)?

Finding #3:

³ This is consistent with findings from a June 2002 content analyses of the Oregon 10th grade benchmark standards and assessments conducted by The College Board and American College Testing (ACT), indicating a good alignment of the content of Oregon's 10th grade benchmarks with the content of later college entry exams like the SAT I and the ACT.

⁴ Note: Data were not available from the community colleges on incoming high school students' GPA. The range of HSGPA in the current sample is primarily limited to those students who meet the admission requirement for various OUS campuses.

- Each of four 10th grade benchmark assessments proved to be related to overall college GPA at the end of the first year. For example, a student scoring 239 in math has an estimated probability of 81% of achieving a 3.0 or higher, while a student scoring 249 in reading has a probability equal to 50% (see Table 2). Careful use of specific test scores as information about future performance has clear value as a diagnostic tool in identifying student skill areas where improvement is needed in high school to buoy success later in college.
- There are a variety of reasons why students decide to continue or not continue their college education beyond their freshman year, and this study does not claim a causal relationship between 10th grade benchmark performance and enrollment beyond the first year. However, 80% of the students who met or exceeded 10th grade benchmarks completed their freshman year and began their sophomore year at OUS, as compared to 76% of the general student population.

Implications of Study

1. **Standards make a difference, and Oregon's standards are comprehensive and rigorous**
 - Students' 10th grade benchmark performance provides an early indicator of academic progress - prior to receiving the end of high school GPA and SAT results - so that teachers, counselors, parents and the students themselves have an opportunity to focus in areas where the student is below the acceptable standard for college admission. Early opportunities for student advising may ensure that a wider range of students have the opportunity to prepare for and enter postsecondary education.
 - SAT and ACT scores arrive too late to support high school student advising, nor were these instruments designed to do so. The 10th grade benchmarks provide a "reality check" while there is still two years for the student to improve and prepare for college.
 - Students who are not "college aspirants" but who then "meet" or "exceed" 10th grade benchmarks, may be motivated to seek college opportunities when they understand that their success in meeting standards success is related to their future success in college. While more than 41,000 high school students took the 10th grade benchmark assessments, less than half of these took either the SAT or the ACT.
 - This early indicator of college academic readiness ensures that a wider range of students will have the opportunity to set clear and achievable goals toward building the knowledge and skills they need for postsecondary education. Because Oregon's standards and assessments are aligned throughout K-12, this process can begin in middle school as students work toward high school preparation.
2. **High school benchmarks provide an "early indicator" of college success**
 - The cohort of students in *The First Year* study took the state assessments during 1999-2000 without any information that these assessments might be linked to college entry or success. Implementation of school reform to this point suggests

that student motivation to reach higher standards in high school is related to whether or not they will gain an advantage when applying to college or seeking employment.

- Each campus can consider 10th grade assessment data to supplement traditional information in admission and placement decisions to better support students success in their first year of college.

3. Quick access to data means quicker, targeted help to students

- *The First Year* study required the individual match of each student's record with his/her subsequent OUS or community college record. Because of this matching process, OUS will for the first time be able to provide additional information on standards met by students to all Oregon high schools who sent graduates to OUS institutions. This expanded Annual Performance Report (APR), produced for the last 10 years in aggregate for all public and private high schools with 5 or more students in Oregon public universities, was sent to Oregon high schools on February 28, 2003.
- K-12, OUS institutions, and Oregon community colleges must be able to exchange information on student performance. An integrated student data exchange system, of which only a prototype currently exists, would expedite the transfer of information on state standards met and alleviate much of the workload currently experienced by building level teachers and counselors who must prepare these records "by hand."

Background and Purpose of Study

- *The First Year* study examines the usefulness of the information supplied by 10th grade benchmark assessments in predicting student success in the first year of college and persistence beyond freshman year. Predictors of college success include: (1) overall freshman-year GPA, (2) GPA by subject areas, and (3) persistence beyond the freshman year to fall 2002 enrollment.
- Since 1994, OUS has been working with ODE to align the K-12 standards and benchmark assessments with college entry. This study addresses 4 of the 10 required standards in the Proficiency-based Admission Standards System (PASS⁵). The state standards and benchmark assessments are aligned at grades 3, 5, 8, and 10 with college entry (PASS) and provide information on all Oregon students.
- Using 1999-2000 state data provided by the ODE, a "standards cohort" of students was identified. This includes students who participated in state assessment while in high school and subsequently enrolled in an OUS institution or Oregon community college in fall 2001. The standards cohort includes 6,082 students from OUS and 12,519 students from Oregon Community Colleges. For OUS this represents 75% of Oregon residents (8,171) enrolled as first time freshmen. For Oregon Community Colleges this represents 71% of Oregon residents (17,720) enrolled as first time freshmen who earned 15 or more credits.

⁵ The Proficiency-based Admission Standards System (PASS) is based on standards that describe the academic skills and knowledge students need to demonstrate to be accepted into Oregon's seven public universities.

Note that Oregon students in private schools are not required to take state assessment.

- The freshman class entering Oregon University System institutions in fall 2001 was admitted on the basis of meeting traditional college entry requirements⁶. The fall 2001 freshman in OUS schools and in the state's community colleges were also the first students to have information about their performance on academic standards assessments at the 10th grade benchmark level. These assessments were required by provisions in the Oregon Education Act for the 21st Century (passed 1991, amended in 1995). The assessments measured four areas as part of the Certificate of Initial Mastery (CIM): reading/literature, writing, mathematics problem solving, and mathematics knowledge and skills⁷. The fall 2001 freshmen took the assessments in 1999.

K-16 School Reform provides the context for *The First Year* study

- Over a decade of pioneering legislative initiatives has resulted in the vision that all Oregon students can reach higher standards. The Oregon Educational Act for the 21st Century (1991, revised in 1995), mandated a comprehensive system of standards and assessments benchmarked at grades 3, 5, 8 and 10. In 1994 the Oregon State Board of Higher Education adopted a policy to develop a proficiency-based admission standards system (PASS) for college entry, making Oregon the only state in the nation with a K-16 system of aligned standards and assessments. The Joint Boards, comprised of the Oregon Board of Education (PK-12, community colleges) and the Oregon State Board of Higher Education (public universities) adopted this alignment of standards and assessments and review progress annually.
- The goal of PASS is to better prepare students with the knowledge and skills necessary for entry into college, thereby increasing the likelihood of student academic success upon enrollment into college. Currently students may use the 10th grade benchmark assessments (addressed by *The First Year* study) to meet several of the PASS standards for admission. Through such linkages it is hoped that all teachers and others involved with PreK-16 will begin to view student learning as a seamless system, and understand how prior learning contributes to future proficiency.
- PASS draws upon multiple assessment methods for admission decisions including national tests (SAT II, ACT, AP and IB), state multiple-choice tests (in English math and science), state performance measures (writing samples) and teacher judgment of collections of students' classroom work.
- *The First Year* study validates the use of the 10th grade benchmark assessments as a foundation for PASS.

For More Information

To Obtain a Copy of the Final Report:

⁶ Admission requirements included: (1) earning a high school diploma or the equivalent; (2) meeting the high school grade point average required by each campus; and (3) successfully completing 14 high school subject area courses in English, math, science, social science and second languages. In addition, applicants were required to present their scores on either SAT or ACT assessments.

⁷ An assessment of science knowledge and skills was field tested in 1999 and so was not used as part of this study.

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