



Standards for Success

What It Takes for Students To Succeed In America's Research Universities

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Understanding University Success

A project of the Association of American Universities
and The Pew Charitable Trusts

What Was the Goal of Standards for Success?

- To identify the knowledge and skills necessary for success in entry-level university courses and to state these findings in a way that would allow high school instruction and testing to be aligned better with college success
- To analyze state high school assessments to determine how well they align with the knowledge and skill necessary for college success

A Starting Point for Better High School-College Alignment

- The first step in achieving better high school-college alignment is clearer understanding of knowledge and skills for university success
- Standards for Success developed a comprehensive set of statements derived from content of entry-level university courses and their instructors' expectations
- These standards have been licensed to the College Board as a foundational element for use in the development of of the PSAT, SAT, and AP exams, and the SpringBoard program

Strengthening Connections between High School and College

- Clarifying expectations improves alignment
- By clarifying expectations, Standards for Success helps open the door to better communication between high school and college
- Both high schools and colleges need to make changes to help more students make successful transitions that result in increased college success

Structure of Standards for Success

- Three-year national study sponsored by the Association of American Universities
 - Conducted by Center for Educational Policy Research, University of Oregon with assistance from the Stanford Institute for Higher Education Research
- Sponsored and funded by the Association of American Universities, 17 member institutions, and The Pew Charitable Trusts
 - Endorsed by an additional 11 AAU institutions

Sponsoring Institutions

- University of California, Berkeley
- Harvard University
- Indiana University
- University of Illinois
- University of Iowa
- Massachusetts Institute of Technology
- University of Michigan
- University of Minnesota
- University of Missouri
- University of Nebraska
- New York University
- University of Oregon
- Pennsylvania State University
- Rice University
- Rutgers University
- University of Wisconsin

Endorsing Institutions

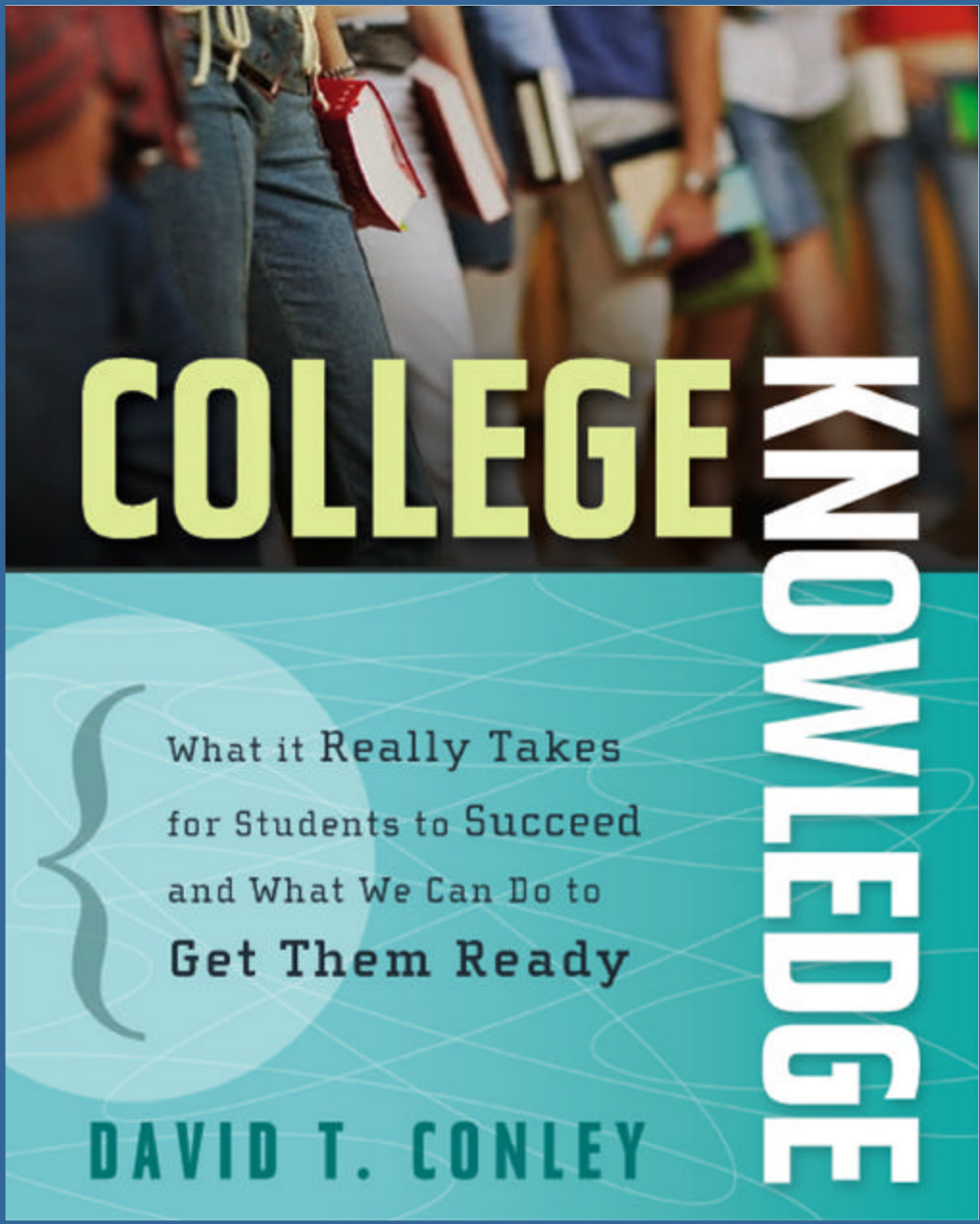
- Carnegie Mellon University
- Case Western Reserve University
- Duke University
- Iowa State University
- University of California, Irvine
- University of California, Los Angeles
- University of North Carolina
- University of Maryland
- Stanford University
- University of Virginia
- Washington University in St. Louis

Key Project Activities

- Develop a statement of “Knowledge and Skills for University Success”
 - Conduct a “National Conversation” at nine participating AAU institutions
 - Send the booklet, *Understanding University Success*, to every U.S. high school
 - Create a databank of actual examples of course requirements and student work from entry-level courses at AAU universities
- Analyze 66 state high school assessments for their alignment with the Knowledge and Skills for University Success
 - Goal: To determine if state tests are providing useful information to students, teachers, and others regarding college readiness

Timeline of Key Project Activities

- Three-year grant: April, 2000- October, 2003
 - January, 2001- Fall 2002: 9 National Conversation meetings at universities nationally
 - Spring, 2003: CD-ROM and brochure sent to all U.S. public high schools:
 - October 23, 2003: Analysis of state high school assessments released
- Subsequent activities
 - September, 2003: Standards for Success licensed by the College Board
 - April, 2005: *College Knowledge* published by David Conley



COLLEGE KNOWLEDGE

What it Really Takes
for Students to Succeed
and What We Can Do to
Get Them Ready

DAVID T. CONLEY

Preface

Acknowledgments

About the Author

PART ONE: From the Current System and the High School of Today to an Aligned, Coherent Program

ONE Understanding the System

TWO What High School Students Know About College Readiness

THREE The Old and New Criteria for College Success

FOUR Current Strategies to Increase College Readiness

FIVE What Does a High School That Prepares Its Students for College Success Look Like?

SIX Designing High Schools for Intellectual Coherence

PART TWO: The First Year Experience and Beyond

SEVEN Experiencing Success in the First Year of College

EIGHT What Really Happens in the First Year of College

NINE What We Must Do to Create a System That Prepares Students for College Success

PART THREE: Knowledge and Skills for Success

TEN Standards for Success

ELEVEN English Knowledge and Skills

TWELVE Mathematics Knowledge and Skills

THIRTEEN Natural Sciences Knowledge and Skills

FOURTEEN Social Sciences Knowledge and Skills

FIFTEEN Second Language Knowledge and Skills

SIXTEEN Arts Knowledge and Skills

SEVENTEEN University Work Samples

APPENDIX A Checklist for College Readiness

Standards for Success Methodology Summary

- Modified Delphi method
 - Repeated reviews by comparable groups combined with expert analyses at key points
 - Nine campus-based National Conversation meetings
 - Findings from each meeting synthesized and reviewed by meeting participants
- Document analysis of course outlines, assignments, student work samples to validate National Conversation results
- Review by Mid-Continent Research for Education and Learning (McREL)
- Final review by Content Review Panel composed of professors with disciplinary expertise and interest in and experience with educational standards
- Subsequent comments by state high school assessment raters on utility, clarity of KSUS standards

What Are The Standards?

- Six content areas
 - English
 - Math
 - Natural Sciences
 - Social Sciences
 - Second Languages
 - The Arts
- Each area has two types of standards
 - Foundational Skills
 - Academic Content Standards

Foundational Skills

- Habits of mind that enable students to succeed in college and to get more out of their college education
 - Inquisitiveness
 - Risk-taking, accepting feedback, learning from mistakes
 - Critical and analytic thinking
 - Draw inferences, reach conclusions based on an evaluation of sources and their assumptions
 - Support an opinion with a logical argument

Knowledge Standards

- Each standard has three levels of detail:

- Standard

- Objective
 - Criteria

- Example: English

- 1. Reading & Comprehension

- C. Understand the defining characteristics of texts and recognize a variety of literary forms and genres

- C.1. Comprehend the salient characteristics of major types and genres of texts

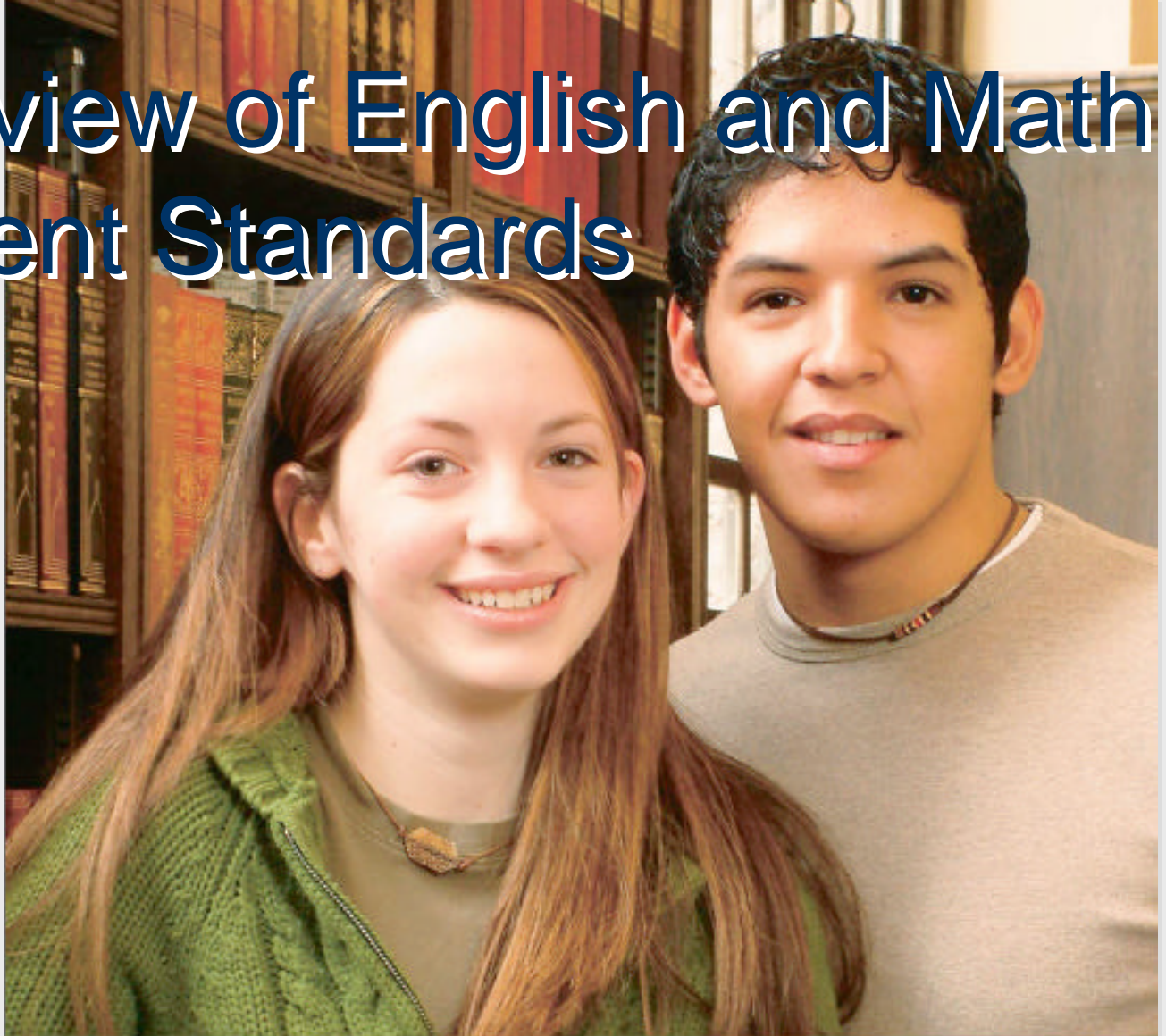
- C.2. Understand the formal constraints of different types of texts

- C.3. Discuss with understanding the effects of an author's style and use of literary devices to influence the reader and evoke emotions

- C.4. Identify archetypes which appear across a variety of types of literature...

- ...C.7

Overview of English and Math Content Standards



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English Standards & Objectives

Standards:

1. Reading & Comprehension
2. Writing
3. Research Skills
4. Critical Thinking Skills

Mathematics Standards & Objectives

Standards:

1. Computation
2. Algebra
3. Trigonometry
4. Geometry
5. Mathematical Reasoning
6. Statistics

Findings from Analysis of State High School Assessments

- 66 exams from 20 states were analyzed
 - States for which tests were analyzed include Colorado, Connecticut, Illinois, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, Oregon, Pennsylvania, Texas, Utah, Virginia, Washington, Wyoming

State High School Assessment Analysis

SUMMARY OF STATE RATINGS: ENGLISH

Level:	A	B	C
Overall State Ratings	3	18	14
State Ratings by KSUS Standard:			
Reading/Comprehension	12	13	10
Writing	5	8	22
Critical Thinking	4	12	19
Research Skills	N/R	N/R	N/R

SUMMARY OF STATE RATINGS: MATHEMATICS

Level:	A	B	C
Overall State Ratings	0	29	2
State Ratings by KSUS Standard:			
Computation	5	12	14
Algebra	0	19	12
Math Reasoning	1	22	8
Geometry	0	25	6
Trigonometry	N/R	N/R	N/R
Statistics	N/R	N/R	N/R

Analysis of Oregon Assessments

Subject	Test Name	<i>Math</i>	Computation	Algebra	Math Reasoning	Geometry
Math	<i>Oregon Statewide Assessment (Certificate of Initial Mastery, CIM)</i>	<i>B</i>	<i>C</i>	<i>C</i>	<i>B</i>	<i>B</i>
	<i>Oregon Statewide Assessment (Certificate of Initial Mastery, CIM)</i>	<i>B</i>	<i>C</i>	<i>C</i>	<i>B</i>	<i>B</i>
	<i>Oregon Statewide Assessment (Certificate of Initial Mastery, CIM)</i>	<i>B</i>	<i>C</i>	<i>C</i>	<i>B</i>	<i>B</i>
	<i>Oregon Statewide Assessment (Certificate of Initial Mastery, CIM) Problem Solving</i>	<i>A</i>				
	<i>Math & Problem Solving Overall</i>	<i>B</i>				
		ELA	Reading Comp	Writing	Critical Thinking	
English	Oregon Statewide Assessment (Certificate of Initial Mastery, CIM) Reading and Literature	C	A	C	C	
	Oregon Statewide Assessment (Certificate of Initial Mastery, CIM) Reading and Literature	C	A	C	C	
	Oregon Statewide Assessment (Certificate of Initial Mastery, CIM) Reading and Literature	C	A	C	C	
	Oregon Statewide Assessment (Certificate of Initial Mastery, CIM) Writing	A				
	Reading/Literature & Writing Overall	B				

Conclusions

- Most tests neglect or address at a low cognitive level many areas considered necessary for college success, particularly critical thinking, research skills, higher mathematics, and quantitative reasoning
- State testing programs were never designed to align with college admissions standards
- High school students and teachers are expending considerable time and energy preparing for tests that may or may not be consistent with the skills needed to succeed at the university level

Alignment and Challenge Audit

- Purpose: Analyze high school course content assignments, and student work in relation to KSUS standards to determine if challenge level is appropriate to prepare students for college success
- Conducted by Center for Educational Policy Research on high schools nationwide

Types of Data Collected

Teachers:

- Teachers with advanced degrees; ways in which these skills are employed in teaching
- Balance of experienced and new teachers
- Teachers trained in AP; type and amount of training
- Teachers participating in AP scoring, annually and cumulatively
- Teacher awards and recognitions
- Teacher involvement on state committees and organizations related to curriculum
- Number and type of teachers teaching outside their area of endorsement

Courses:

- Uses of diagnostic data to coordinate course challenge level and content coverage with prior student knowledge and skill
- Explicit outcomes identified by course
- Balance of academic and non-academic elements in grading system by course
- Alignment of grading standards with KSJS Foundational Skills and Standards
- Challenge level
- Material/concepts for which mastery will be attained
- Means of assessing attainment of mastery
- Purposes of homework
- Frequency and quantity of homework
- Academic content of homework
- Rate of student completion of homework
- Criteria for grading
- Instructions given to students
- Instructional support in development of major papers and projects
- Focus on "big ideas"
- Appropriate challenge level
- Reasonable scope and sequence
- Challenge level of books and other instructional materials
- Engagement level of books and other instructional materials



Student Work

- Quality of work produced
- Effort level
- Challenge level
- Alignment with Knowledge and Skills for University Success Standards
- Quality of homework completed
- Quality of work produced
- Quality and challenge level of in-class student work

Curriculum Structure

- Formal and informal paths students follow in practice through the curriculum
- Degree to which groups of students move together through the curriculum relatively independent of their performance
- Courses with high failure rates that prevent students from moving on through the higher levels of a curriculum sequence
- How students gain access to high academic-challenge courses
- Policies on who takes external tests in these classes (AP, IB tests)
- Opportunities for students to build from coursework to participation in major regional and national academic competitions

Report Outline

Example of some of the major headings in a final report

Demographics and Community Expectations

- Student and community knowledge level of college knowledge and skill expectations
- Culture, attitudes, extra-curricular activities and their impact on academic success
- Percentage of students who are working
- Types of jobs and hours of work
- Attitudes towards academic achievement
- Patterns of extra-curricular involvement
- Post high school aspirations
- Recommendations for improving knowledge of college success standards

Structure of the Curriculum

- Continuity and logic
- Overlap, duplication, and omissions
- Course-taking patterns by student group
- Recommendation for improving structure of the curriculum to create greater coherence

Challenge Level of the Curriculum

- Horizontal challenge across courses at a grade level in a discipline
- Vertical challenge across grade levels
- Numbers of students who participate in college-prep curriculum
- Gate-keeper courses that prevent access to advanced courses
- Number and type of Advanced Placement courses that could be sustained by the high school
- Recommendations for changes in course and assignments to establish appropriate level of challenge

Alignment with Knowledge and Skills for University Success Standards

- English/Language Arts
- Mathematics
- Science
- Social Studies
- Second Languages
- The Arts
- Recommendations for additions to the curriculum that help improve alignment with Knowledge and Skills for University Success Standards

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