

Looking Under the Hood: Welding AP into CTE Pathways

Marc Duske

Education Administrator

College Board Programs

College and Career Readiness Bureau



Objectives

- Understand how AP coursework complements Career Technical Education (CTE) programs of study
- Understand how AP course participation builds college and career ready skills
- Learn about AP course accessibility through IDEAL-New Mexico
- Learn about AP Potential via PSAT/NMSQT
- Learn about the value of linking PSAT and Khan Academy accounts



Defining a Matrix

ma·trix

/'mātriks/

noun

noun: **matrix**; plural noun: **matrices**; plural noun: **matrixes**

1. *an environment or material in which something develops; a surrounding medium or structure.*

"free choices become the matrix of human life"

a mass of fine-grained rock in which gems, crystals, or fossils are embedded.

Biology

the substance between cells or in which structures are embedded.

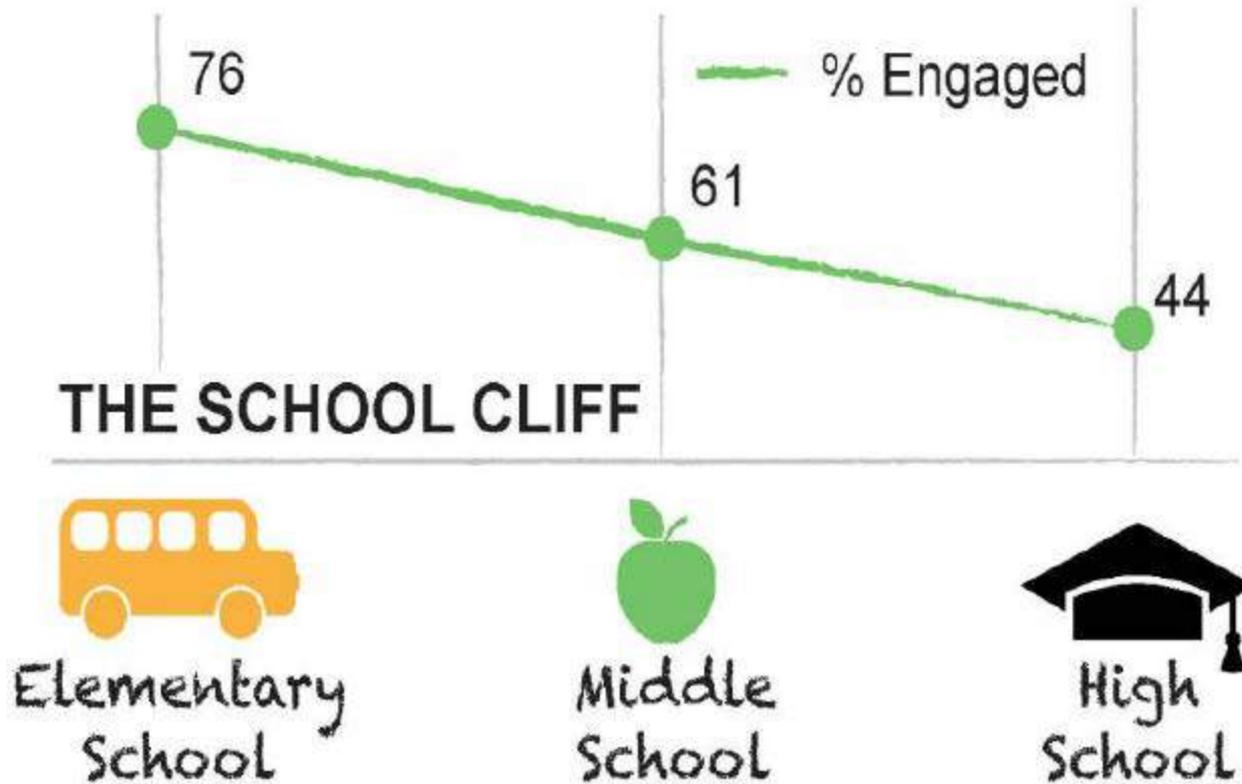
fine material.

"the matrix of gravel paths is raked regularly"

2. a mold in which something, such as printing type or a phonograph record, is cast or shaped.



Context: Why It Matters



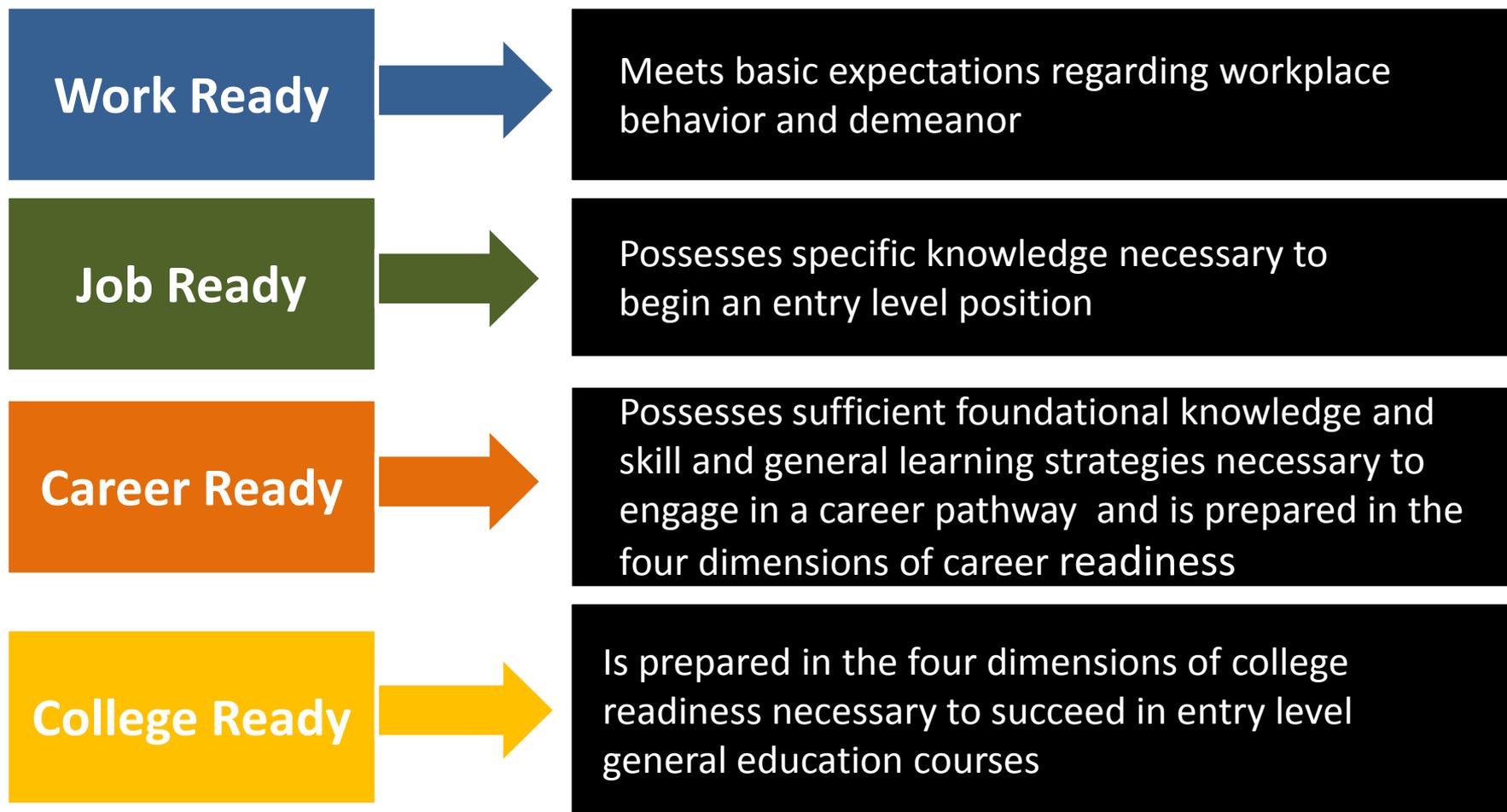
According to a Gallup Student Poll, Gallupstudentpoll.com

College and Career Readiness Matrix



http://www.ped.state.nm.us/ped/CCR_index.html

College and Career Readiness Defined



Source: Dr. David Conley's Model of College Readiness

AP is not for the gifted. It is for the prepared.

“Whether you think you can,
or you think you can't--you're right.”
-- Henry Ford, Founder,
Ford Motor Company



- Between the options of taking an AP, honors, dual credit, or online course, the best option for *portability* of credit is AP.
- In 2016, NM students earned 5,572 AP scores of 3-5. **That's the highest number ever**, and up 7% (386 students) from last year (2011-2015 range 5,077 to 5,347). This represents a total potential **tuition savings of over \$3.5 million** to New Mexico families (\$212 per credit hour).



Key Benefits of AP

AP courses....

- establish a college-level standard in secondary schools that is measured through a national assessment designed and scored by college faculty.
 - expose college-bound students to the amounts of homework, study skills, and habits of mind essential for success in college courses.
 - are typically the most rigorous curriculum offered in secondary schools and are designated on the student transcript.
 - provide leverage for aligning and strengthening the curriculum in grades 6-12.
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AP COURSES



AP Capstone

- AP Research
- AP Seminar

Arts

- AP Art History
- AP Music Theory
- AP Studio Art: 2-D Design
- AP Studio Art: 3-D Design
- AP Studio Art: Drawing

English

- AP English Language and Composition
- AP English Literature and Composition

History & Social Science

- AP Comparative Government and Politics
- AP European History
- AP Human Geography
- AP Macroeconomics
- AP Microeconomics
- AP Psychology
- AP United States Government and Politics
- AP United States History
- AP World History

Math & Computer Science

- AP Calculus AB
- AP Calculus BC
- AP Computer Science A
- AP Computer Science Principles
- AP Statistics

Sciences

- AP Biology
- AP Chemistry
- AP Environmental Science
- AP Physics C: Electricity and Magnetism
- AP Physics C: Mechanics
- AP Physics 1: Algebra-Based
- AP Physics 2: Algebra-Based

World Languages & Cultures

- AP Chinese Language and Culture
- AP French Language and Culture
- AP German Language and Culture
- AP Italian Language and Culture
- AP Japanese Language and Culture
- AP Latin
- AP Spanish Language and Culture
- AP Spanish Literature and Culture

AP Courses via IDEAL-NM

- Uses the statewide Learning Management System (LMS) to deliver AP courses
- Provides expanded options for students
- AP enrollment waivers may be available
- Crowdsourcing materials and resources are shared with teachers
- Professional development and networking resources are available

Next Step Plans (NSP)

- NSPs are personal, written plans that are developed by students at the end of grades 8–11 and during the senior year (grade 12)
- Purpose of the plan is to target student career interests
- NSP also helps align studies a student will complete in order to be on track for high school graduation
- Student reviews and updates NSP annually, and each year's plan must explain any differences from the previous year's NSP

Programs of Study (POS)

A program of study is a comprehensive structured approach for delivering academic and career technical education to prepare students for postsecondary education and career success.

Goal: Students are college and career ready.



Inclusion in CTE Course Sequences

Human Services – Counseling & Mental Health Services	Government and Public Administration – Public Management and Administration	Transportation, Distribution and Logistics – Logistics Planning and Management Services
I want to obtain education and training to become a Clinical Psychologist. Intend to complete 2 year degree with desire to continue at a 4 year degree awarding university.	I will obtain my education and training to become a Social and Community Service Manager	I will obtain education and training to become an Administrative Services Manager.
AP Statistics ?	AP United States Government and Politics ?	AP Computer Science Principles?
AP Human Geography ?	AP Environmental Science ?	AP Statistics?
Career Pathway Electives		



AP Potential

A free, Web-based tool, AP Potential:

- Maximizes the value of PSAT/NMSQT® results
- Is based on a research sample of more than 1.8M students
- Systematically identifies students capable of succeeding in rigorous AP® courses



PSAT: AP Potential for Students

My AP Potential

You can use this report to see your potential for AP courses based on your PSAT/NMSQT scores. AP courses you can take are listed below.

- 1 Review the full list of courses**
You may have potential for AP courses that aren't currently on your radar.
- 2 Take a closer look**
Sort your list to see courses related to the college majors that interest you. [Learn more](#) about each course and how it can help you succeed in college.
- 3 Talk to your school counselor and teachers**
They can help you decide the best course for you!

Communication

AP Courses	Potential	Matches Major	Your School Offered This Course
Psychology		✓	✓
Art History			✓
Calculus BC			✓
English Language		✓	✓
European History			✓

Interpret your report

Potential
Your scores show that you have the potential for success in this course. Speak with your school counselor to see if you have the appropriate prerequisite courses and find out how you can enroll. [less...](#)

Some Potential
Your scores show that you have some potential for success in this AP course. Having interest in the course subject as well as your dedication to working hard will only increase your chances for success. Speak with your school counselor to see if you have the appropriate prerequisite courses and find out how you can enroll. [less...](#)

Potential Not Yet Indicated
Your scores show that you may need more preparation and support to

The shading of the steps icons illustrates level of potential

Choosing a major puts a checkmark in the Matches Major column next to appropriate courses

This column tells a student if this course is likely offered at their school

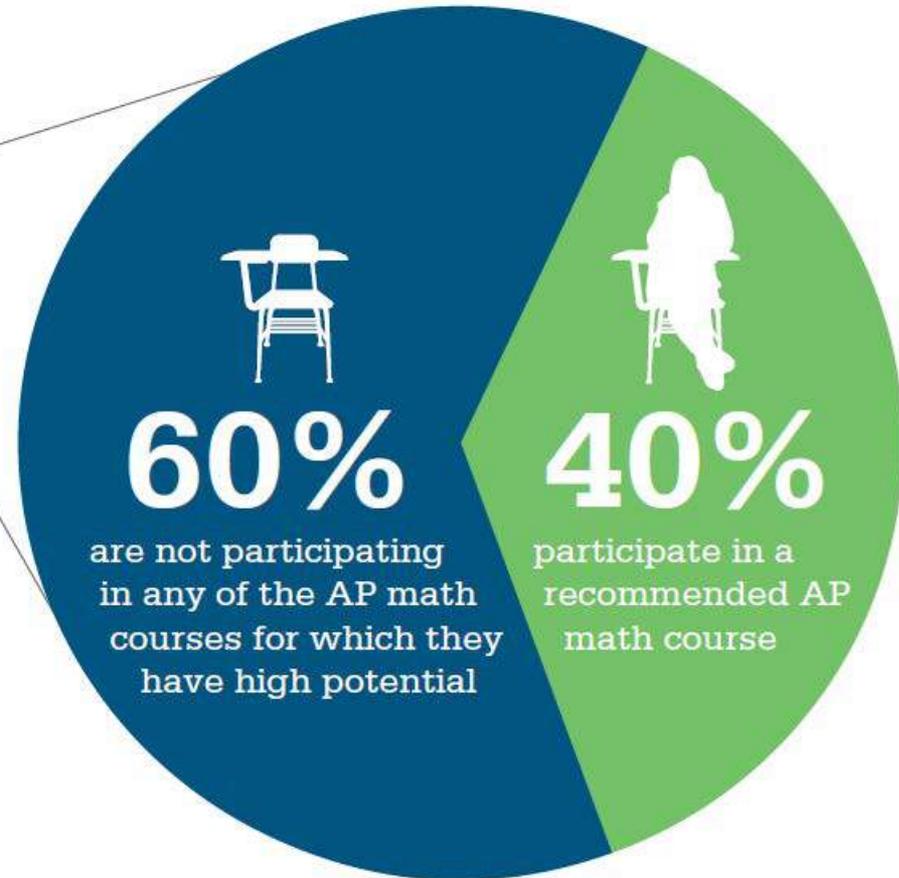
Look for courses where they have "potential", it matches their major, and it's offered at their school



Unfulfilled Potential

Our Potential Loss

In each graduating class,
hundreds of thousands of students
demonstrate high potential for success in AP math course work





7,000+

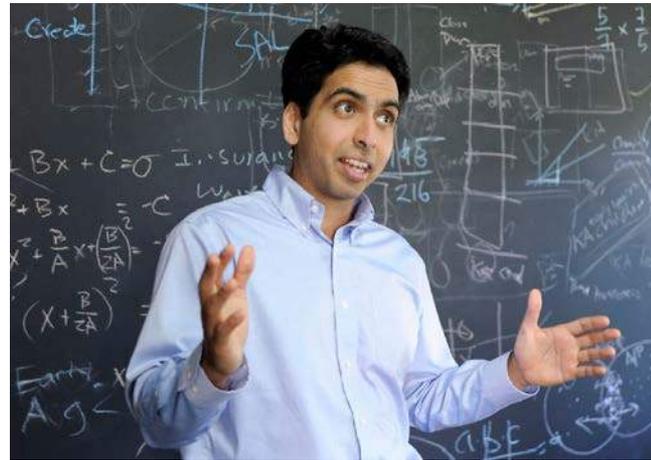
instructional
videos

3+ billion

problems solved

30+ subjects

25+ languages



**A FREE WORLD-
CLASS EDUCATION
FOR ANYONE,
ANYWHERE**

10+ million

users every month

900,000+

registered coaches

190+ countries

75 full-time team
members

- 
- + The College Board and Khan Academy have partnered to provide online SAT® test preparation programs and resources entirely free of charge.
 - + Beginning in **June 2015**, Khan Academy released an interactive and **personalized** practice program for the redesigned SAT
 - + Features include:
 - + Thousands of practice problems
 - + Personalized tutorials on test content
 - + Official SAT practice questions and full-length tests
 - + Comprehensive reporting for students
 - + Access anytime, anywhere — for free
 - + College Board and Khan Academy work with educators, community groups, college access organizations, and parents to provide the necessary resources to propel students to college success.



CollegeBoard
+
KHANACADEMY
+
YOU

PROVIDING WORLD-CLASS
FREE SAT® PREPARATION
TOGETHER.



Contributors to Student Success

- Career Counseling
- Financial Aid Counseling
- Safety Nets/Interventions
- Job Placement Services
- Removal of Barriers to Success



Independent Research

AP examinees are more likely to graduate in five years or less compared to non-AP students of similar ability.

- Dougherty, C., Mellor, L., & Jian, S. (2006) found that students who earn a 3 or higher on one or more AP Exams are more likely to graduate from college in five years or less. The study controlled for prior academic achievement, demographic variables and school-level variables.

AP exam scores are among the best predictors of college performance.

- Geiser & Santelices (2004) found that AP exam scores were the best predictor of second-year college performance with the exception of high school grades. This finding was consistent for the total sample as well as almost every major disciplinary area. The study controlled for parental income, parental education, high school quality, and prior academic achievement.

AP examinees are more likely to major in their AP subject or a related discipline.

- Tai, R. H., Liu, C. Q., Almarode, J. T., & Fan, X. (Harvard Ed Press, 2010) found that students who took an AP exam in a particular content area were more likely to major in a related discipline in college than students who did not take an AP exam in that content area. The study controlled for gender, ethnicity, parental education, socioeconomic status, and eighth grade career expectations.





Marc Duske, Education Administrator
Dual Credit, College Board Programs

marc.duske@state.nm.us

College and Career Readiness Bureau
Public Education Department
State of New Mexico

(505) 827-6712

http://www.ped.state.nm.us/ped/CCR_index.html