

New Mexico's Dual Credit Program: A Study of Student Outcomes and Cost Effectiveness

A Presentation To
The Bridge of Southern New Mexico
May 9, 2012
Las Cruces, NM

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Data... Insight... Impact

A Note on the Data in this Presentation

- We would like to thank all those who contributed data and analysis for this research study, including Albuquerque Public Schools, Central NM Community College, Doña Ana Community College, Las Cruces Public Schools, NM Higher Education Department, NM Legislative Finance Committee, NM Public Education Department, New Mexico State University, and the University of New Mexico.
- Although the official New Mexico dual credit program is relatively new, students have been participating in dual and concurrent enrollment programs at New Mexico colleges for more than a decade. The data contained in our analyses include the results of both state-sponsored dual credit, as well as other dual and concurrent enrollment programs taking place prior to the 2007-08 school year. Thus, our analyses of student performance and program effects are based on the multiple datasets available to us. What follows are some lessons learned from our analyses of approximately 20,000 high school seniors, 6,000 community college students, and 6,000 university students.



Dual credit: Lessons learned

1. Dual credit programs appear to be an effective approach to large-scale implementation of accelerated learning.
2. Dual credit programs appear to be associated with increased levels of student performance.
3. Dual credit appears to reduce the long-term costs of education and provide potential benefits on students' life earnings.
4. High schools and higher education institutions can, in fact, work together.
5. The content and delivery of dual credit programs needs to be refined to ensure consistency and rigor across a large statewide program .
6. Dual Credit programs (other accelerated learning programs) must overcome a number of fundamental issues if they are to make a permanent difference for large numbers of students.
7. We need to ensure equity and accessibility of accelerated learning programs to all students.



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An Overview of Today's Presentation

- Why is Dual Credit Important?
 - If we are going to improve the educational success of our students, it is imperative that we understand the challenges that they face.
- Dual Credit Student Performance
 - We looked at student performance at several different institutions and through several different lenses. It is encouraging that, in all cases, students who took dual credit courses showed higher levels of student performance. It is too early in our research to draw causal connections, but the initial results are promising.
- Dual Credit Cost Effectiveness
 - A persistent area of tension exists around the funding of dual credit programs, ensuring that schools and colleges are adequately compensated for the additional costs of programs and programs are administered equitably and fairly, while at the same time ensuring that benefits to students are worth the expenses incurred by the state.
- Lessons Learned and Next Steps
 - Initial findings and recommendations for further research.



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WHY IS DUAL CREDIT IMPORTANT?

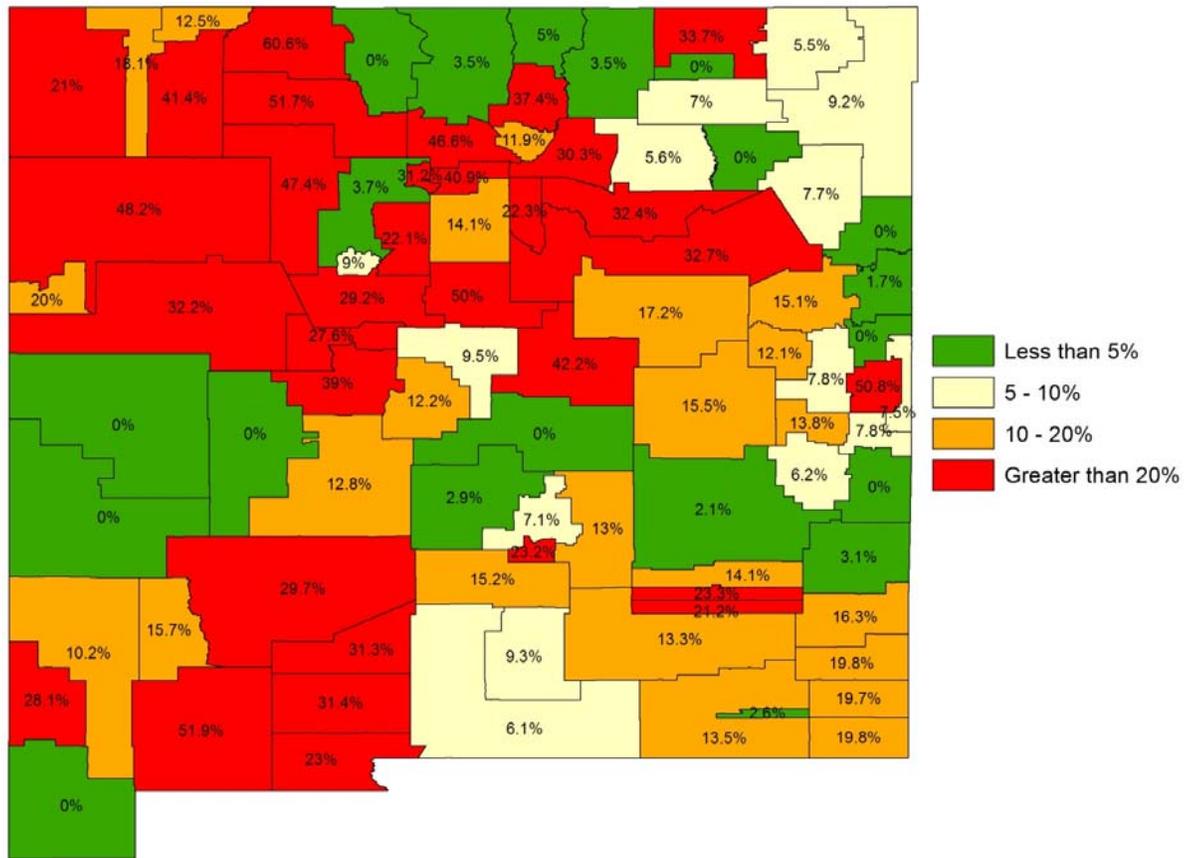
Dual Credit is important because we believe that it can make schools more flexible and responsive to student needs, increase the rigor of the curriculum, raise student aspirations, and enhance the collaboration between high schools and colleges. We believe these critical changes must occur if New Mexico students are going to be successful and competitive in a global economy, if the achievement gap is to be addressed, and if education is to be the path to a better future.



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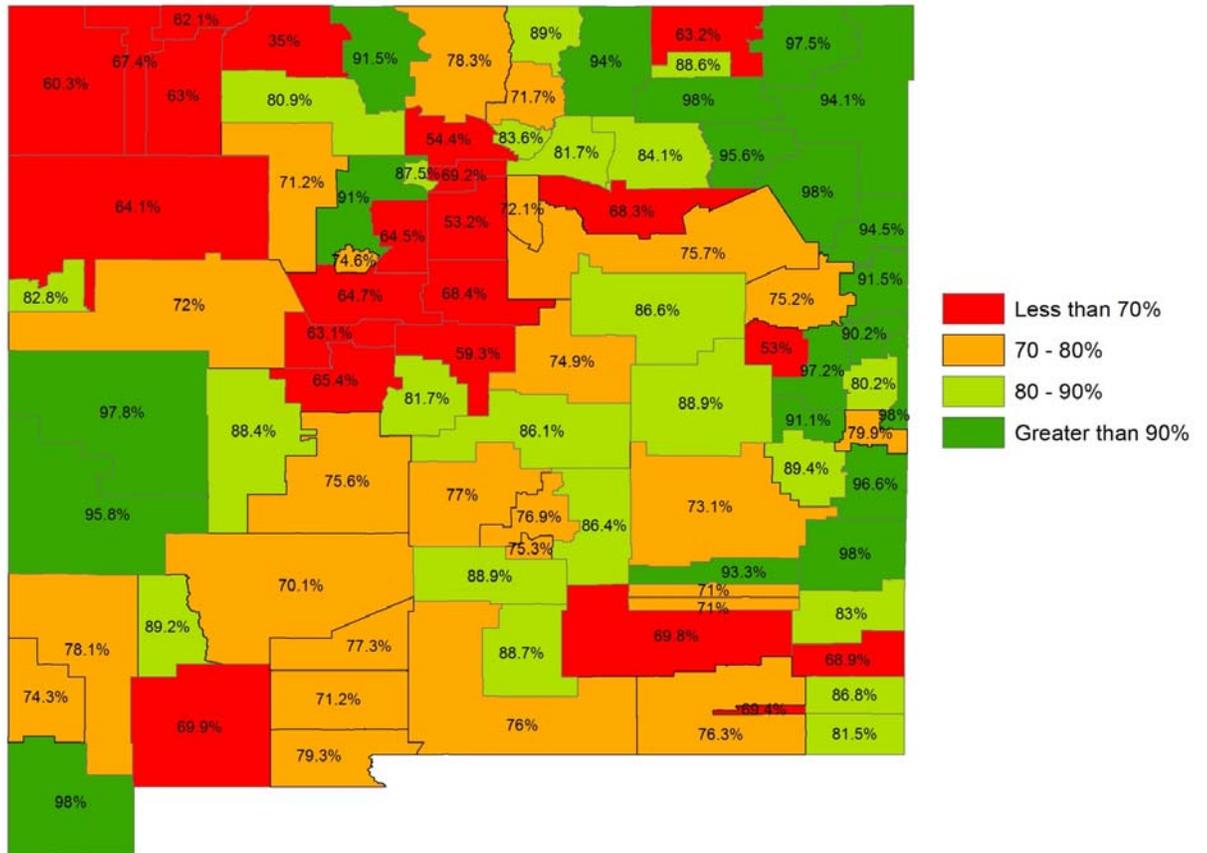
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Percentage of High School Students Who Were Habitually Truant, By School District

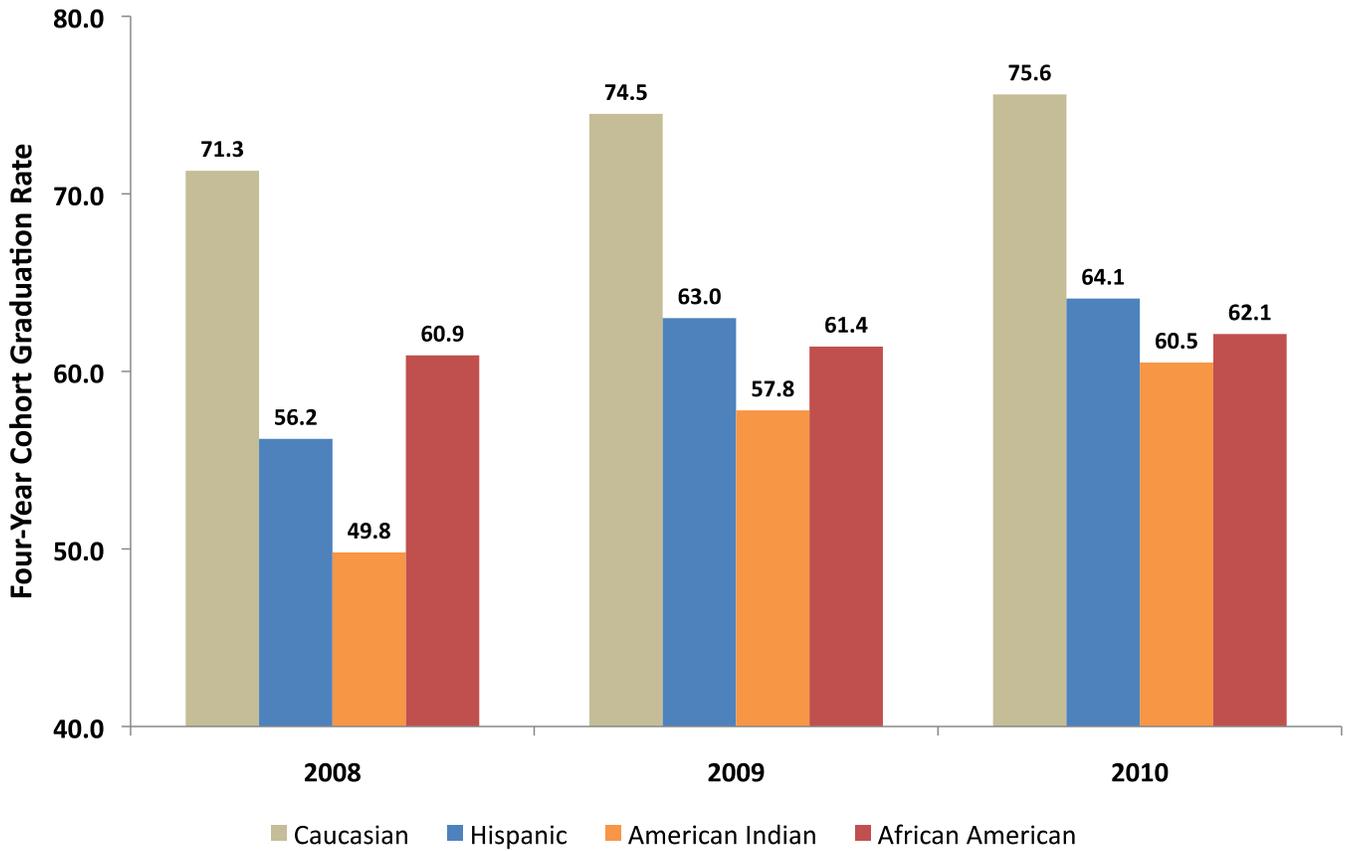


Source: New Mexico Public Education Department, 2009-2010 School Year. A student is identified as a Habitual Truant when the student has accumulated 10 or more of unexcused absences.

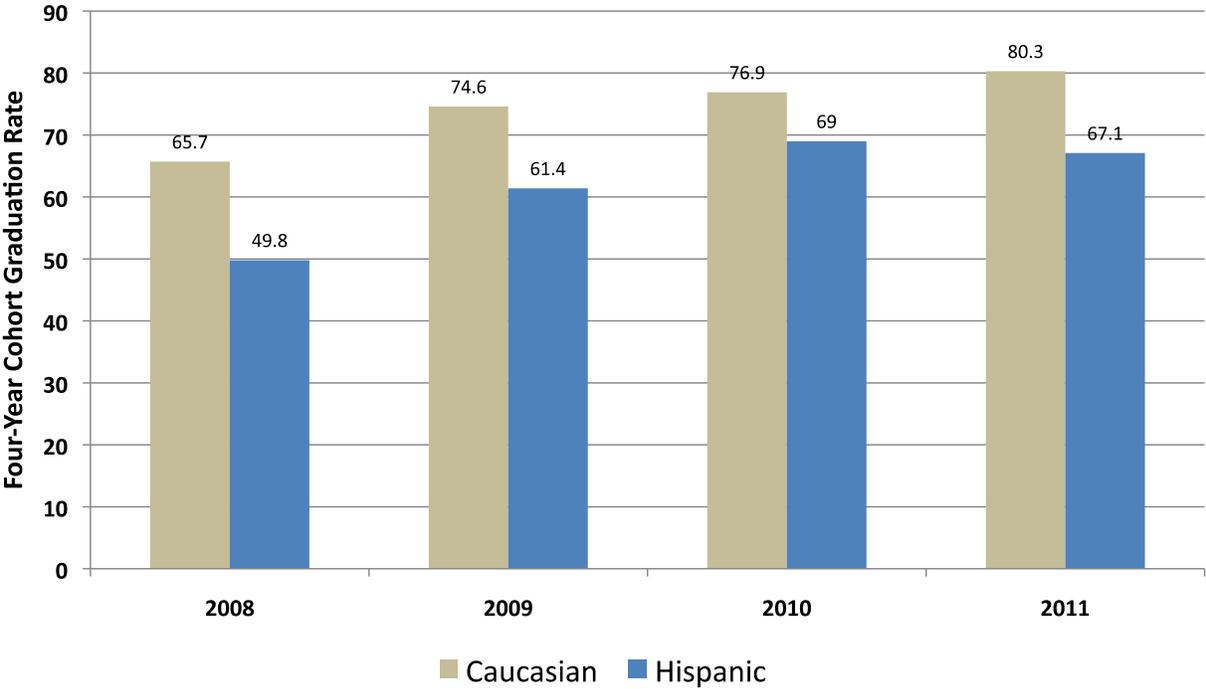
Four-Year High School Graduation Rate, All Students, By District



Four-Year High School Graduation Rate, Graduation Gap Between Caucasians and Students of Color



Las Cruces Public Schools Four-Year Graduation Rate, Graduation Gap Between Caucasians and Hispanics



Percentage of Students Earning a Degree or Certificate by the Number of Remedial Courses Taken

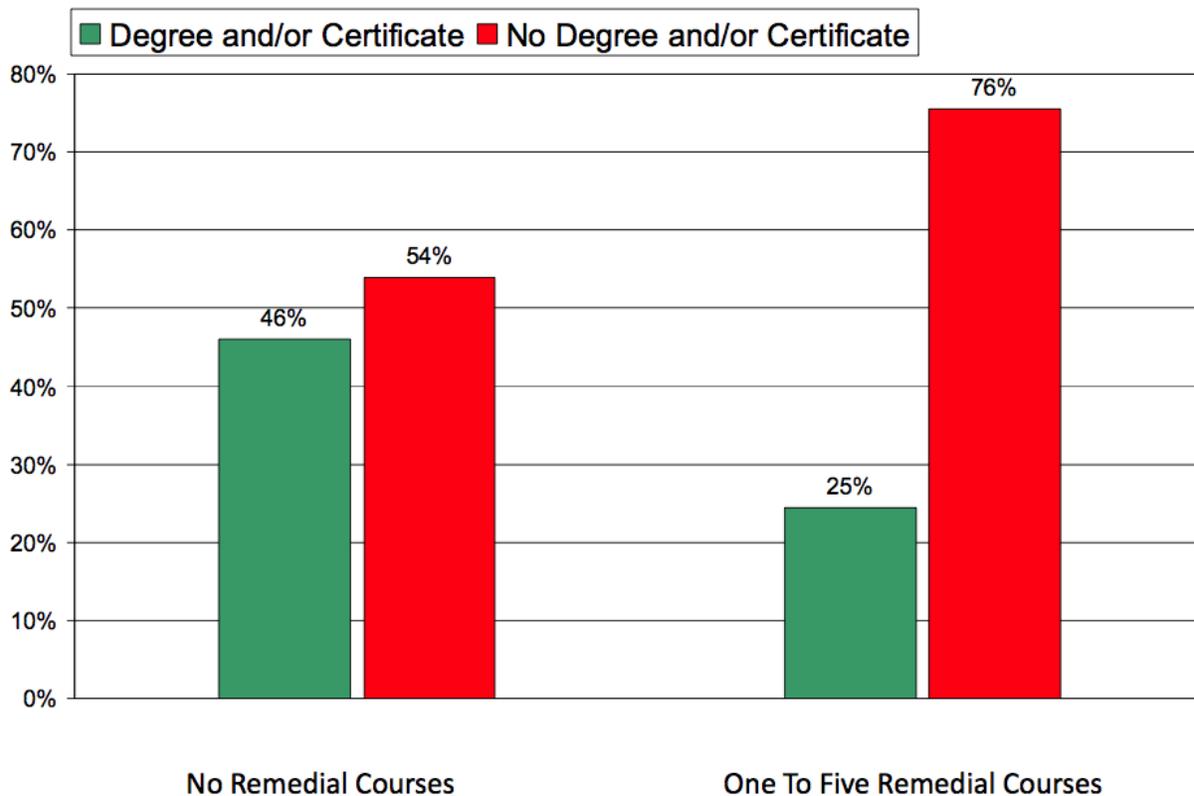
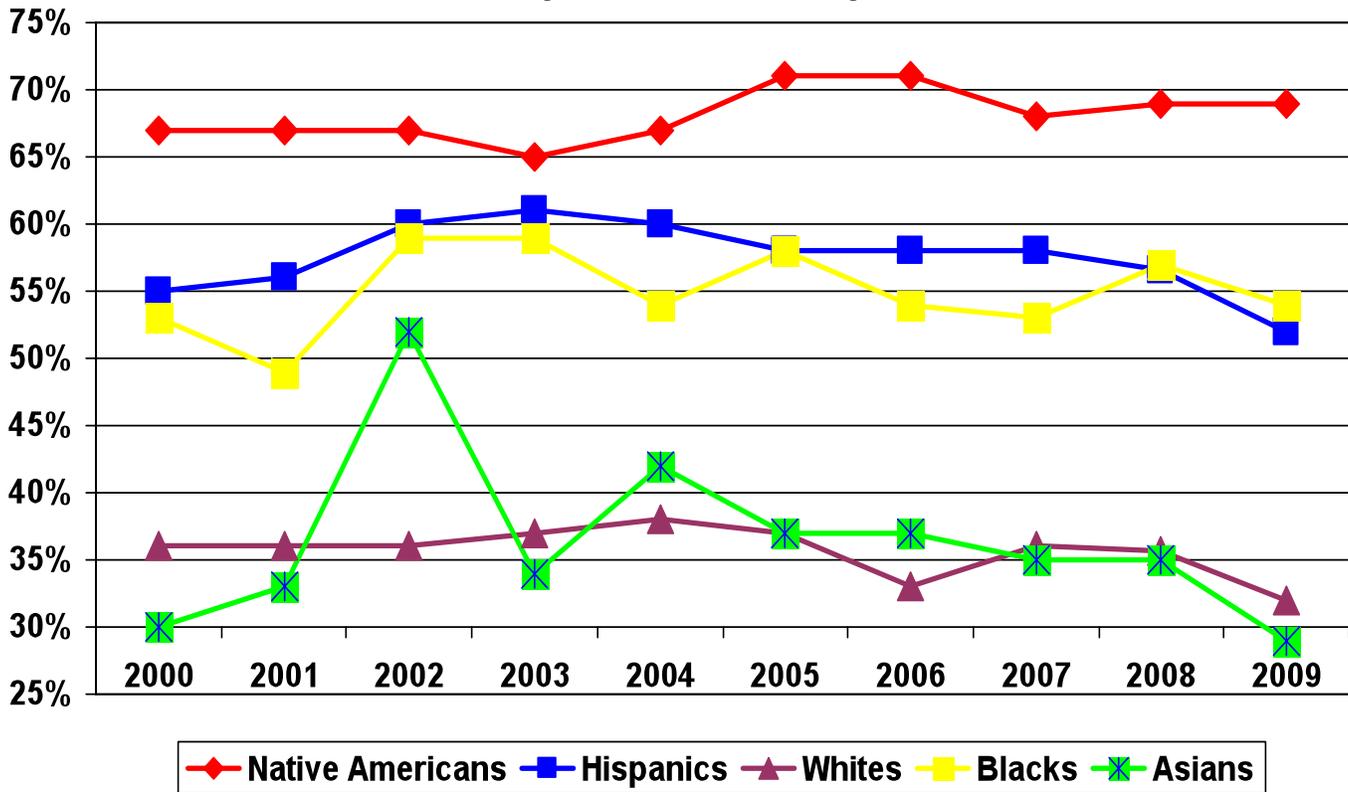


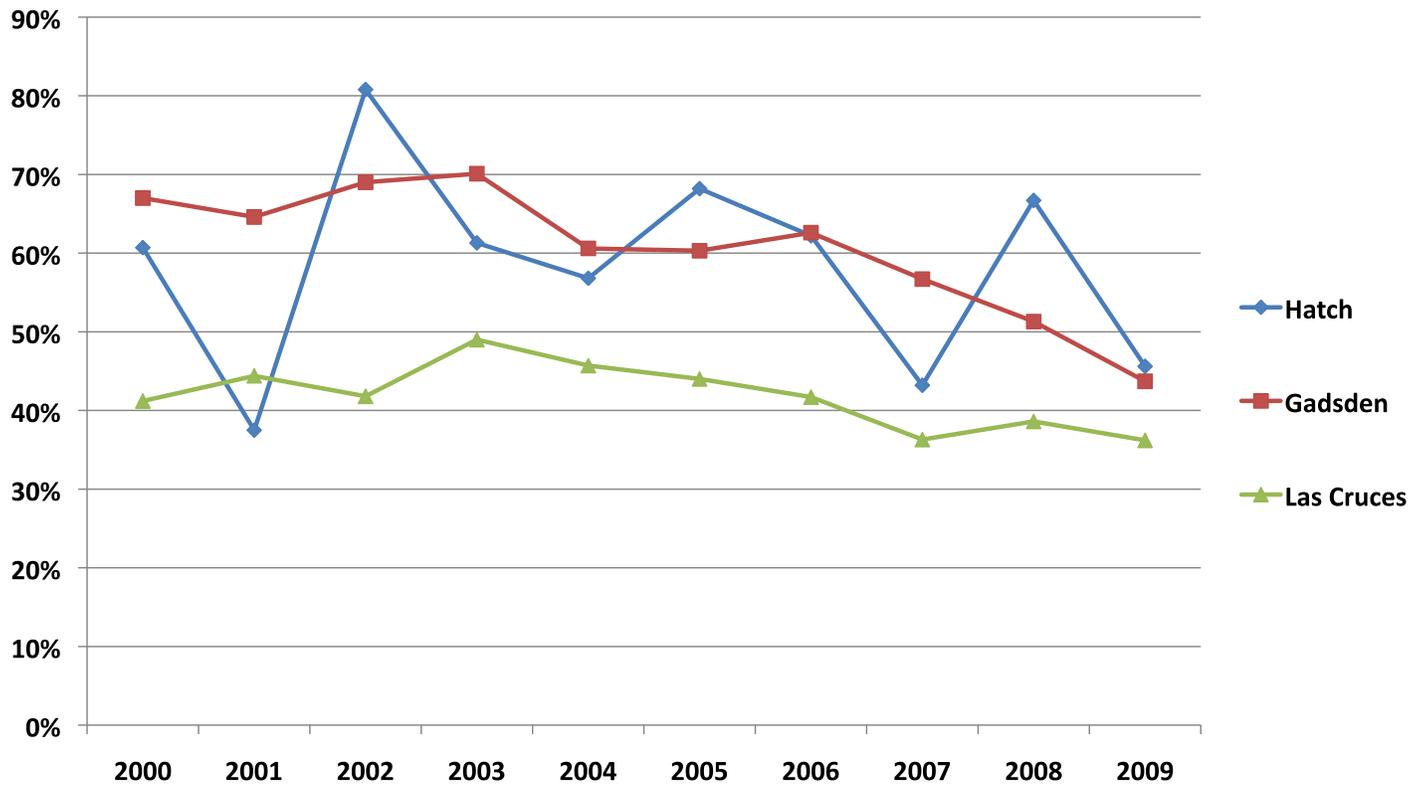
Chart shows percentage of students who graduate within six years by the number of remedial courses taken. Sample includes 8,315 students beginning college in 2003. Source: "Ready For College? A Report on New Mexico's High School Graduates Who Take Remedial Courses In College," June 2010, New Mexico Office of Education Accountability.

Percentage of New Mexico Public High School Graduates Attending New Mexico Colleges Who Took Remedial Classes, By Race/Ethnicity



Source: "Ready For College? A Report on New Mexico's High School Graduates Who Take Remedial Courses In College," June 2010, New Mexico Office of Education Accountability. Data do not include charter or alternative schools.

Percentage of Students Attending New Mexico Colleges Who Took Remedial Classes, Doña Ana County School Districts



DUAL CREDIT: STUDENT PERFORMANCE

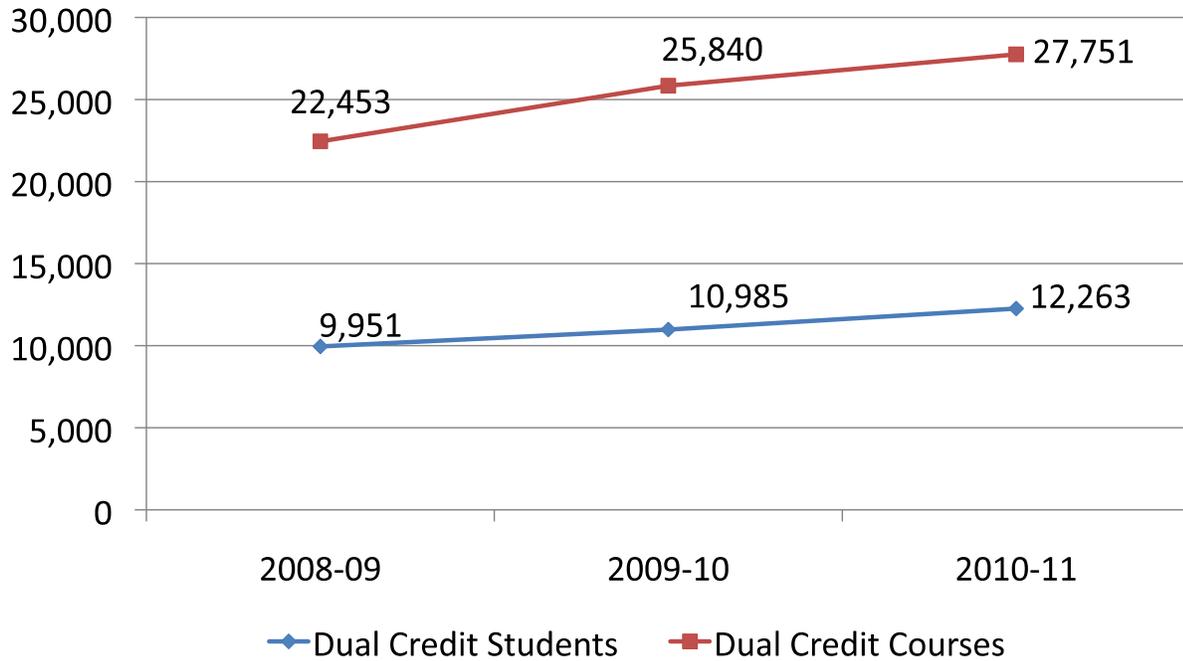
Given the complexity of the student education pipeline, it is difficult for any one measure to completely capture student performance. Recognizing this, we looked at student performance at several different institutions and through several different lenses. It is encouraging that, in all cases, students who took dual credit courses showed higher levels of student performance. It is too early in our research to draw causal connections, but the initial results are promising.



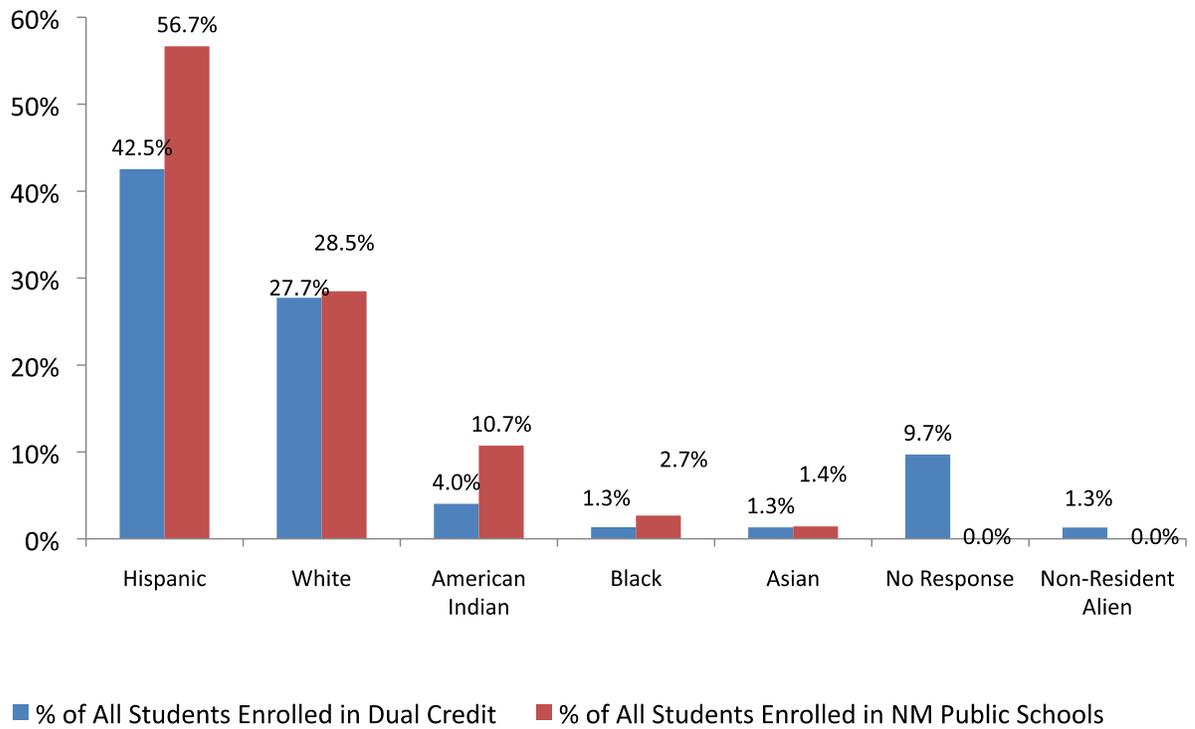
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New Mexico Dual Credit Program Growth

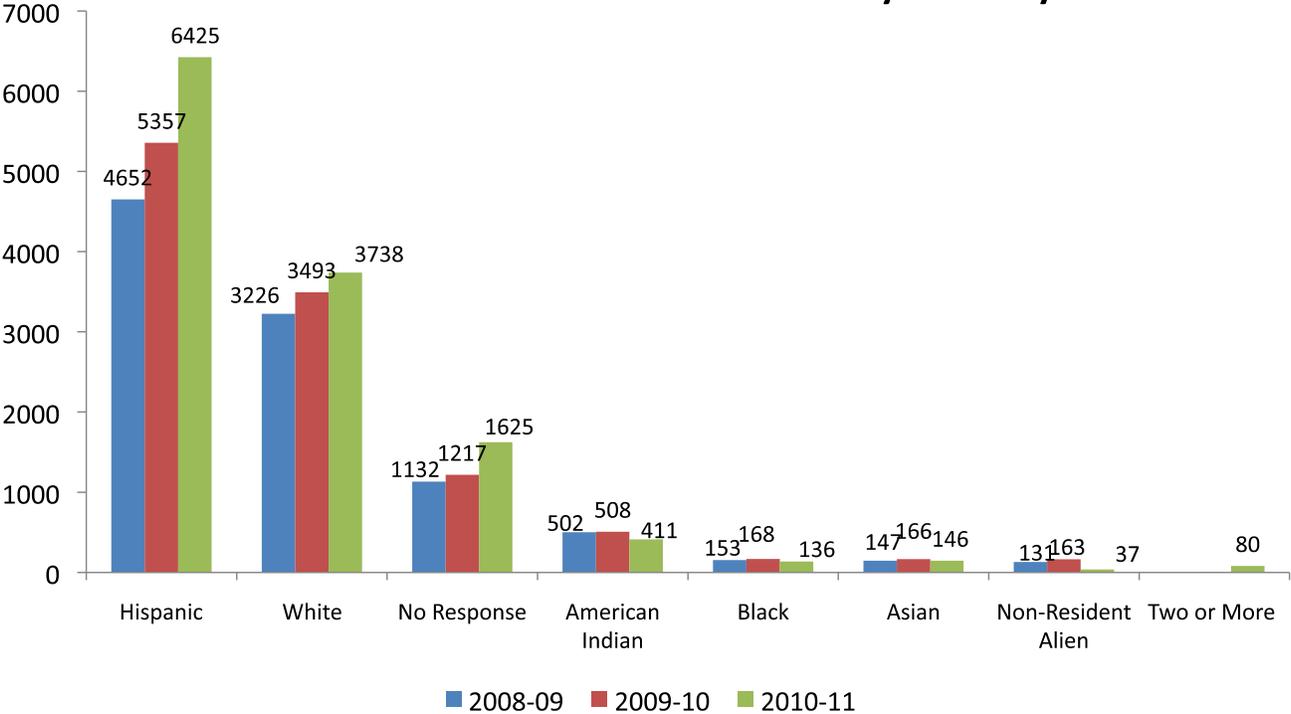


Underrepresentation of Minority Students in Dual Credit Programs, Academic Year 2009-10

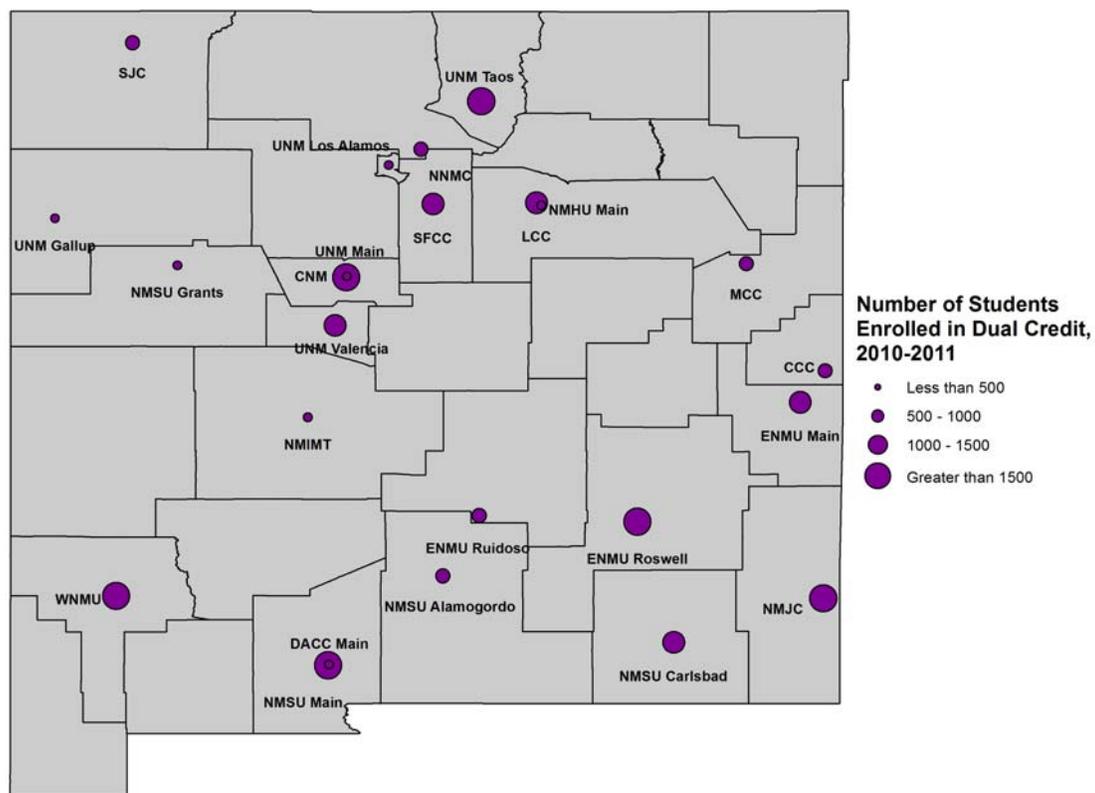


Though Still Underrepresented, Hispanic Student Dual Credit Enrollment is Growing Steadily Each Year

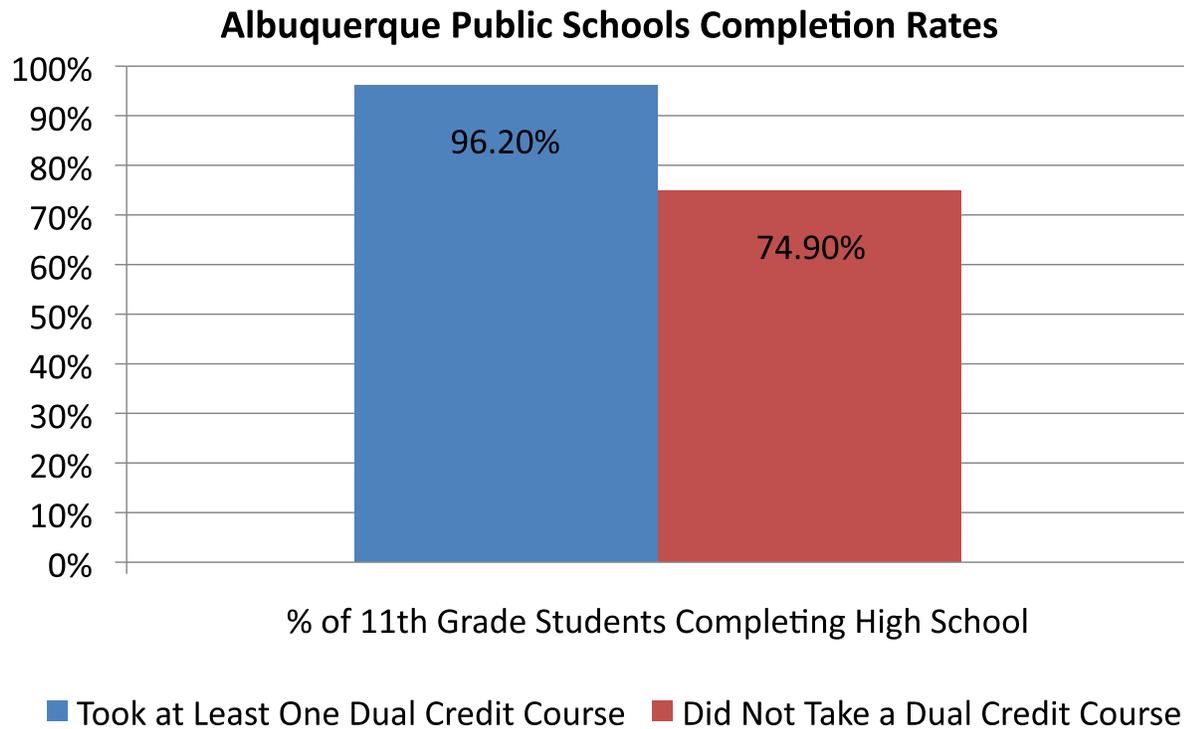
NM Dual Credit Enrollment Growth by Ethnicity



New Mexico's Dual Credit Program Provides Opportunities for Students Across the State



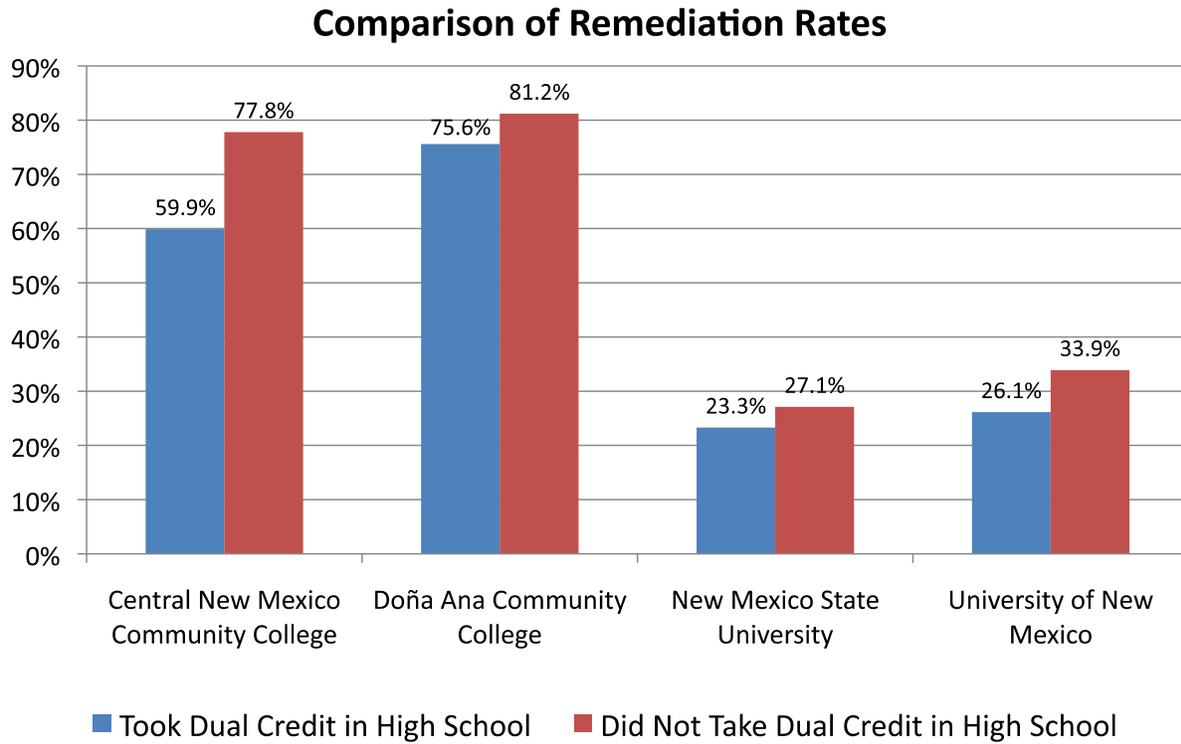
Dual Credit is Associated with Increased High School Completion Rates



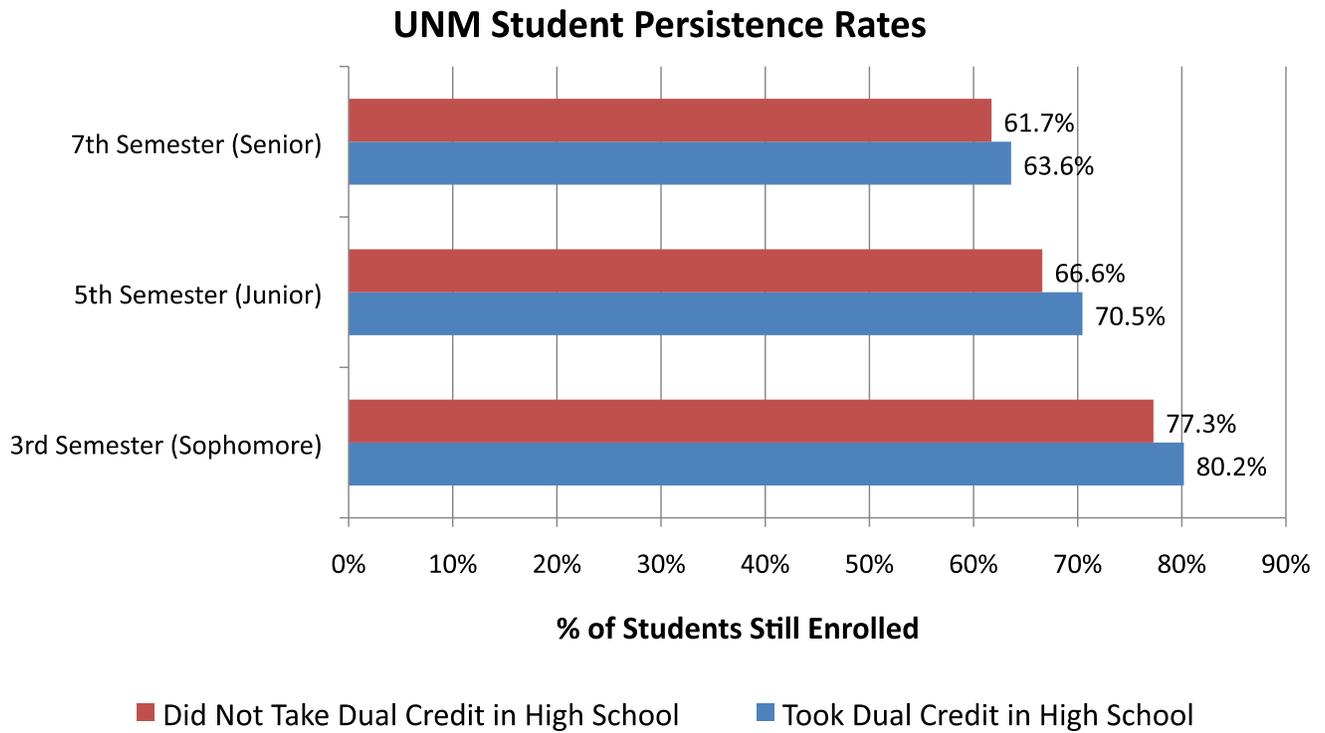
Dual Credit is Associated with Increased High School Completion Rates

Albuquerque Public Schools Dual Credit Completion Rates by Socioeconomic Status			
	Took a Dual Credit Course	Did Not Take a Dual Credit Course	Total
Participated in a Free/Reduced Lunch Program	86.8% (N=91)	44.6% (N=1,227)	47.5% (N=1,318)
Did Not Participate in a Free/Reduced Lunch Program	98.2% (N=442)	85.6% (N=3,463)	87.0% (N=3,905)
Total	96.2% (N=533)	74.9% (N=4,690)	77.0% (N=5,223)

Dual Credit is Associated with a Reduced Need of Remediation

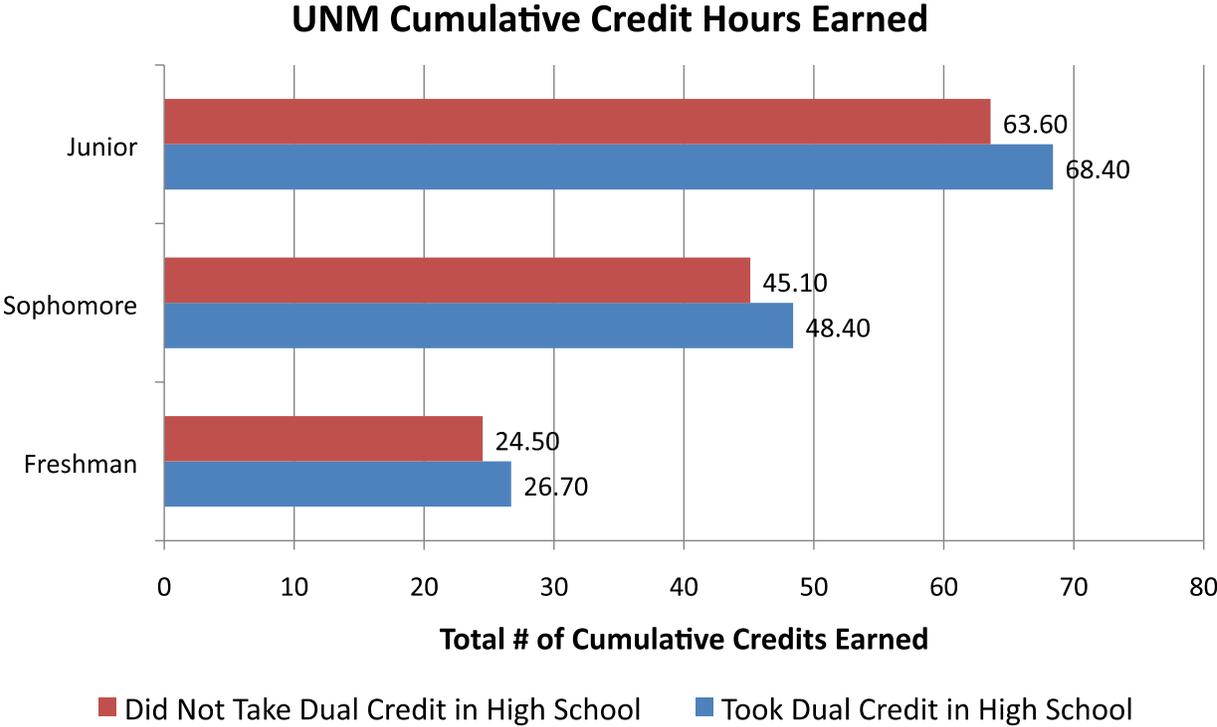


Dual Credit is Associated with Increased Student Persistence



Persistence is defined as students who were still enrolled at the census date of the specified semester. These data are for UNM full-time, first-time entering freshmen in Fall 2007 and Fall 2008. Sample consists of 904 Dual Credit and 5220 non-Dual Credit students. Source: UNM Office of Institutional Research

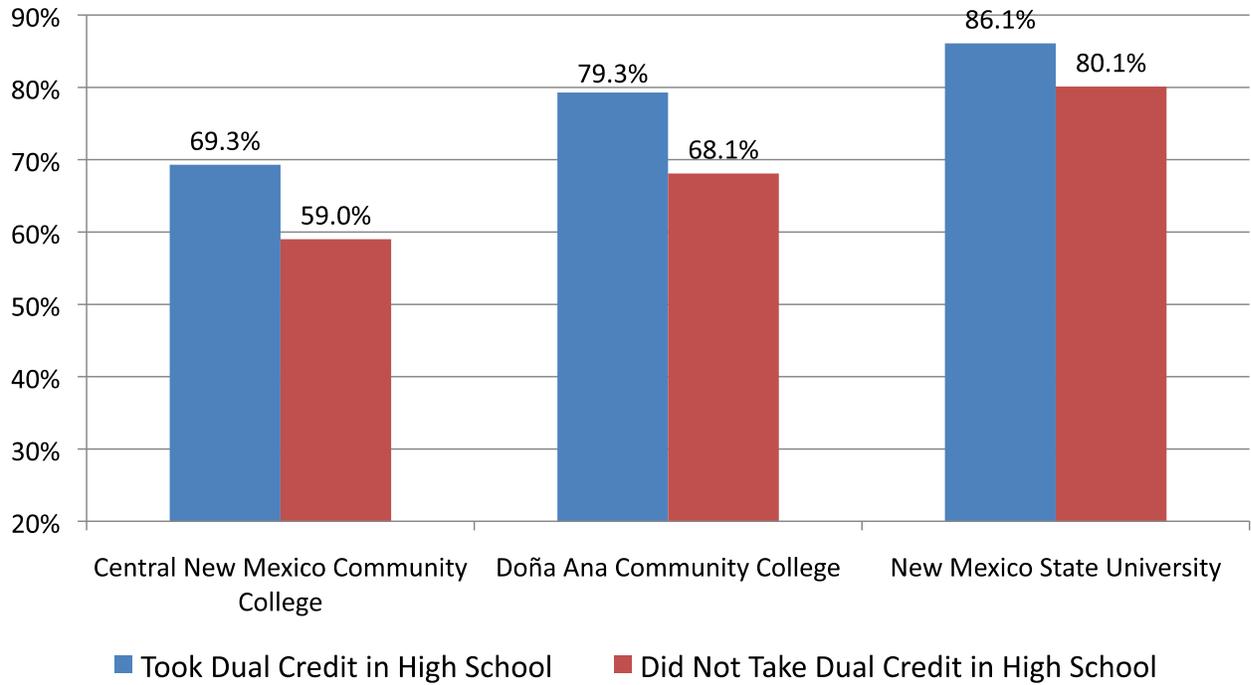
Dual Credit is Associated with Students Earning Credits Faster



This chart shows the number of cumulative credit hours earned by the end of the spring semester of each year. These data are for UNM full-time, first-time entering freshmen in Fall 2007 and Fall 2008. Sample consists of 904 Dual Credit and 5220 non-Dual Credit students. Source: UNM Office of Institutional Research

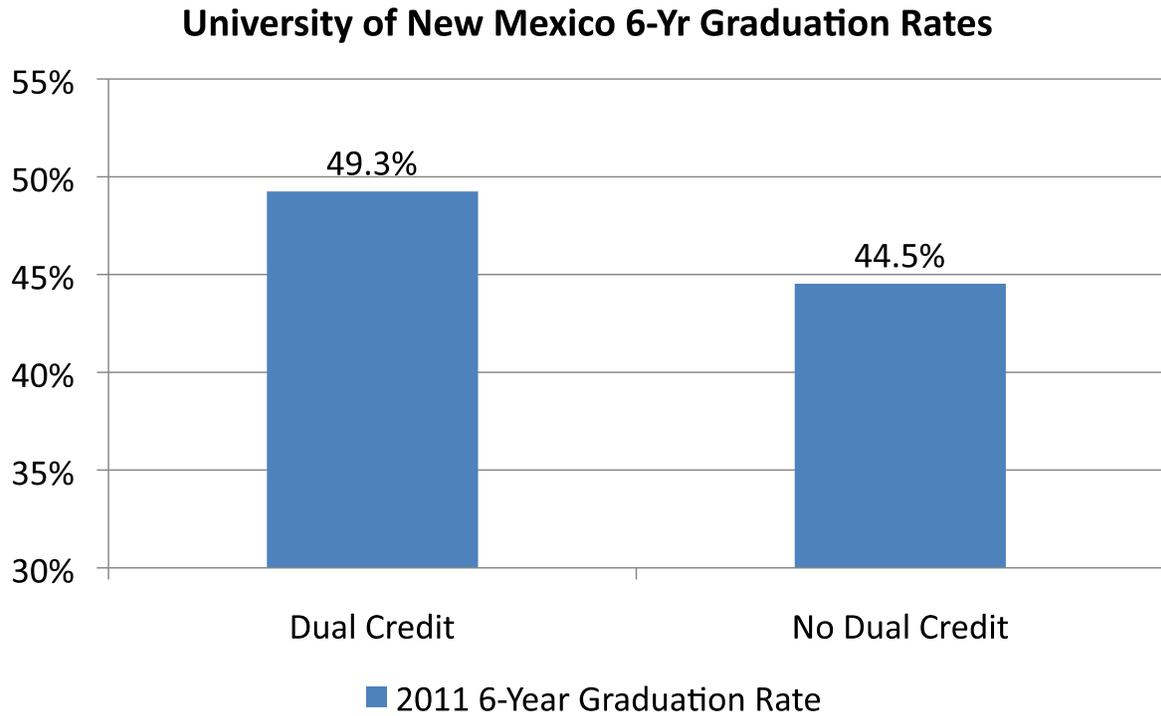
Dual Credit is Associated with Increased Student Persistence

Comparison of Persistence to the Sophomore Year



Retention rates are based on the percentage of first-time, full-time students in fall 2009 re-enrolling during the fall 2010 semester. DACC and NMSU retention rates include students retained at any campus in the NMSU system. Source: CNM, DACC, and NMSU Office of Institutional Research

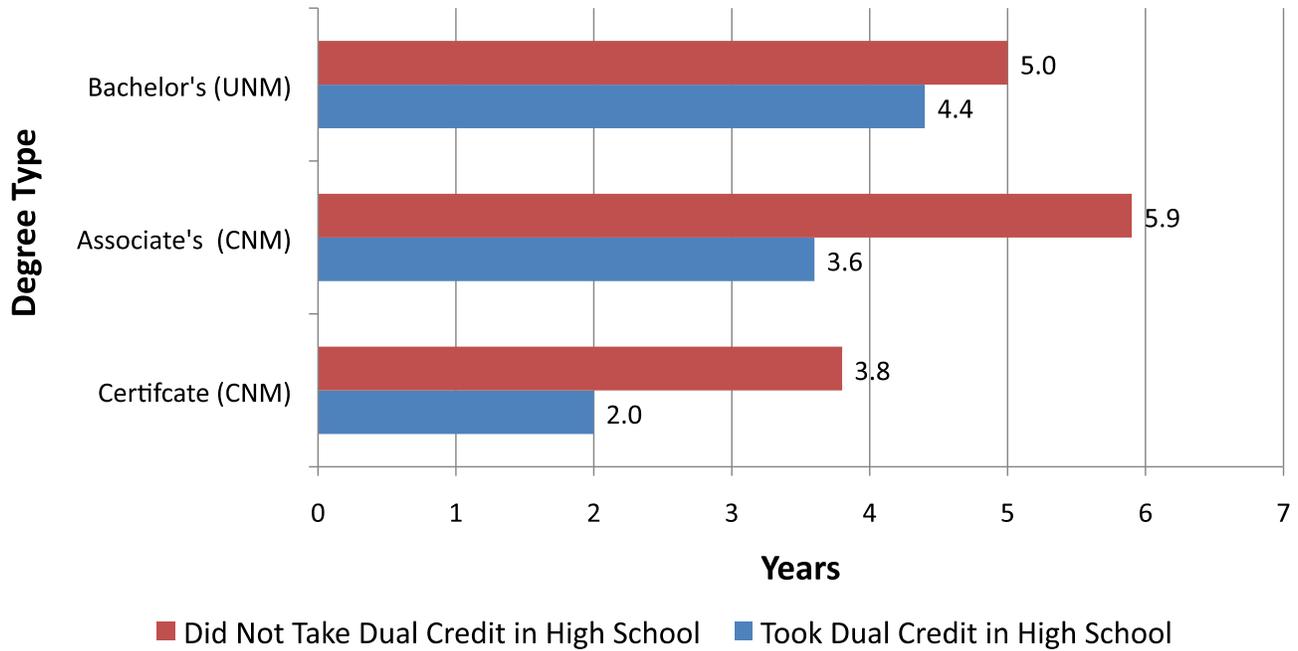
Dual Credit is Associated with Higher College Graduation Rates



Graduation rates are the percentage of first-time, full-time freshmen in Fall 2005 who graduated with a bachelor's degree or enrolled in the 3rd semester of the PharmD program by the spring semester of 2011. Source: UNM Division of Enrollment Management

Dual Credit is Associated with Shorter Time to Graduation

Average Years to Graduation by Degree Type



Data are from 2008-10 graduates at CNM and UNM. Years to graduation are calculated by subtracting the semester and year of first enrollment from the semester and year of graduation. The CNM sample consists of 1265 Dual Credit and 5696 non-Dual Credit students. The UNM sample consists of 639 Dual Credit and 8944 non-Dual Credit students. Source: UNM Office of Enrollment Management and CNM Office of Institutional Research

Dual Credit Students Show Quicker Times to Graduation Across Differing Levels of Academic Preparation

UNM Average Years to Graduation Comparison of Dual Credit versus Non-Dual Credit Students			
HS Grade Point Average	Took a Dual Credit Course in High School	Did Not Take a Dual Credit Course in High School	Dual Credit Student Difference
Less than 2.5	*	5.66 years (n=65)	*
2.5 – 2.99	5.28 years (n=31)	5.24 years (n=644)	About the Same
3.0 – 3.49	4.60 years (n=123)	5.02 years (n=1,377)	1 Semester Faster
3.5 – 3.99	4.20 years (n=217)	4.55 years (n=1,591)	1 Semester Faster
Greater than 4.0	3.87 years (n=127)	4.18 years (n=593)	1 Semester Faster

This table shows a comparison of the average years to degree for UNM Bachelor degree recipients who took dual credit in high school compared to those who did not take dual credit. Data includes students who graduated in 2009-2011 who also started at UNM as first-time freshman. Years to Graduation are calculated as follows: Fall semester = .4 years, Spring semester = .4 years, Summer semester = .2 years

*Data masked due to n<10.

DUAL CREDIT: COST EFFECTIVENESS

New Mexico has one of the most generous dual credit programs in the nation, resulting in minimal, if any, financial barriers to entry for students. The state also provides full funding to both the high school and college for the dual credit course, independent of the course location or delivery method. The rapid growth in participation in dual credit has created concern among policy makers that some institutions are taking advantage of the program, and that continued enrollment increases will further drive up costs. We must understand how to balance the immediate costs with its potential long-term benefits and structure the programs accordingly.



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Despite Enrollment Growth, Dual Credit Programs Still Comprise a Small Portion of NM Education Spending

Estimated Total State Funding for Dual Credit				
	Est. Average Cost Per Course	# of Courses	Total DC Funding	% of Total Budget [^]
Public Education	\$684	25,840	\$17.7M	1.2%
Higher Education	\$570	25,840	\$14.7M*	1.6%
Instructional Materials	\$40	25,840	\$1.04M	n/a
Total	\$1,294		\$33.44M	

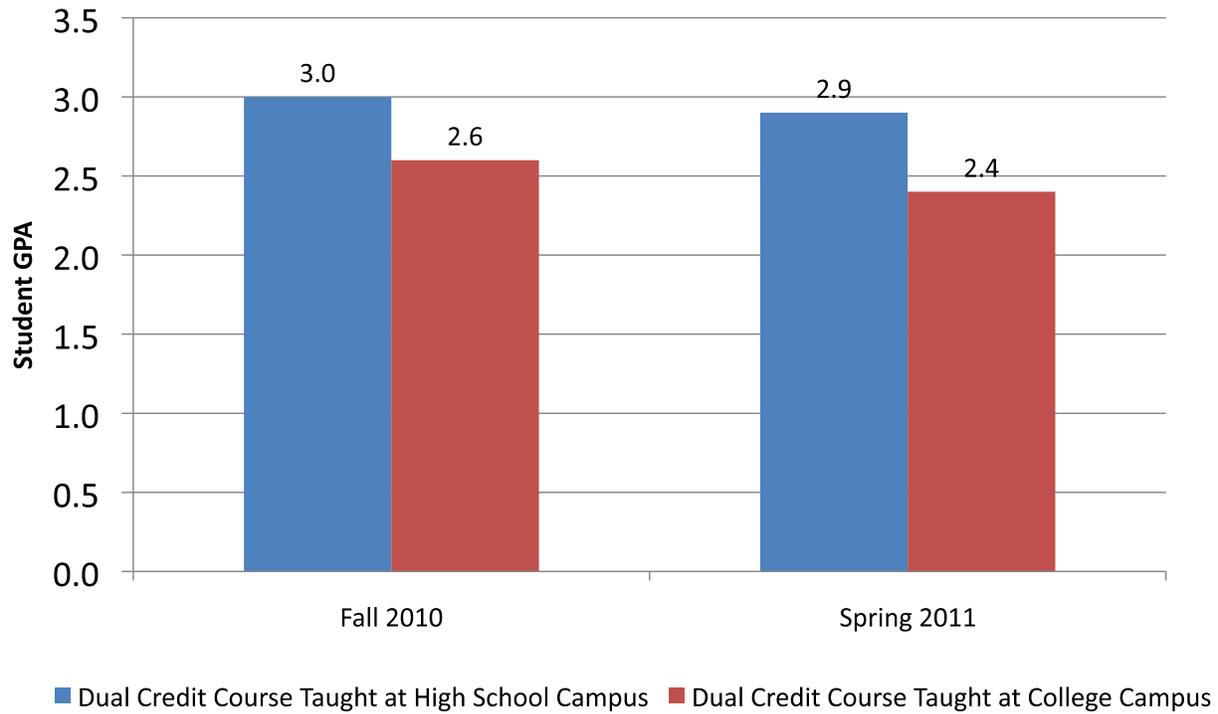
Amount of "double" funding

* Estimated HED funding based on FY10 SCH. Actual funds would not be appropriated until FY12 due to the "lag" associated with the funding formula.

[^] % of total budget based on PED dual credit expenses as a portion of PED operating expenses for instruction / total HED funding

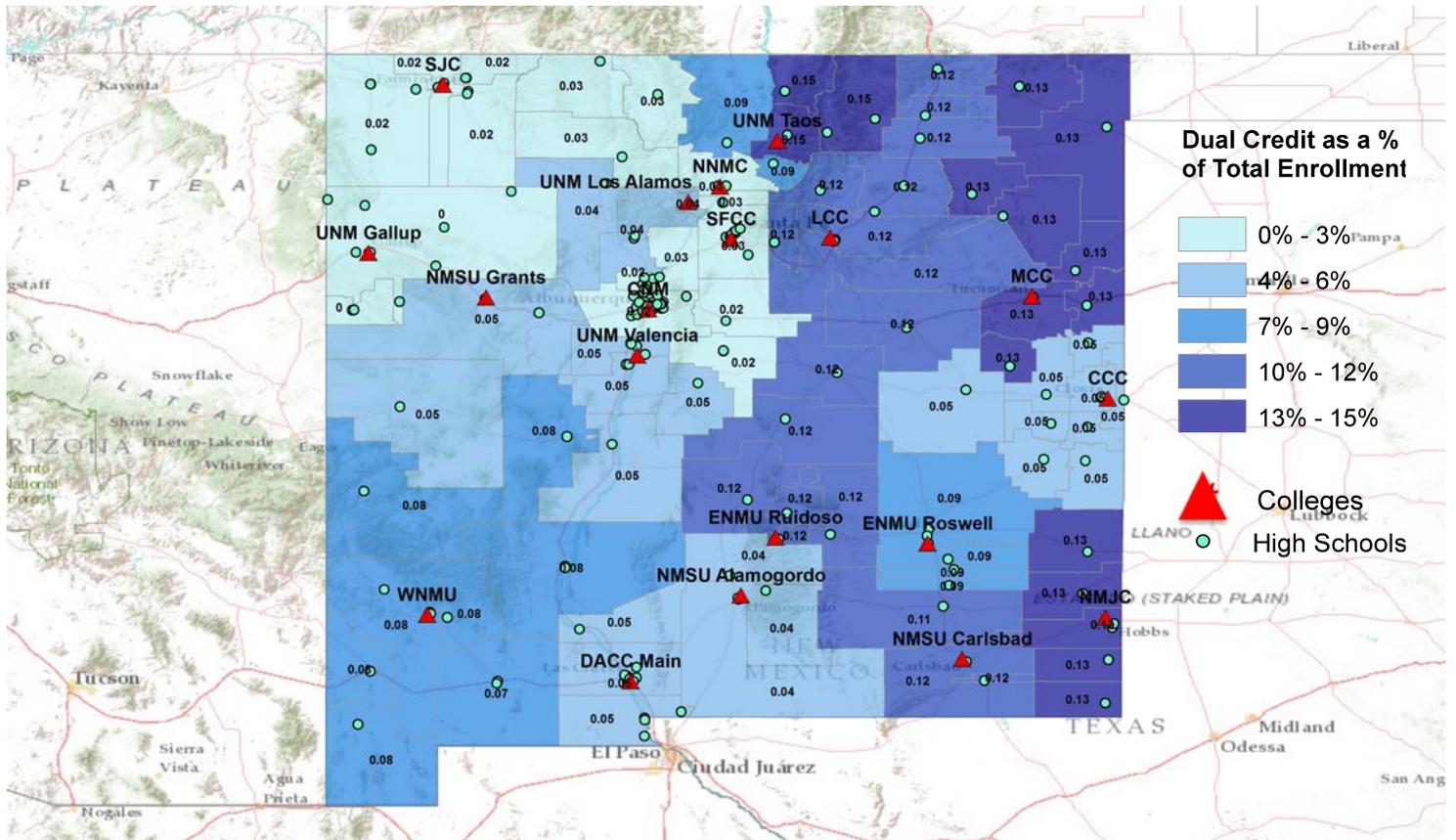
Source: CEPR analysis of HED and PED data. PED per course funding based on \$4,480 in SEG funding per student with an average course load of 6.56 courses. HED per course funding based on CEPR estimated \$190 per SCH for a 3-hour course.

Comparison of Grades by Dual Credit Course Location



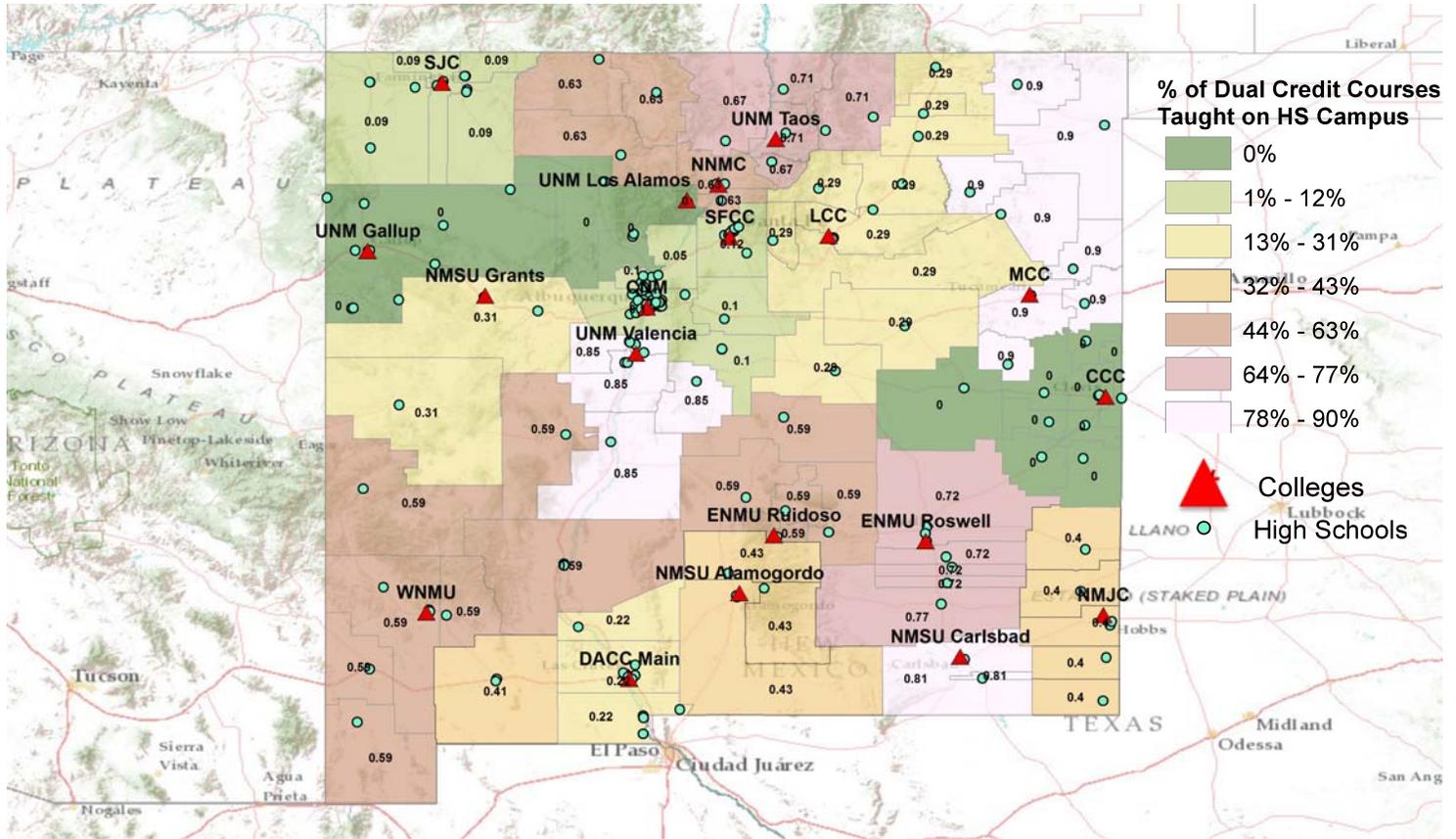
This chart shows the average GPA (on a 4-point scale) of students taking dual credit courses at a college campus compared to at a high school campus. For this analysis, online or distance education courses are categorized as being offered at the college campus. Source: New Mexico Higher Education Department

Despite Recent Growth, Dual Credit Courses Still Comprise a Small Percentage of College Enrollments



This map shows dual credit courses as a percentage of total community college enrollment, organized by community college geographic area of responsibility. Source: NM Higher Education Department

Most Colleges Offering Dual Credit Courses Primarily on High School Campuses have Large Geographic Areas of Responsibility



Gains in Student Performance Have the Potential to Reduce State Expenditures

Lookback Analysis – Average Credit Hours Attempted				
	Non-DC Students (SCH)	DC Students (SCH)	Difference (credit hours)	Est. Formula Savings per Student
CNM Certificate Graduates	52	44	(8)	\$1,520
CNM Associate's Graduates	96	93	(3)	\$570
UNM Bachelor's Graduates	167	160	(7)	\$1,330

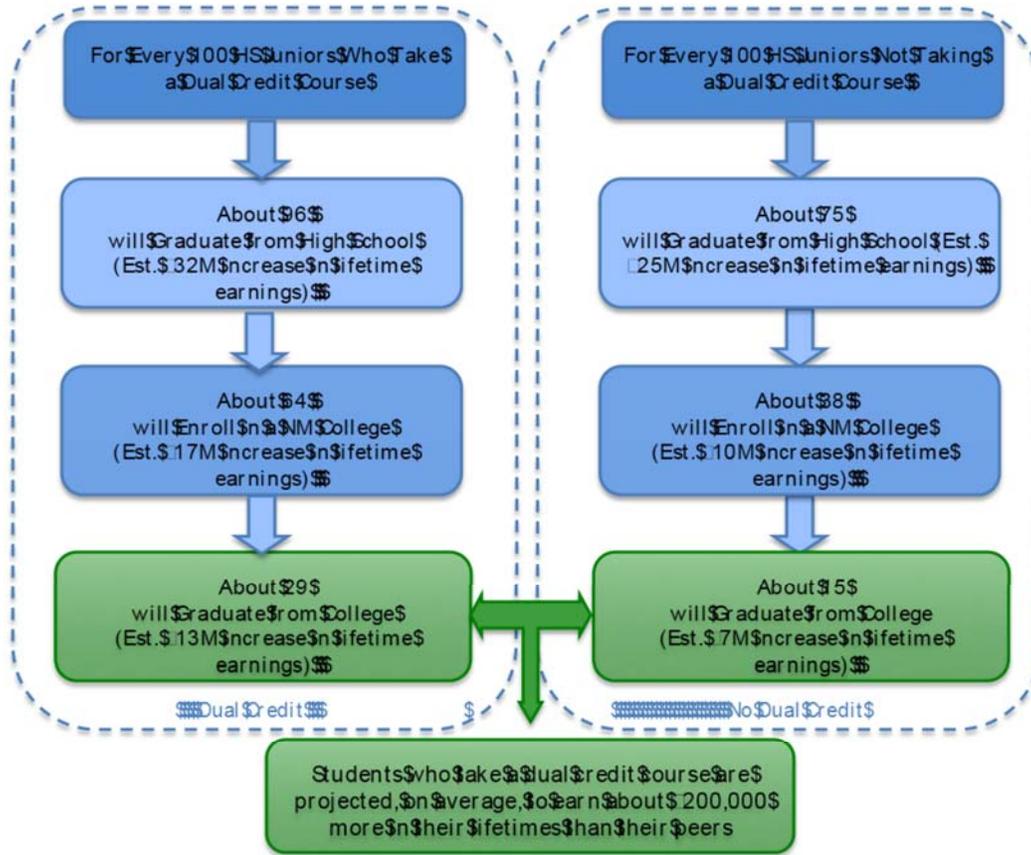
Data are from 2008-10 graduates at CNM and UNM. Years to graduation are calculated by subtracting the semester and year of first enrollment from the semester and year of graduation. The CNM sample consists of 1265 Dual Credit and 5696 non-Dual Credit students. The UNM sample consists of 639 Dual Credit and 8944 non-Dual Credit students. Formula savings based on estimated cost of \$190/SCH. Source: UNM Office of Enrollment Management and CNM Office of Institutional Research

Gains in Student Performance Have the Potential to Save Students and Families Money

Lookback Analysis – Average Years to Graduation				
	Non-DC Students (Years)	DC Students (Years)	Difference (Years)	Tuition & Fees Savings per Student
CNM Certificate Graduates	3.8	2.0	(1.8)	\$432
CNM Associate's Graduates	5.9	3.8	(2.3)	\$2,663
UNM Bachelor's Graduates	5.0	4.4	(.6)	\$4,356

Data are from 2008-10 graduates at CNM and UNM. Years to graduation are calculated by subtracting the semester and year of first enrollment from the semester and year of graduation. The CNM sample consists of 1265 Dual Credit and 5696 non-Dual Credit students. The UNM sample consists of 639 Dual Credit and 8944 non-Dual Credit students. Tuition saving estimates based on CNM and UNM 2010-11 tuition costs. Source: UNM Office of Enrollment Management and CNM Office of Institutional Research

Gains in Student Performance Have the Ability to Increase Lifetime Earnings



Information in this chart is based on CEPR analysis of multiple data sources. High rate based on APS class of 2011 11th grade completions; College enrollment rate based on Ready for College 2010 (Winograd, Garcia, & Flores, 2010), College graduation rate based on NCES IPEDS statewide data and UNM graduation rate data. Lifetime earning estimates from The College Payoff (Carnevale, Rose, & Cheah) Data provided by: APS RDA, UNM Division of Enrollment Management, and NCES IPEDS State Profile.

Next Steps and Further Research

1. The High School Class of 2013 is the first to graduate under the new “Diploma of Excellence” standards – we need to collect data on the ways students are meeting their graduation requirements and their subsequent enrollment and performance in college.
2. Most of the college data collected so far has consisted of only those students attending New Mexico colleges – we need to expand the scope of our research to capture those students who attend college out of state.
3. Most of the data collected so far has only looked at participation in dual credit programs – we need to conduct deeper analyses into the types of courses that students are taking and the impact of course type on student performance.
4. New Mexico’s Dual Credit program is still relatively new – we need to continue collecting data as the program grows to draw stronger correlations between dual credit course-taking and student performance.



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DUAL CREDIT: THE LARGER STATEWIDE CONTEXT

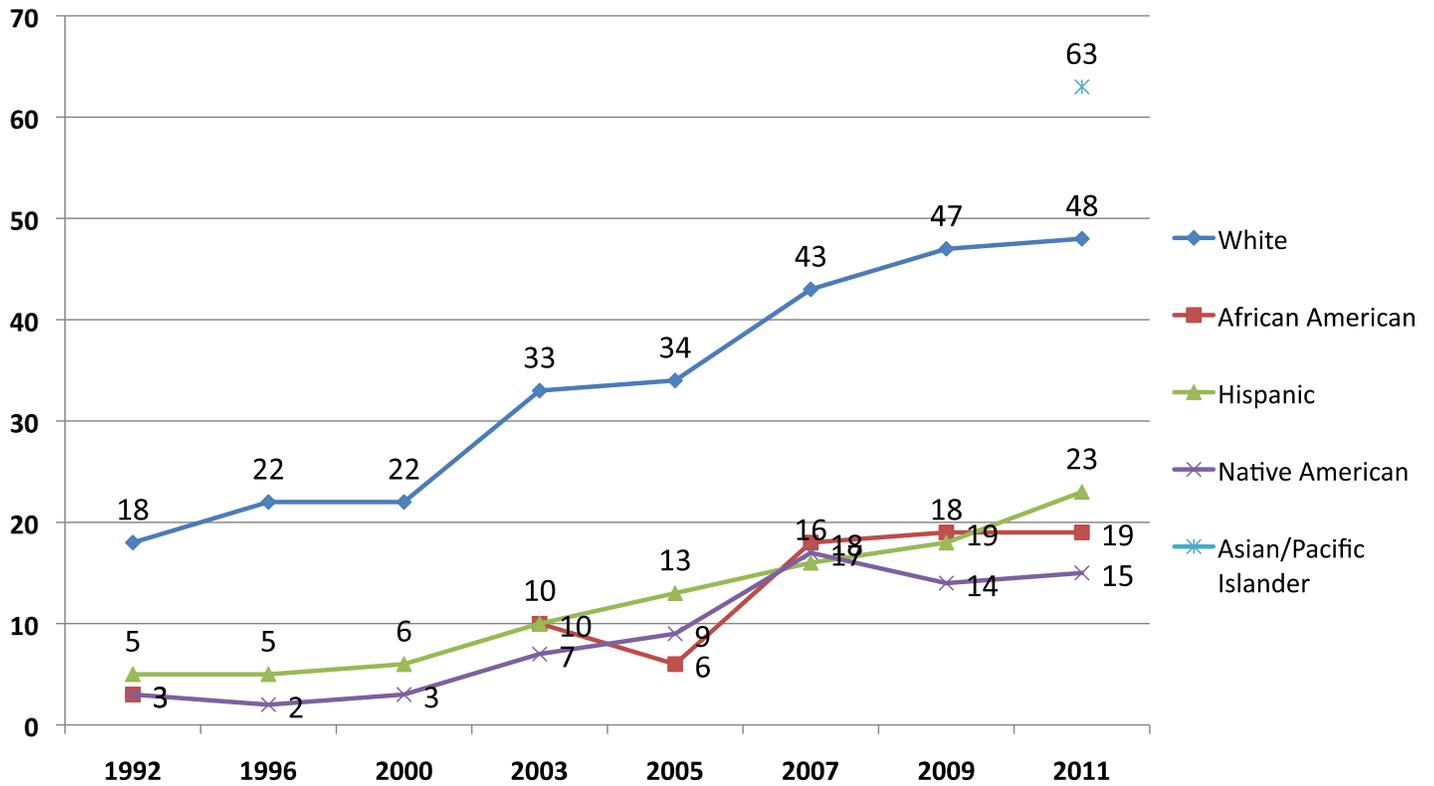
We lose too many children to poor health care and lack of developmental support in the four or five years before they get to school, and we continue to lose them in elementary and middle schools. Even the most effective accelerated learning programs are limited to the students who make it through the system to high school and are prepared enough to take advantage of these more rigorous learning opportunities.



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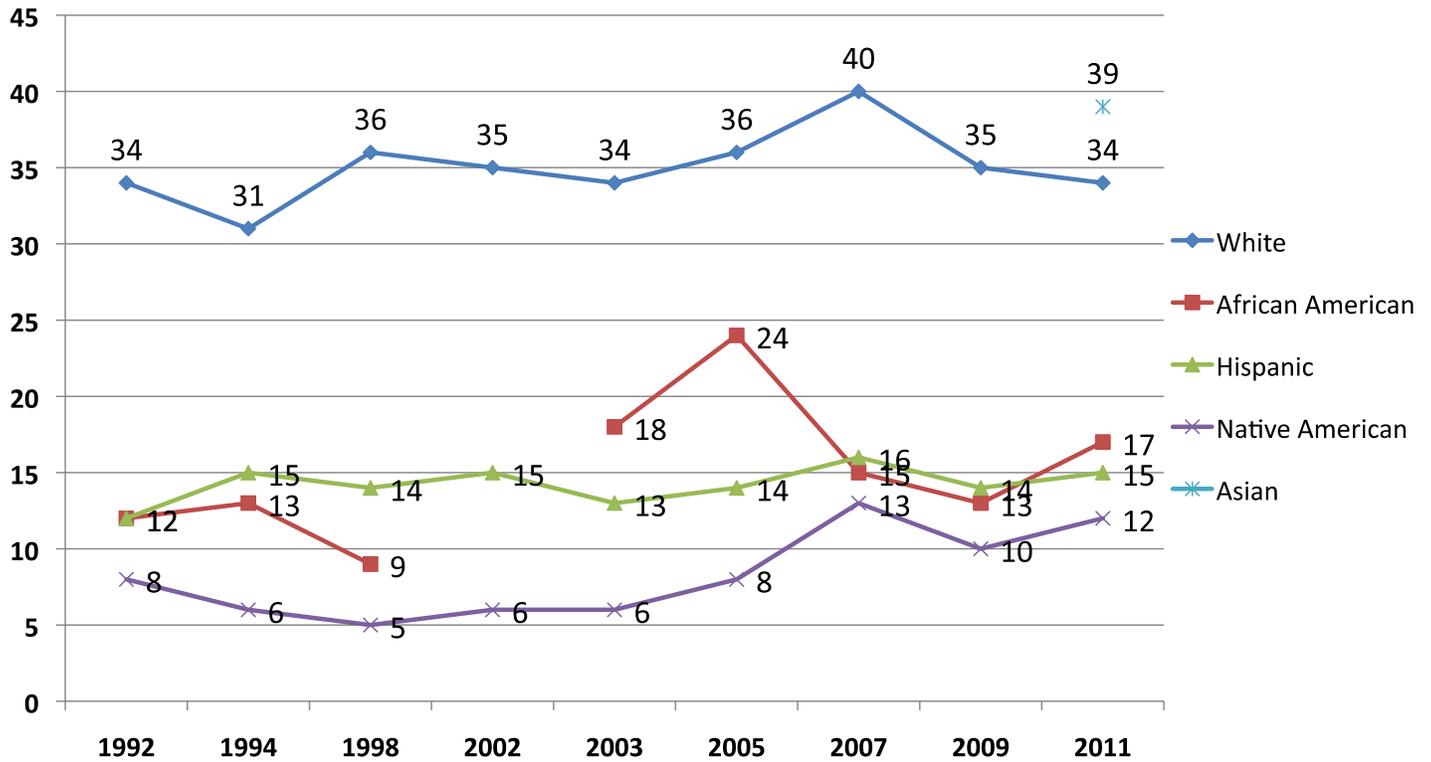
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Percentage of NM 4th Grade Students Scoring At or Above Proficient in Math, By Race/Ethnicity



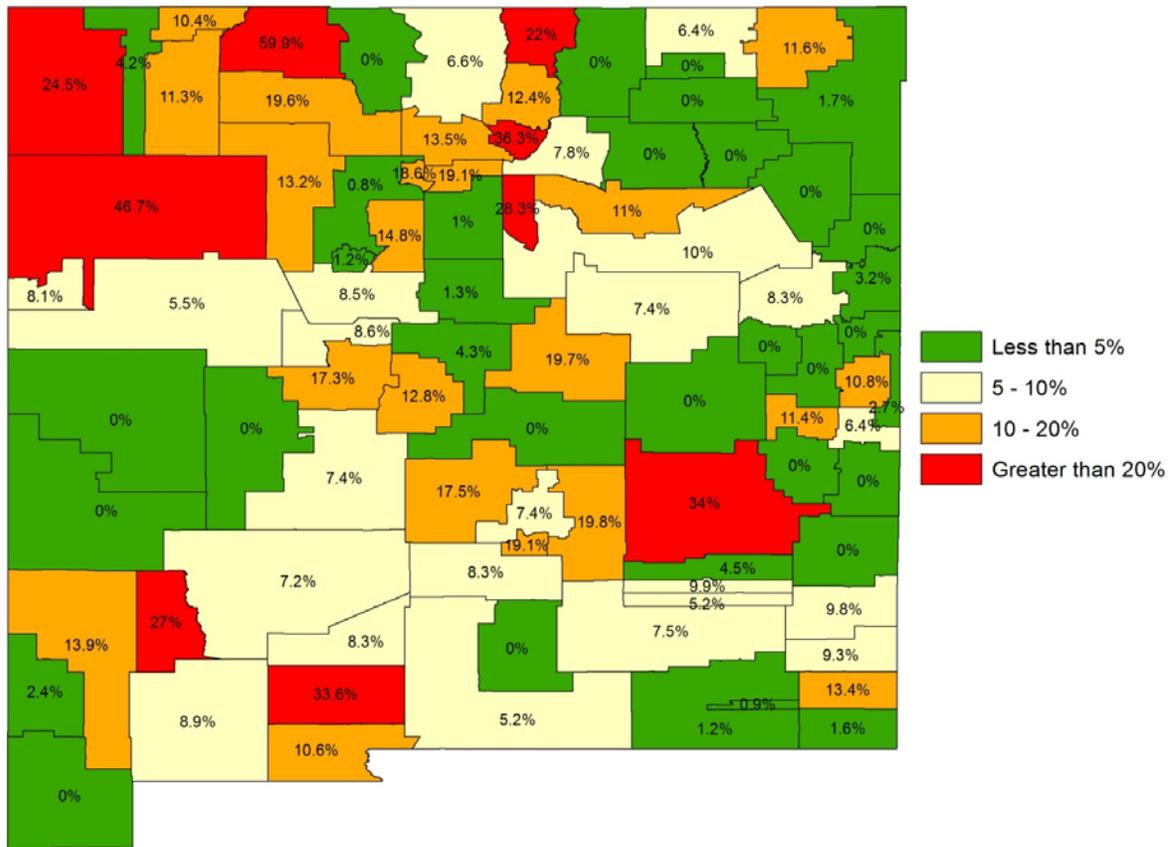
Source: National Assessment of Educational Progress (NAEP), 1992-2011. Asian/Pacific Islander is not reported in all years because NAEP reporting standards have not been met. African American data is not reported in all years because NAEP reporting standards have not been met.

Percentage of NM 4th Grade Students Scoring At or Above Proficient in Reading, By Race/Ethnicity



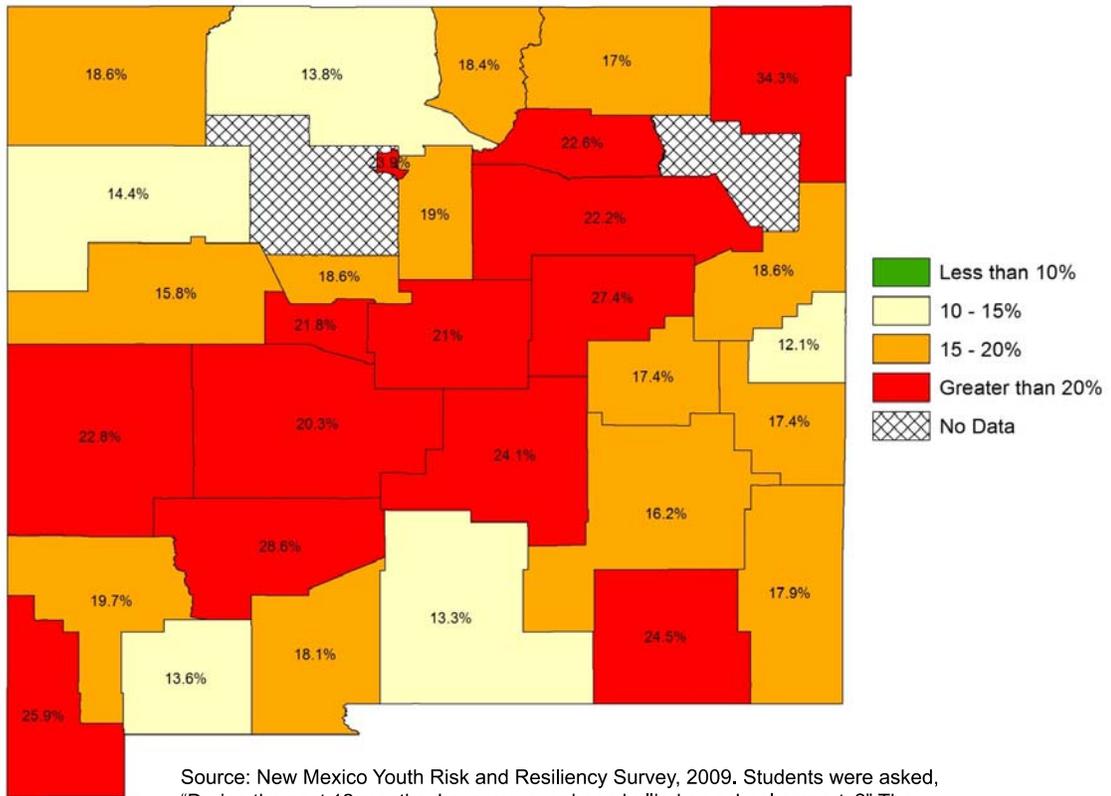
Source: National Assessment of Educational Progress (NAEP), 1992-2011. Asian/Pacific Islander is not reported in all years because NAEP reporting standards have not been met. African American data is not reported in all years because NAEP reporting standards have not been met.

Percentage of Elementary School Students Who Were Habitually Truant, By School District



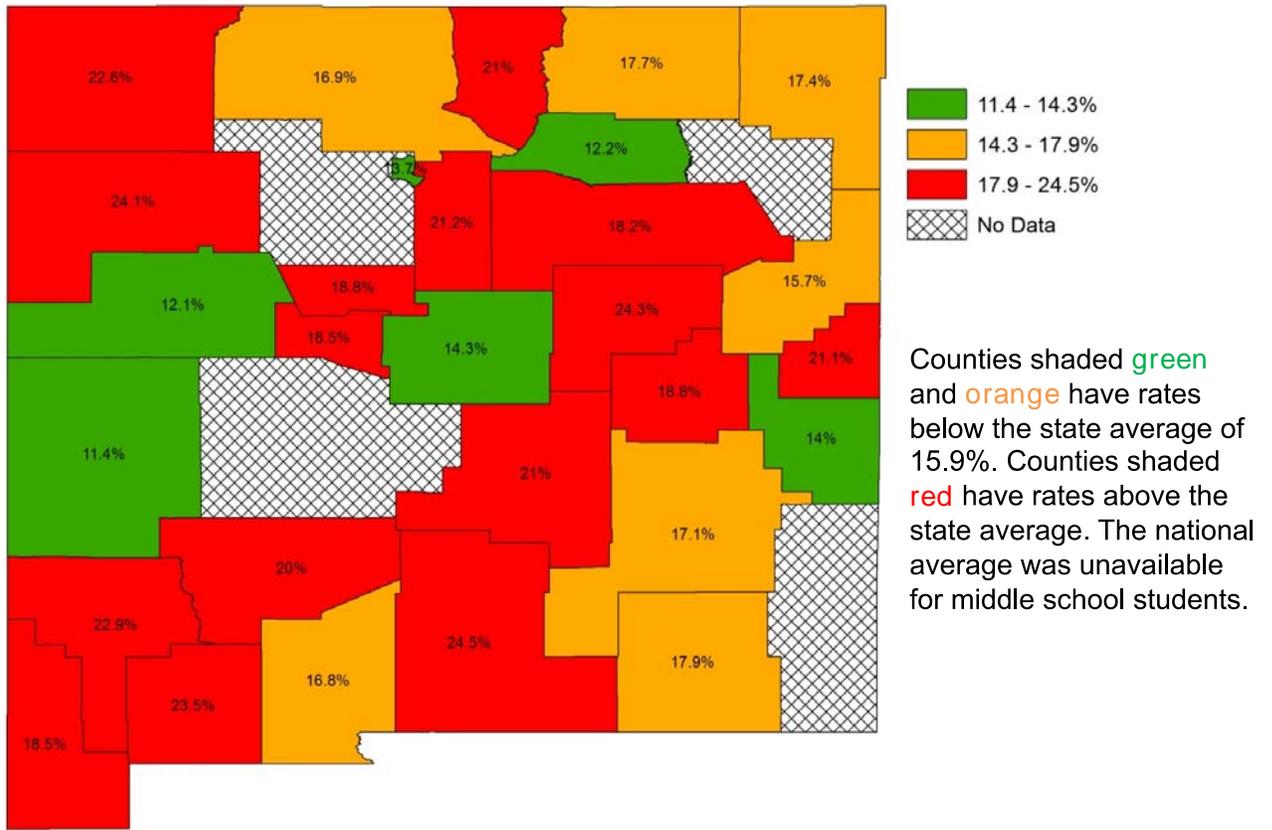
Source: New Mexico Public Education Department, 2009-2010 School Year. A student is identified as a Habitual Truant when the student has accumulated 10 or more days of unexcused absences.

Percentage of High School Students Who Were Bullied on School Property, By County



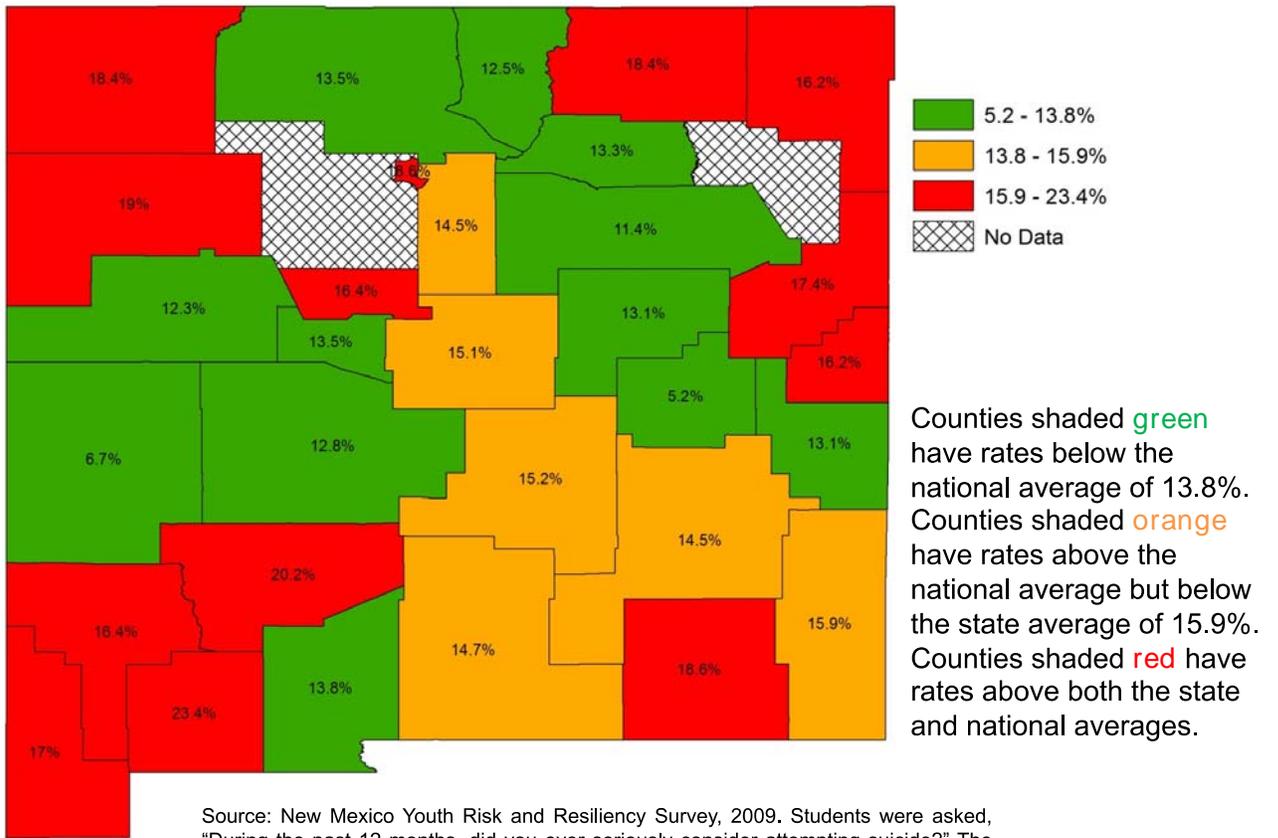
Source: New Mexico Youth Risk and Resiliency Survey, 2009. Students were asked, "During the past 12 months, have you ever been bullied on school property?" The percentage reported here reflects respondents who answered "Yes." According to the survey, "bullying is when one or more students tease, threaten, spread rumors about, hit, shove, or hurt another student over and over again. It is not bullying when two students of about the same strength or power argue or fight or tease each other in a friendly way."

Percentage of Middle School Students Who Seriously Considered Attempting Suicide



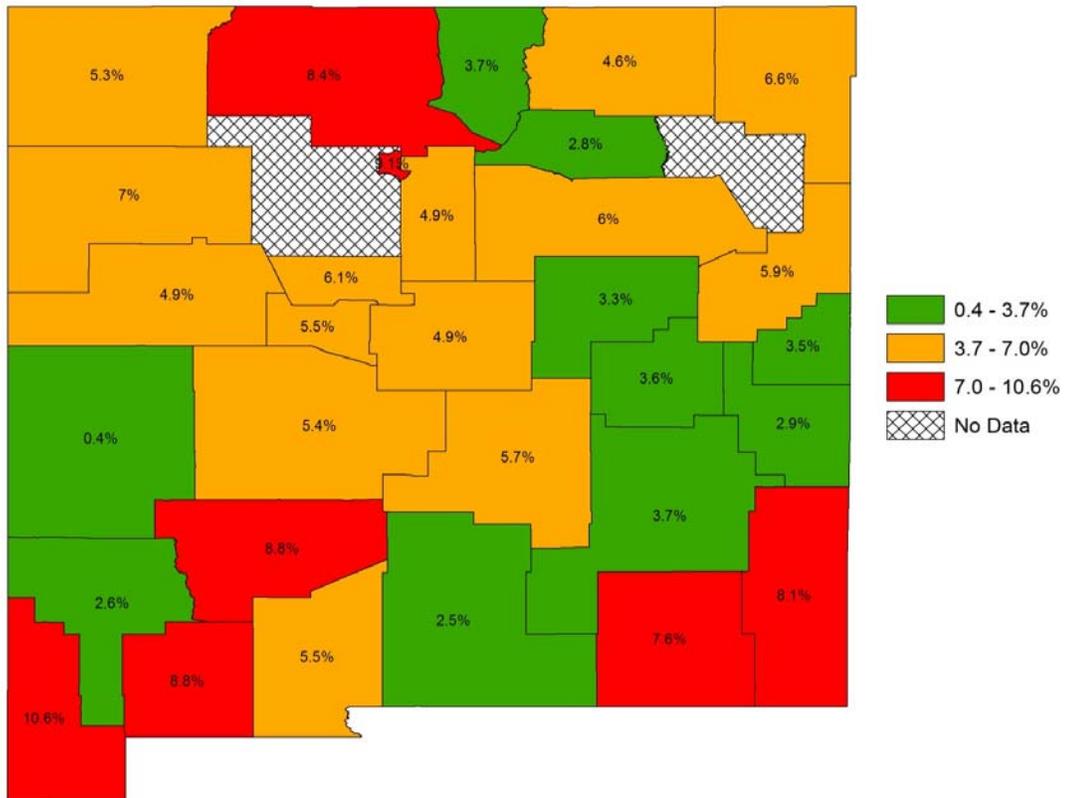
Source: New Mexico Youth Risk and Resiliency Survey, 2009. Students were asked, "During the past 12 months, did you ever seriously consider attempting suicide?" The percentage reported here reflects respondents who answered "Yes."

Percentage of High School Students Who Seriously Considered Attempting Suicide



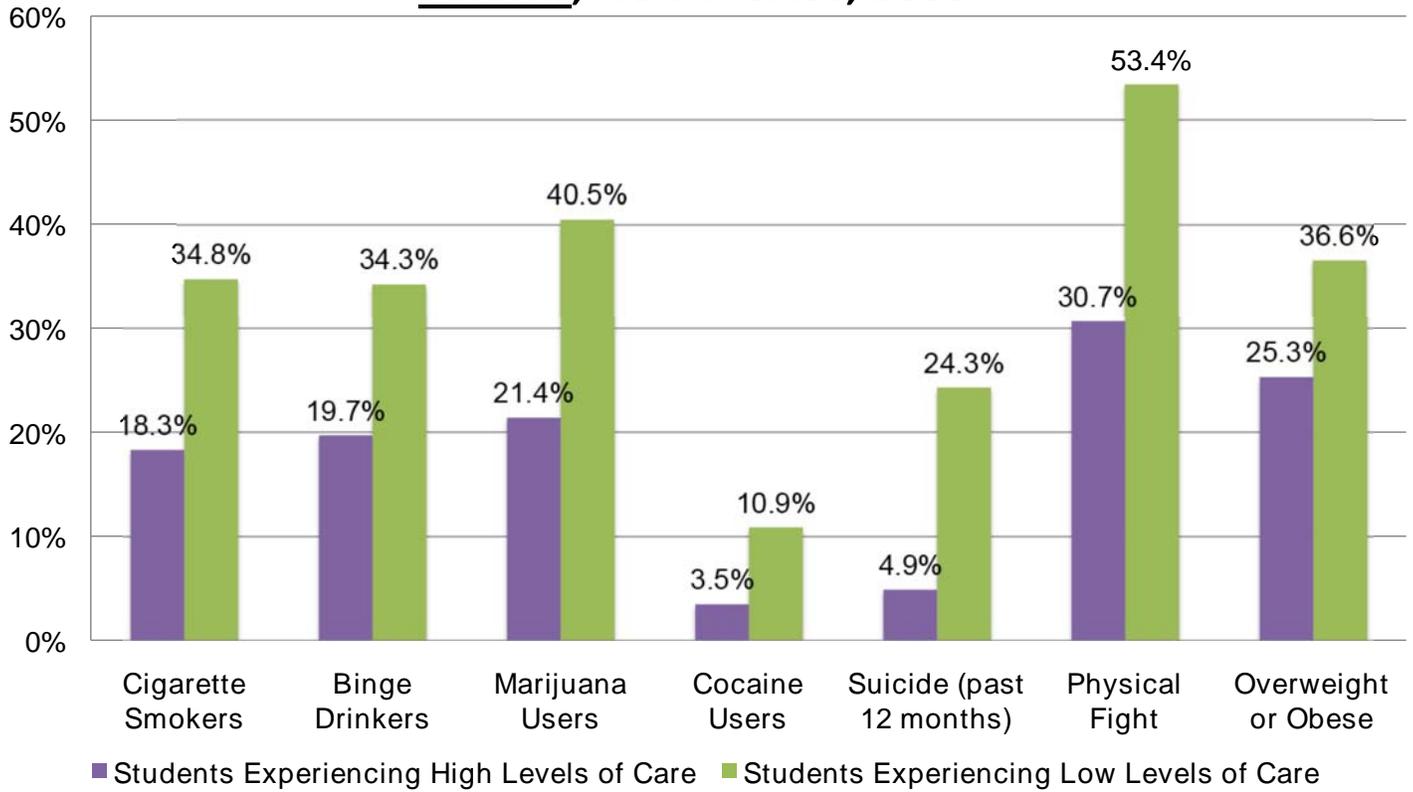
Source: New Mexico Youth Risk and Resiliency Survey, 2009. Students were asked, "During the past 12 months, did you ever seriously consider attempting suicide?" The percentage reported here reflects respondents who answered "Yes." The national rate of 13.8% is drawn from the Youth Risk and Behavior Surveillance System survey, Centers for Disease Control and Prevention, 2009.

Percentage of High School Students Who Report Not Having a Parent or Adult at Home Who is Interested in Their School Work



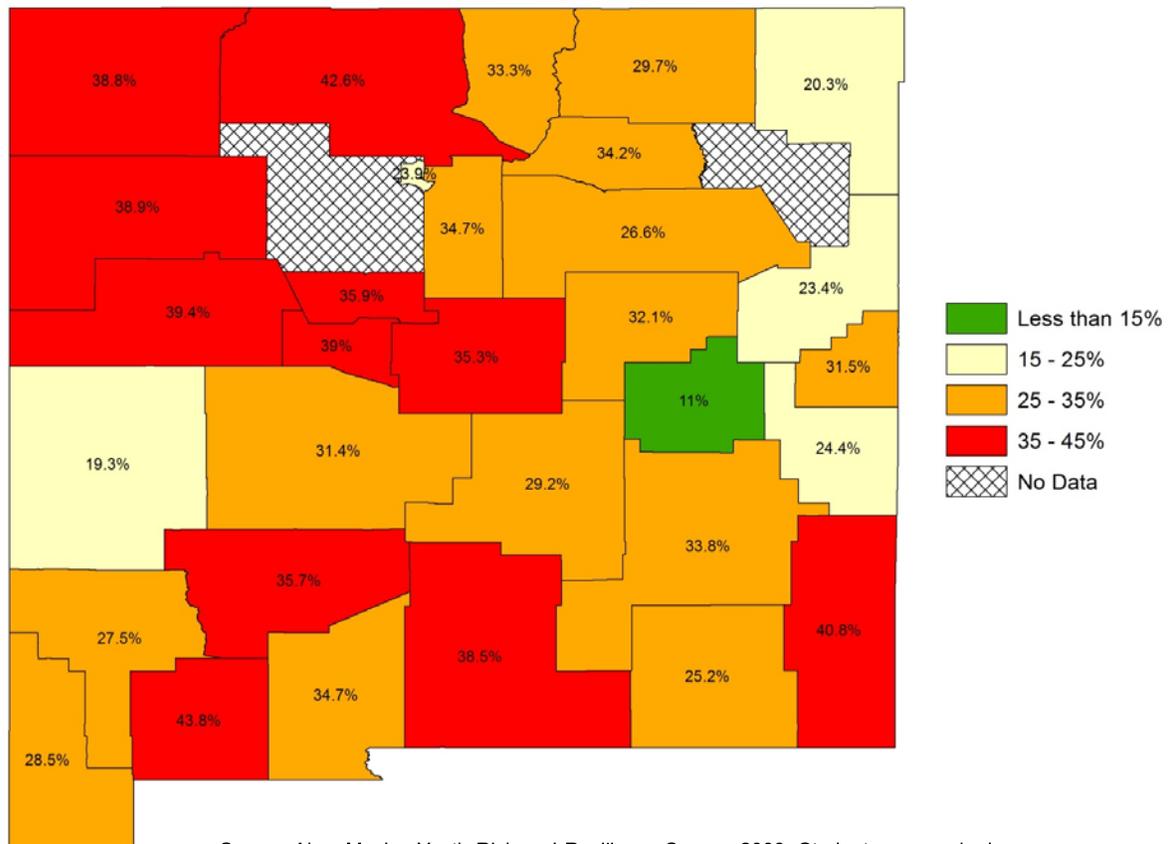
Source: New Mexico Youth Risk and Resiliency Survey, 2009. Students were asked to comment on the statement, "In my home, there is a parent or some other adult who is interested in my school work." The percentage reported here reflects respondents who answered, "Not true at all."

Key Outcomes of High School Students Experiencing High & Low Levels of Caring and Supportive Relationships With Parents, New Mexico, 2009



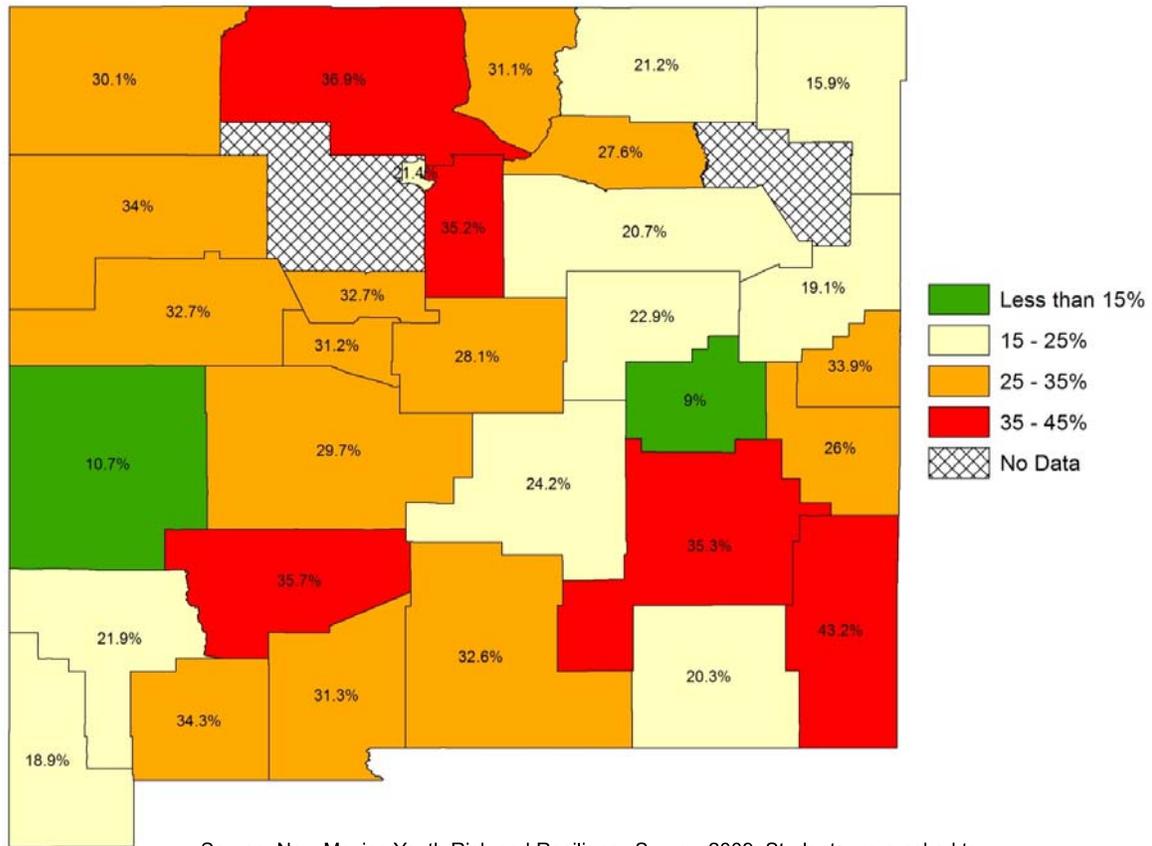
Source: New Mexico Epidemiology, 2010. (<http://nmhealth.org/erd/HealthData/pdf/ER%20YRRS%20092410.pdf>). National data taken from High School Youth Risk Behavior Survey, 2009, Centers for Disease Control & Prevention.

Percentage of High School Students Not Involved in Group Activities Outside of School or Home, By County



Source: New Mexico Youth Risk and Resiliency Survey, 2009. Students were asked, "Outside of my home and school, I am a part of clubs, sports teams, church/temple, or other group activities." The percentage reported here reflects respondents who answered "Not true at all."

Percentage of High School Students Not Involved in School Sports, Clubs, or Activities, By County



Source: New Mexico Youth Risk and Resiliency Survey, 2009. Students were asked to respond to the statement, "At school I am involved in sports, clubs, or other extracurricular activities (such as band, cheerleading, or student council)." The percentage reported here reflects respondents who answered "Not true at all."