

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

A Presentation To:

New Mexico Legislative Education Study Committee

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Presentation Overview

- Executive Summary
- Why is Dual Credit Important?
- Dual Credit Student Performance
- Dual Credit Cost Effectiveness
- Dual Credit: The Challenges Ahead
- Next Steps and Further Research

Executive Summary

1. New Mexico's state-wide dual credit programs appear to be an effective large scale policy initiative aimed at improving student success.
2. Dual credit programs appear to be associated with increased levels of student performance in both high school and higher education.
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 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.

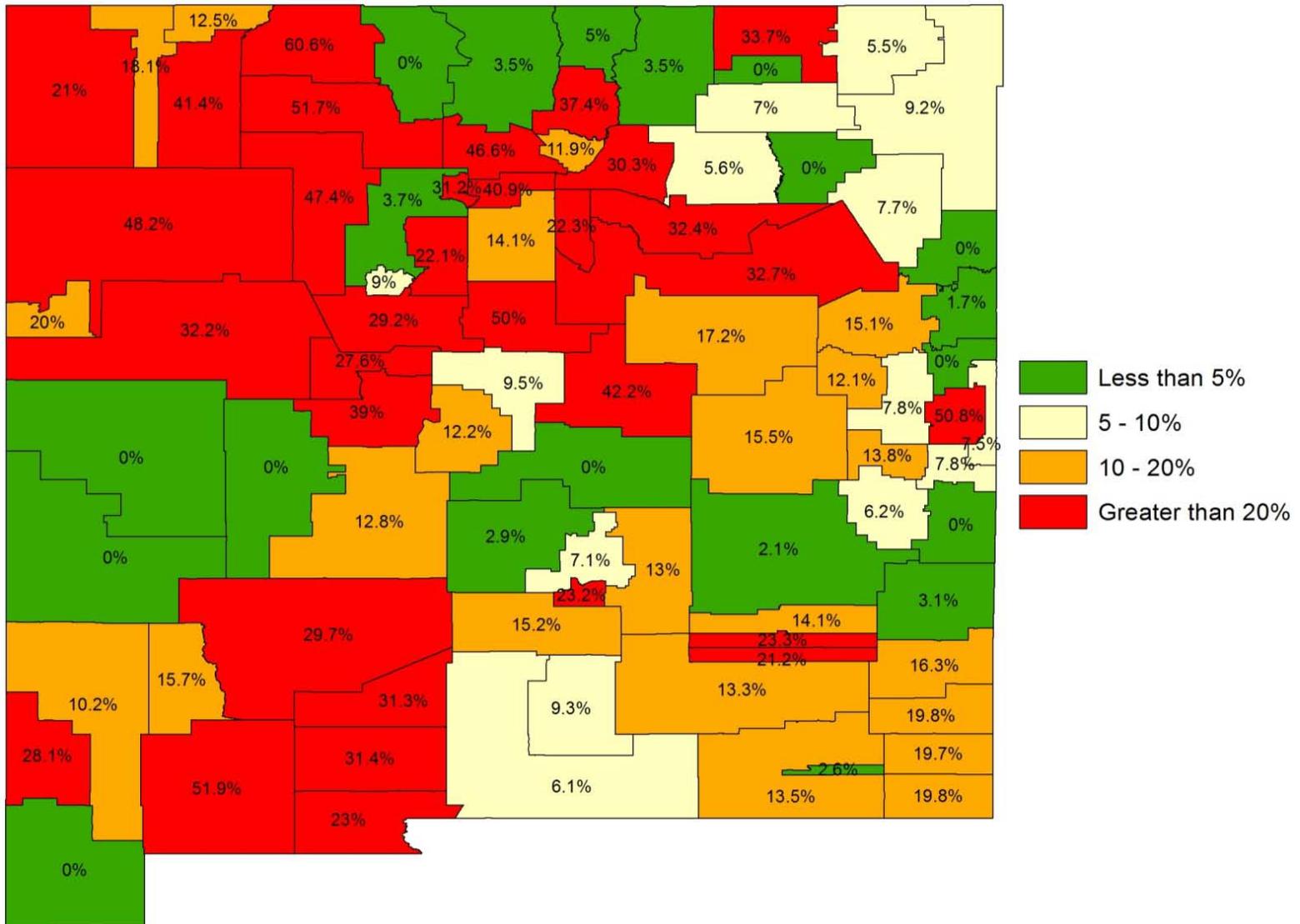
A Note on the Data in this Presentation

- 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.

WHY IS DUAL CREDIT IMPORTANT?

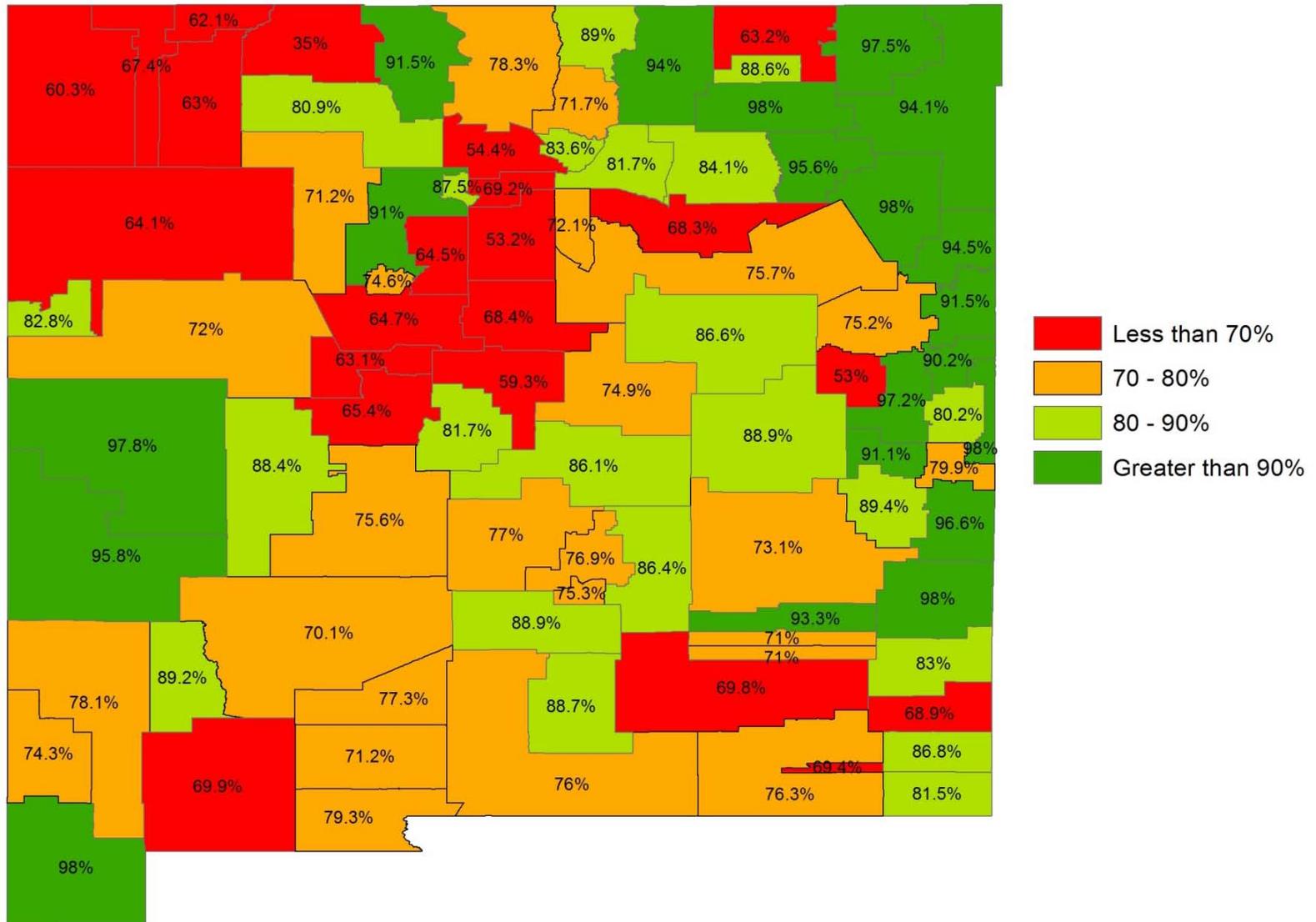
Dual Credit is important because we believe that it can make schools more flexible and responsive to student needs, increase the rigor of the curriculum, raise student aspirations, and enhance the collaboration between high schools and colleges. We believe these critical changes must occur if New Mexico 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.

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



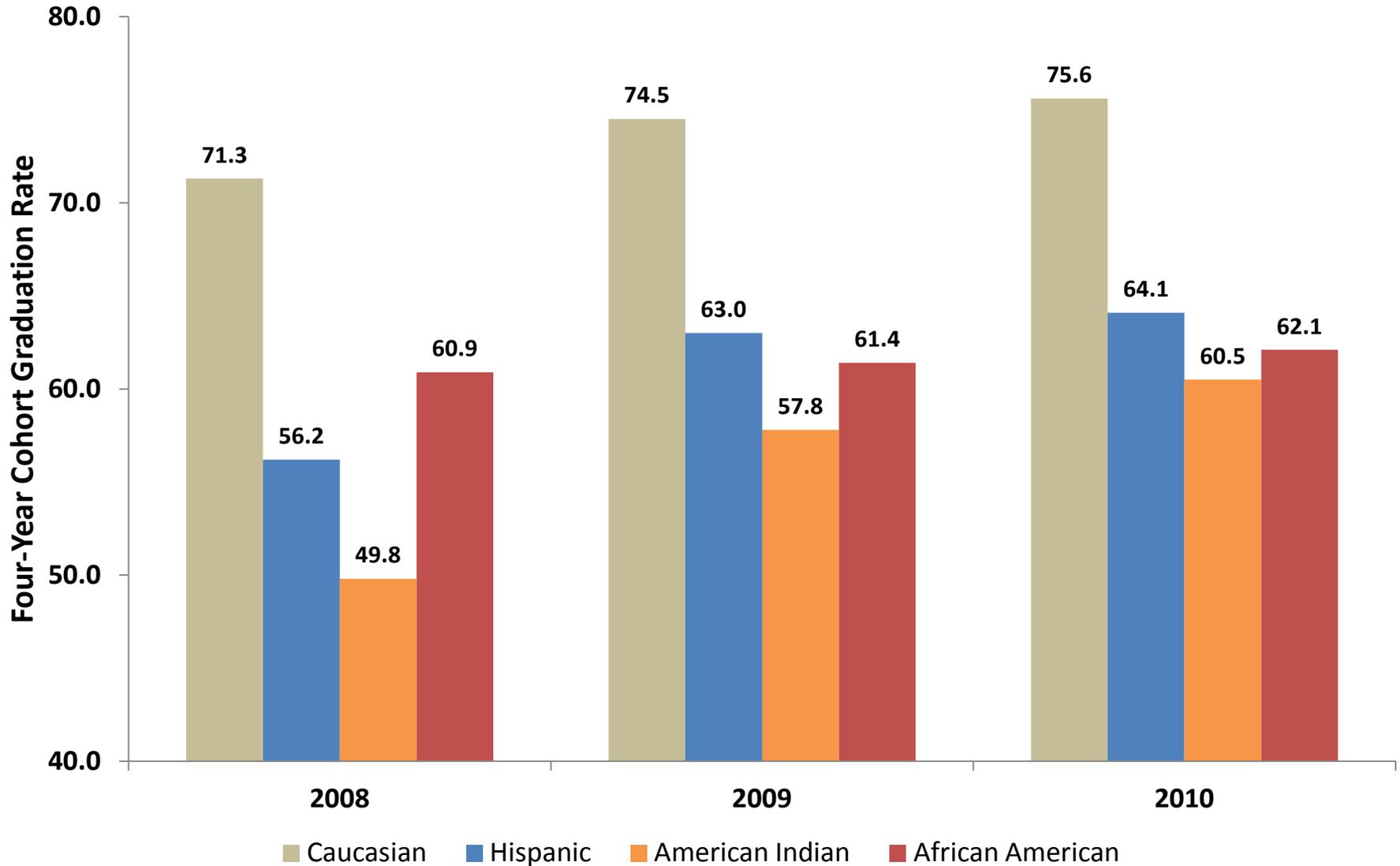
Source: New Mexico Public Education Department, 2009-2010 School Year. A student is identified as a Habitual Truant when the student has accumulated 10 or more unexcused absences.

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



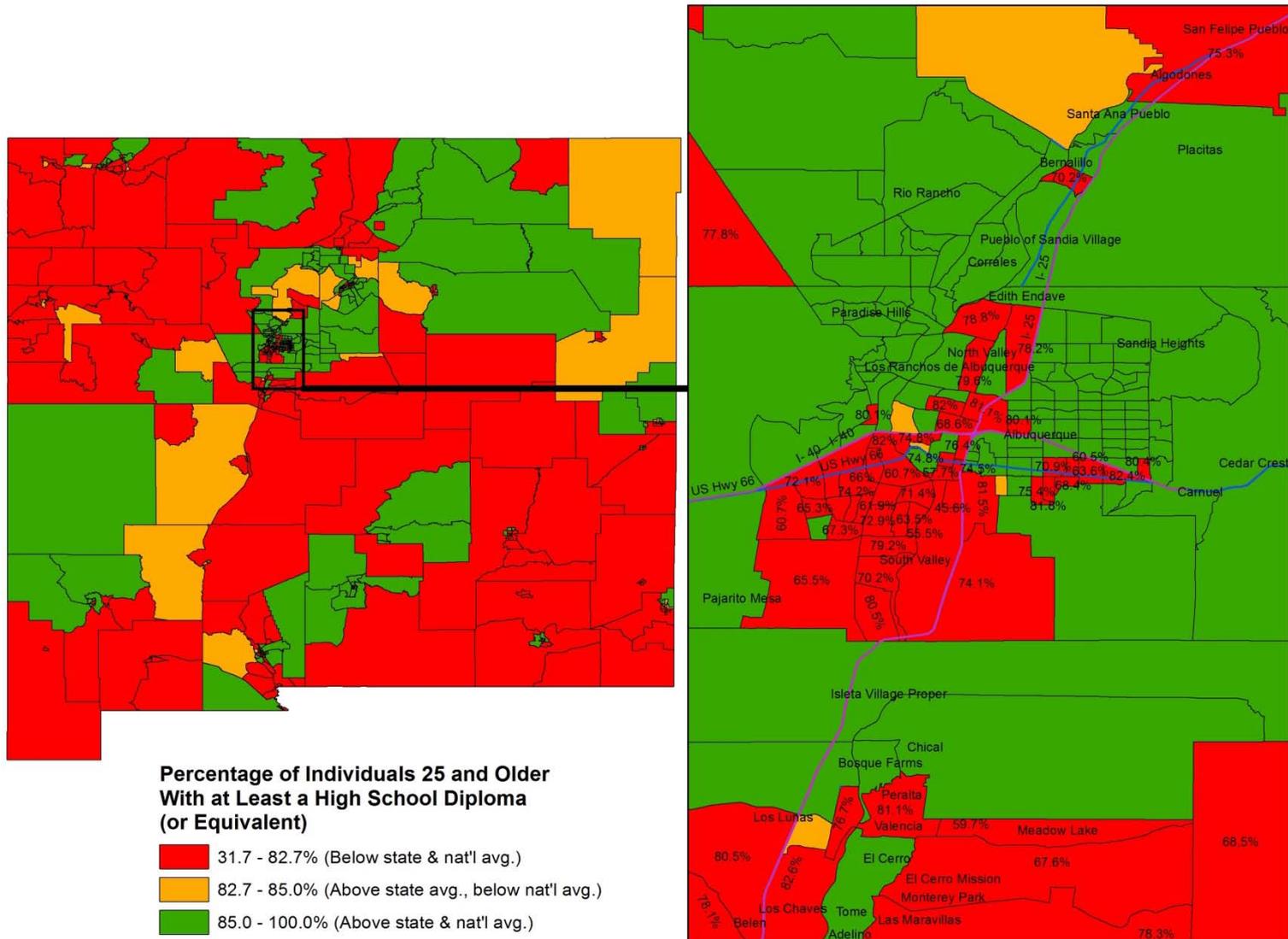
Source: NM Public Education Department, 4-Year Cohort High School Graduation Rate, Class of 2010.

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



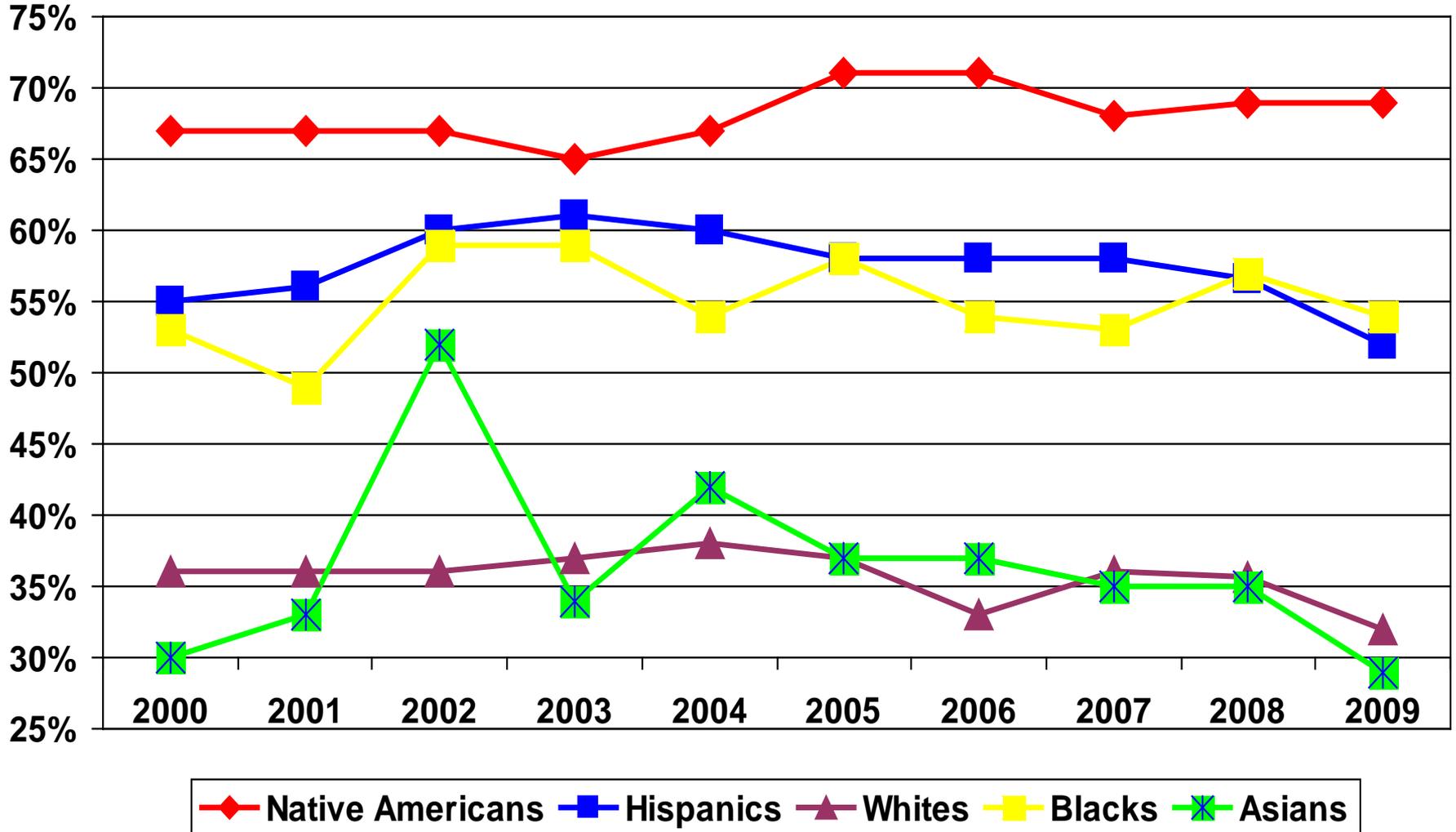
Source: NM Public Education Department, 4-Year Cohort High School Graduation Rate, Classes of 2008-2010.

Percentage of Individuals Over 25 Years of Age With At Least a High School Diploma (or Equivalent), By Census Tract



Source: U.S. Census, American Community Survey, 2006-2010 Five-Year Estimates. Rates are reported by census tract. State and national averages taken from the 2010 American Community Survey (state avg. = 82.7%; national avg. = 85.0%).

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

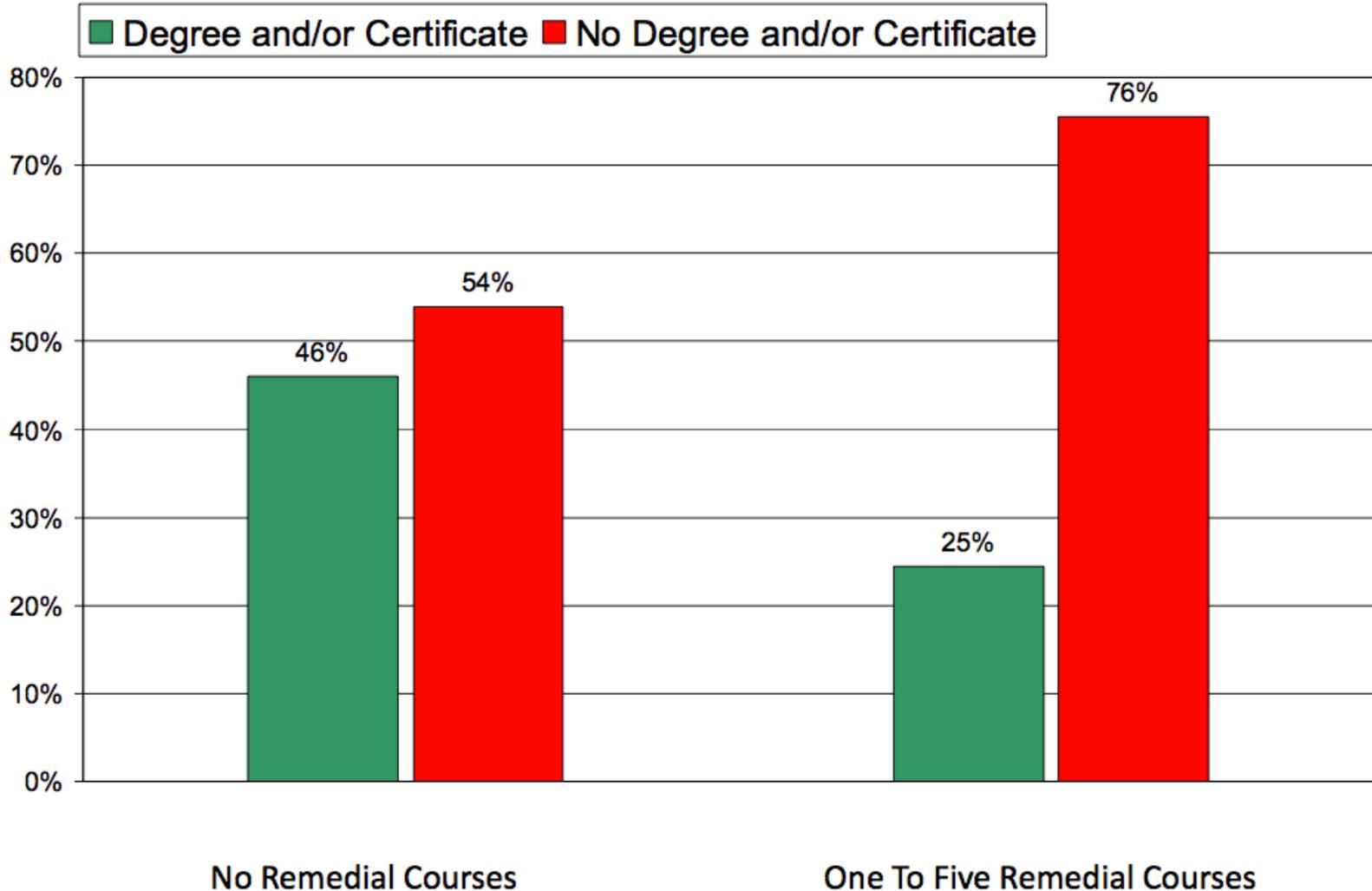
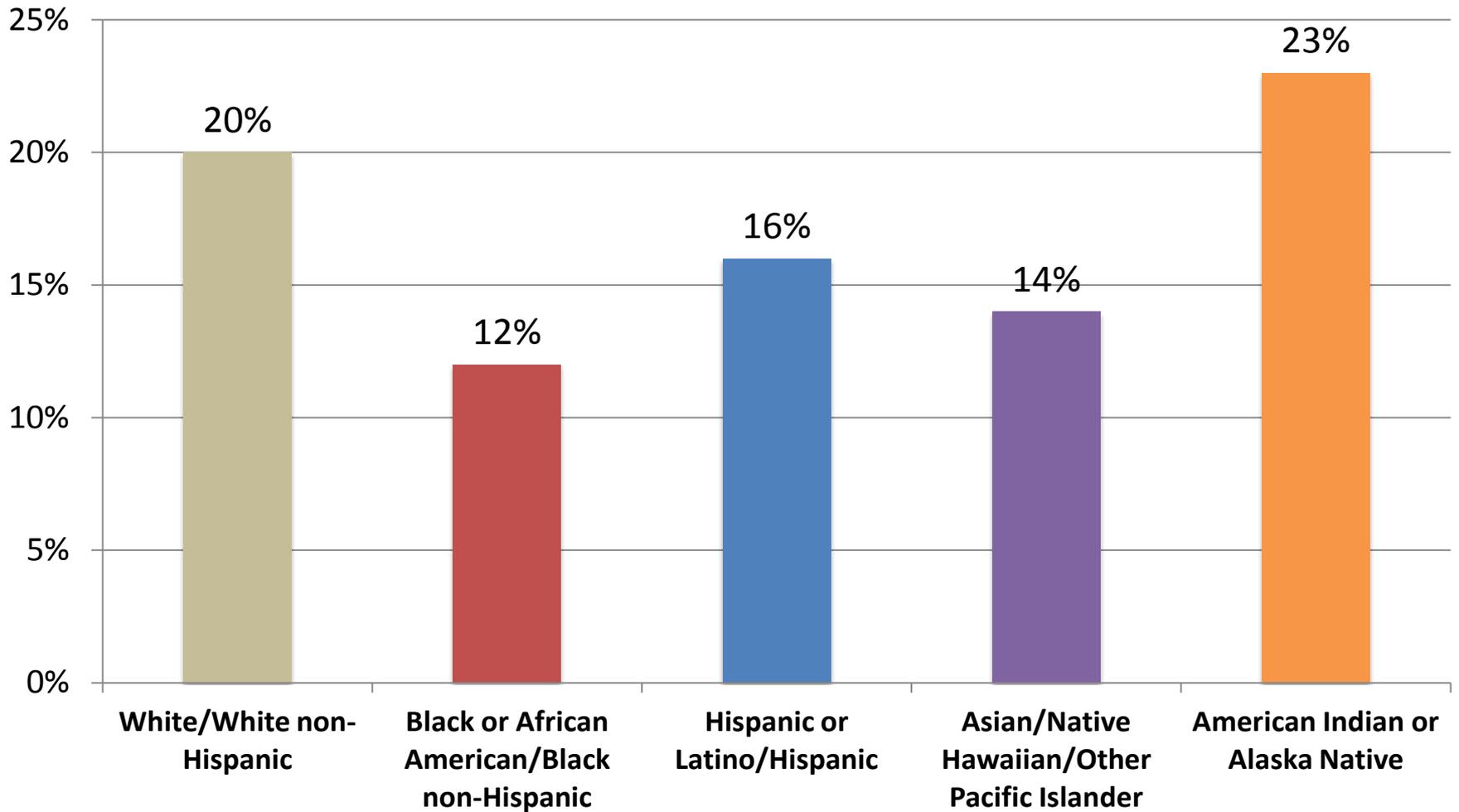
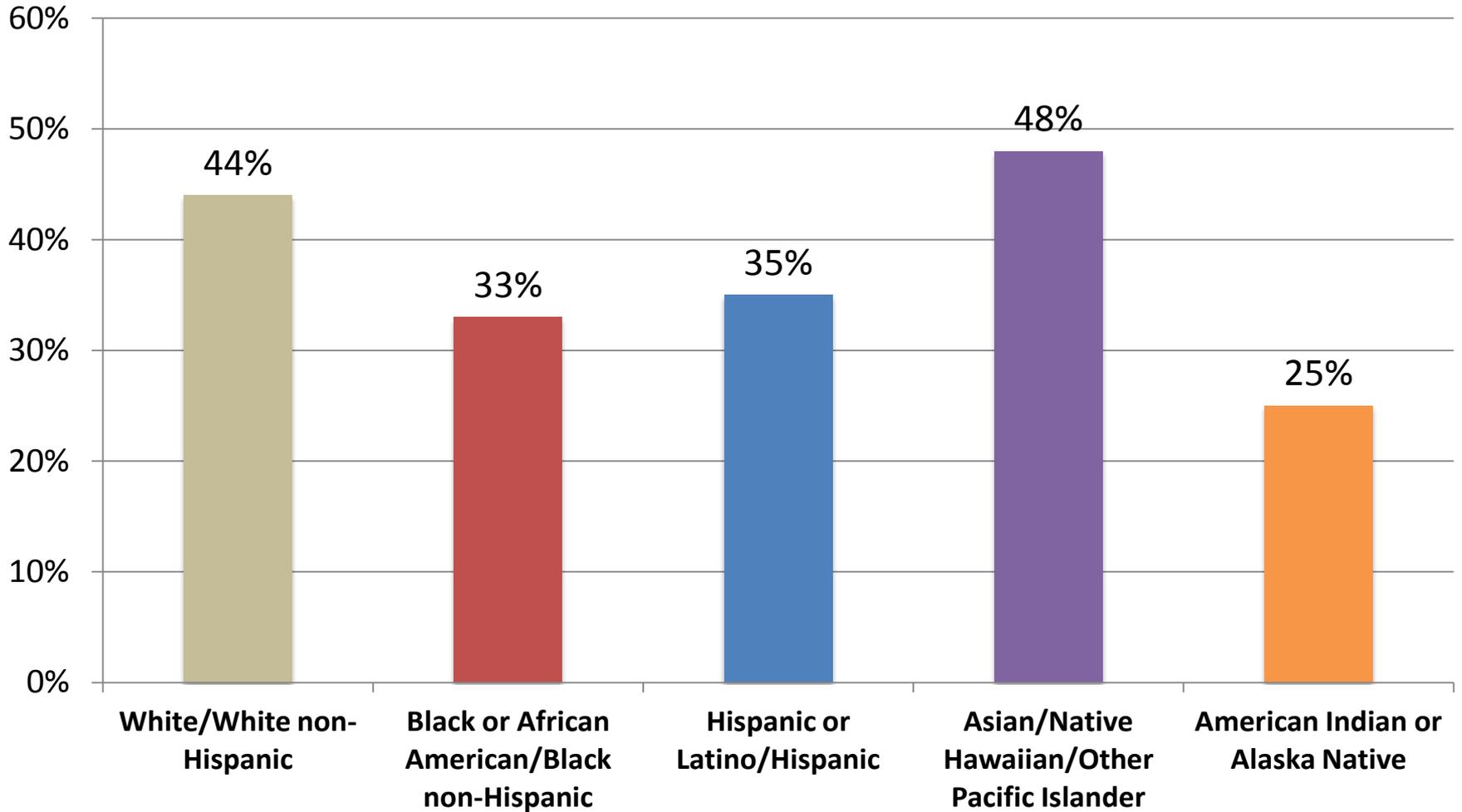


Chart shows percentage of students who graduate within six years by the number of remedial courses taken. Sample includes 8,315 students beginning college in 2003. Source: "Ready For College? A Report on New Mexico's High School Graduates Who Take Remedial Courses In College," June 2010, New Mexico Office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

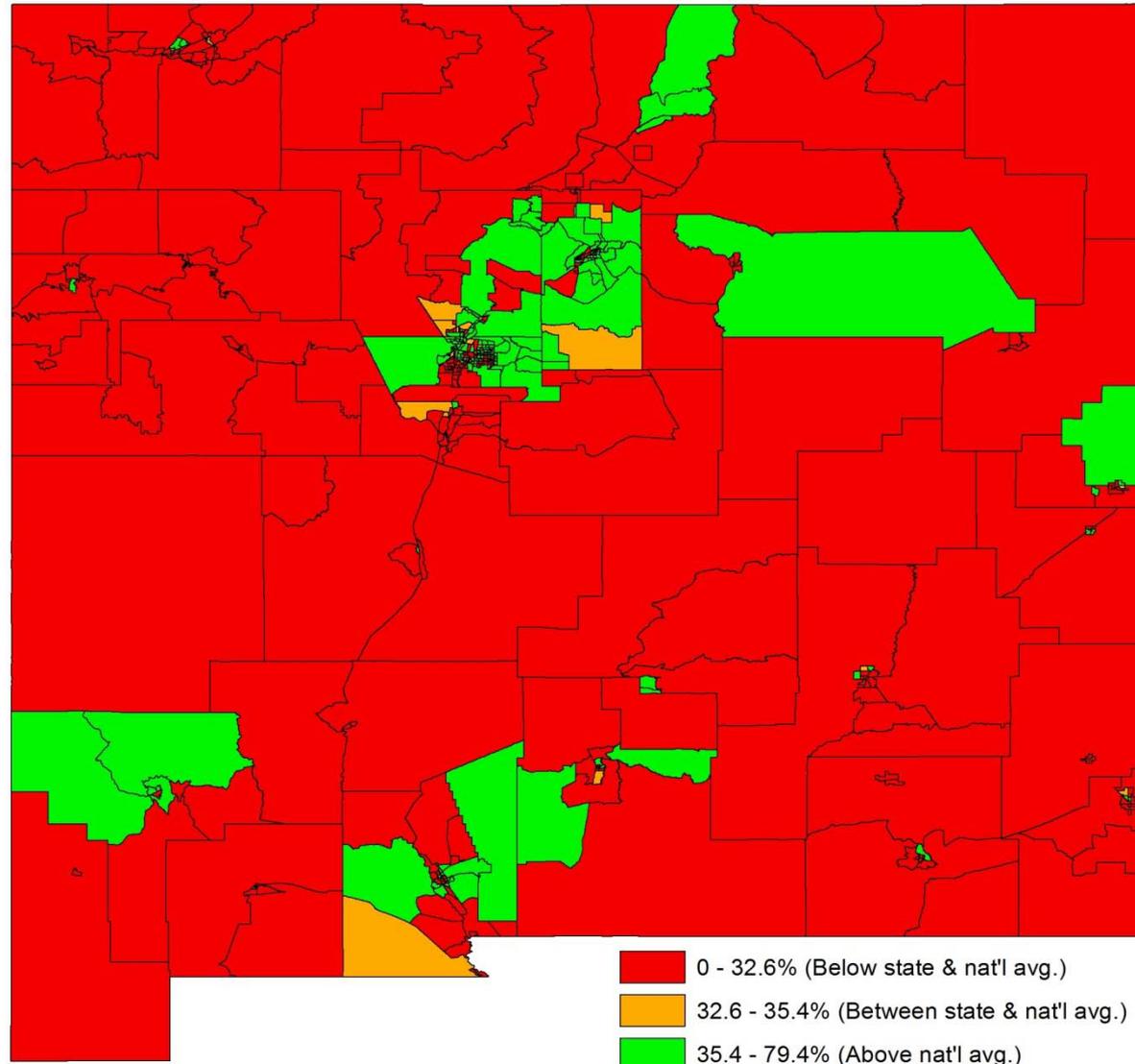
Three-Year Graduation Rates, All NM Community Colleges



Six-Year Graduation Rates, All NM Universities

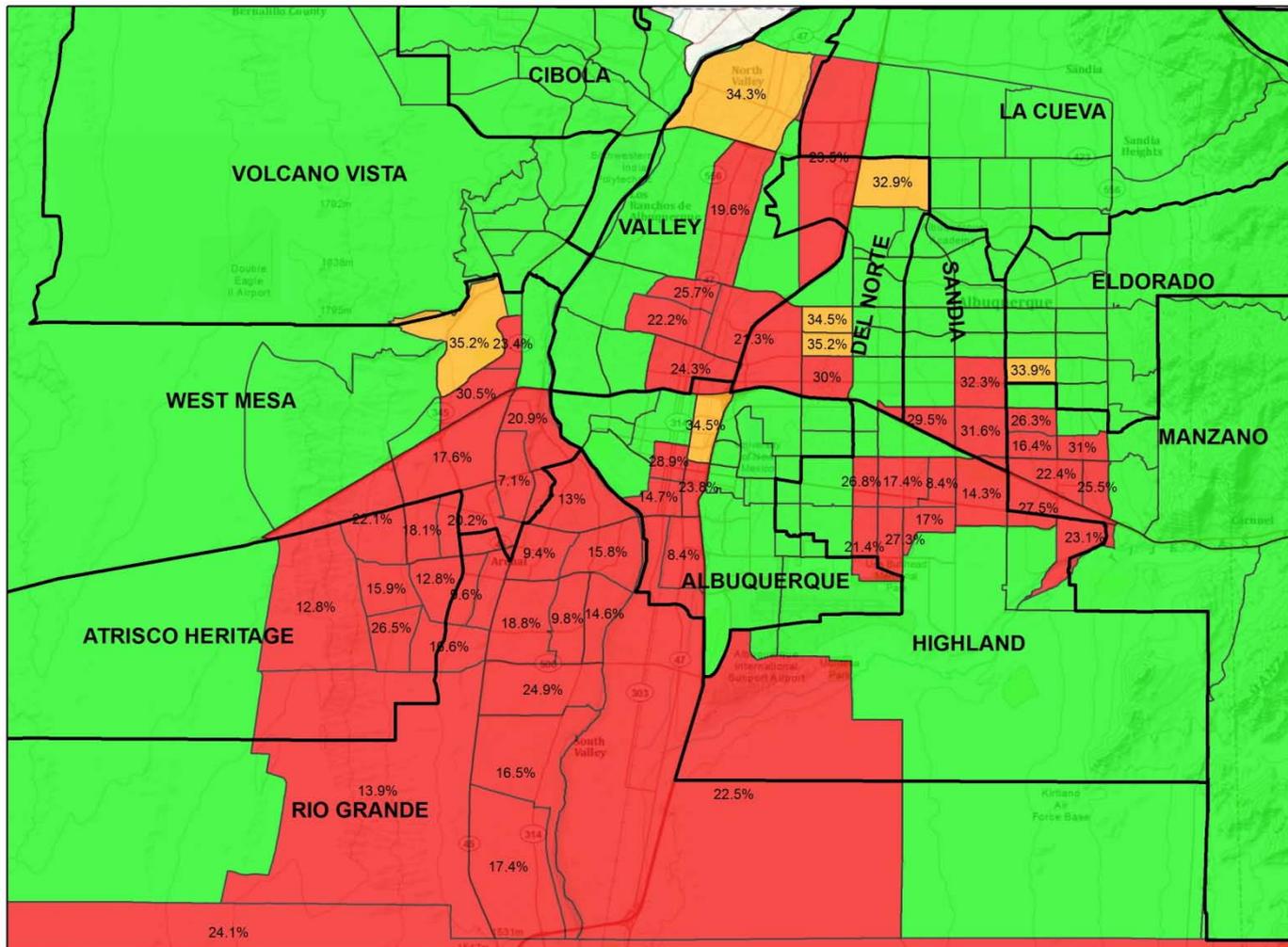


Percentage of Individuals Over 25 Years of Age With an Associates Degree or Higher, By Census Tract



Source: U.S. Census, American Community Survey, 2006-2010 Five-Year Estimates. Rates are reported by census tract. State and national averages taken from the 2010 American Community Survey (state avg. = 32.6%; national avg. = 35.4%).

Percentage of Individuals Over 25 Years of Age With an Associates Degree or Higher, By Census Tract



■ Less than 32.6% (Below state & nat'l avg.)
 ■ 32.6 - 35.4% (Between state & nat'l avg.)
 ■ Greater than 35.4% (Above nat'l avg.)

Source: U.S. Census, American Community Survey, 2006-2010 Five-Year Estimates. Rates are reported by census tract; high school boundaries are overlaid to provide perspective. State and national averages taken from the 2010 American Community Survey (state avg. = 32.6%; national avg. = 35.4%).

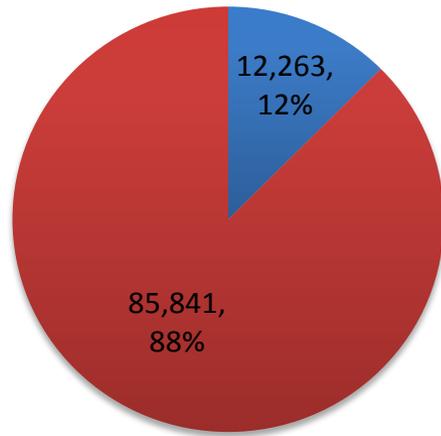
**We Believe The Essential Question
Is Whether New Mexico's
State-Wide Dual Credit Initiative
Is An Effective Strategy For
Addressing New Mexico's
Educational And Economic Challenges**

DUAL CREDIT: STUDENT PERFORMANCE

We examined the dual credit data from several public schools, community colleges, and universities using a variety of analyses. 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.

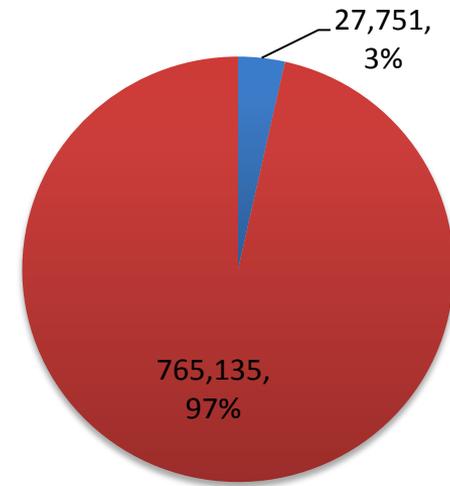
Despite Recent Growth, Dual Credit Accounts for a Small Portion of High School Students and a Very Small Portion of High School Courses

Number of Dual Credit Students



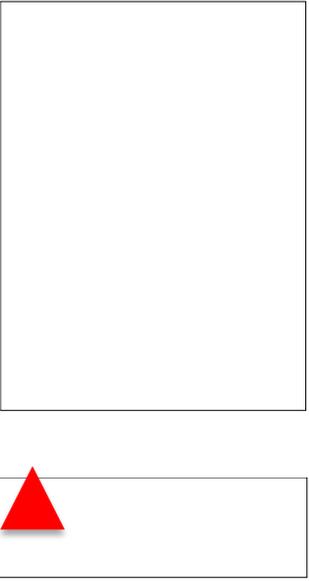
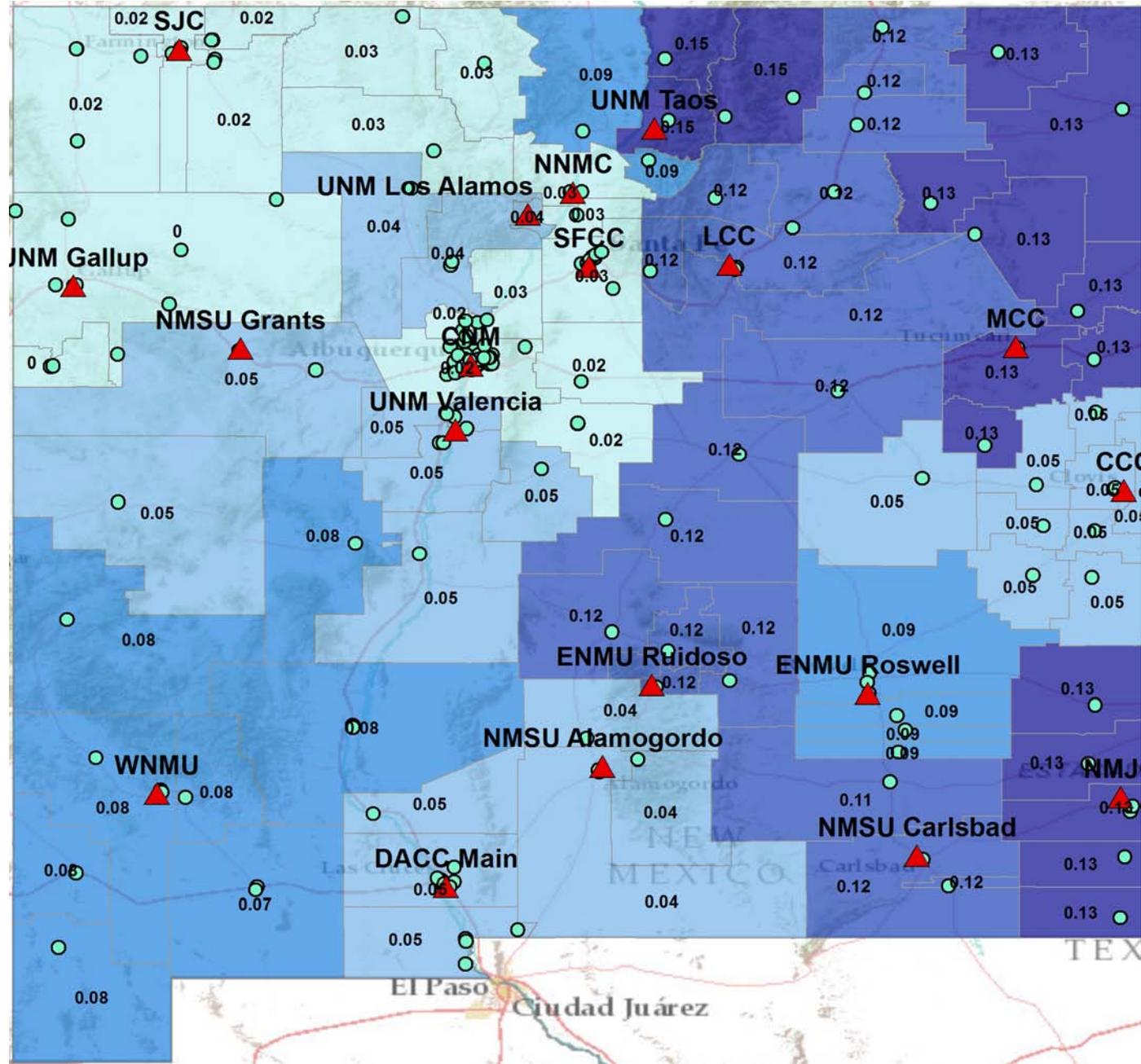
■ Enrolled in Dual Credit ■ Not Enrolled in Dual Credit

Number of Dual Credit Courses



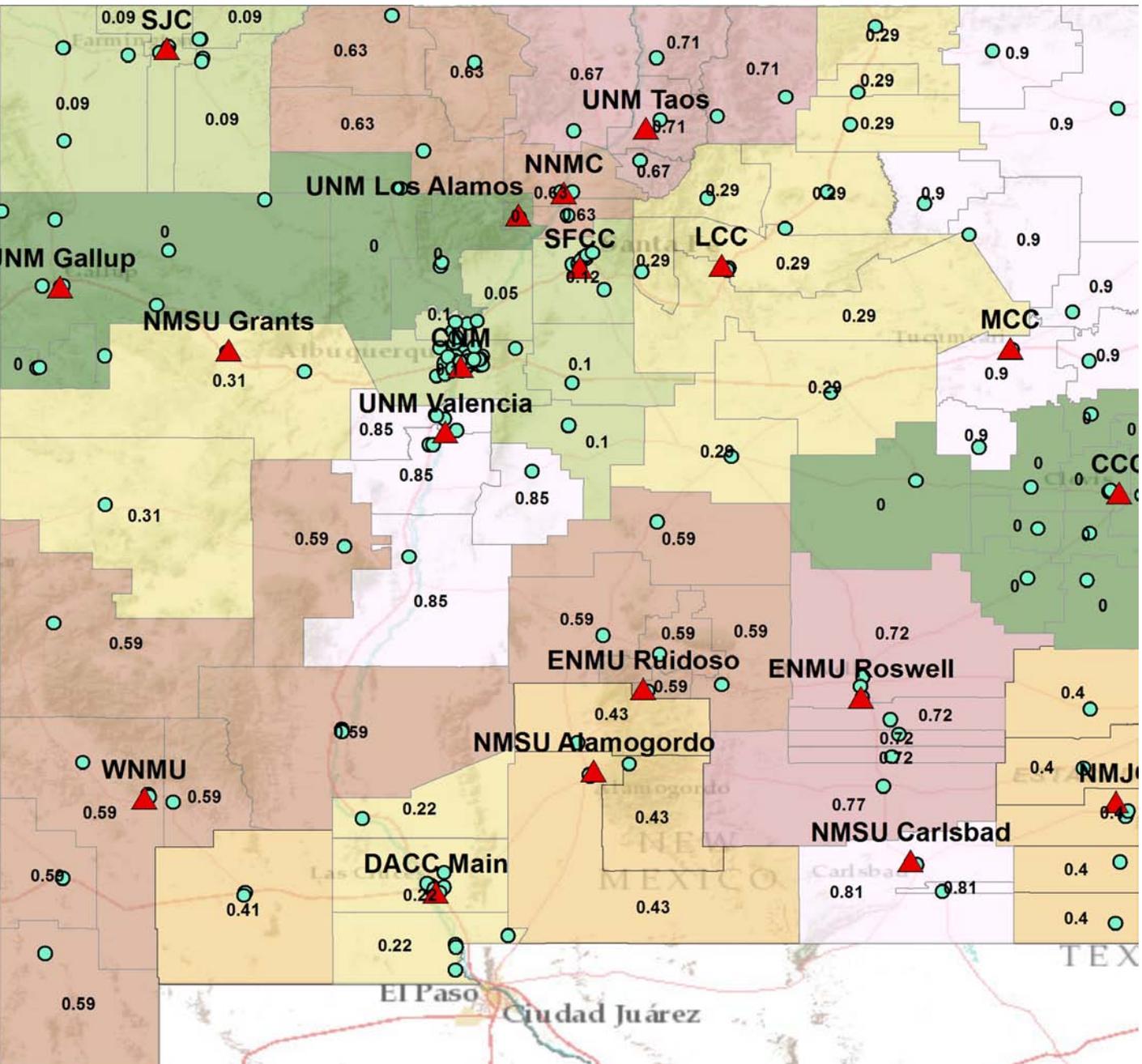
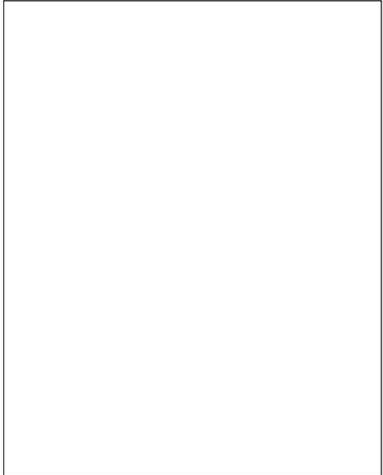
■ Dual Credit ■ Not Dual Credit

Despite Recent Growth, Dual Credit Courses Still Comprise A Small Percentage Of College Enrollments



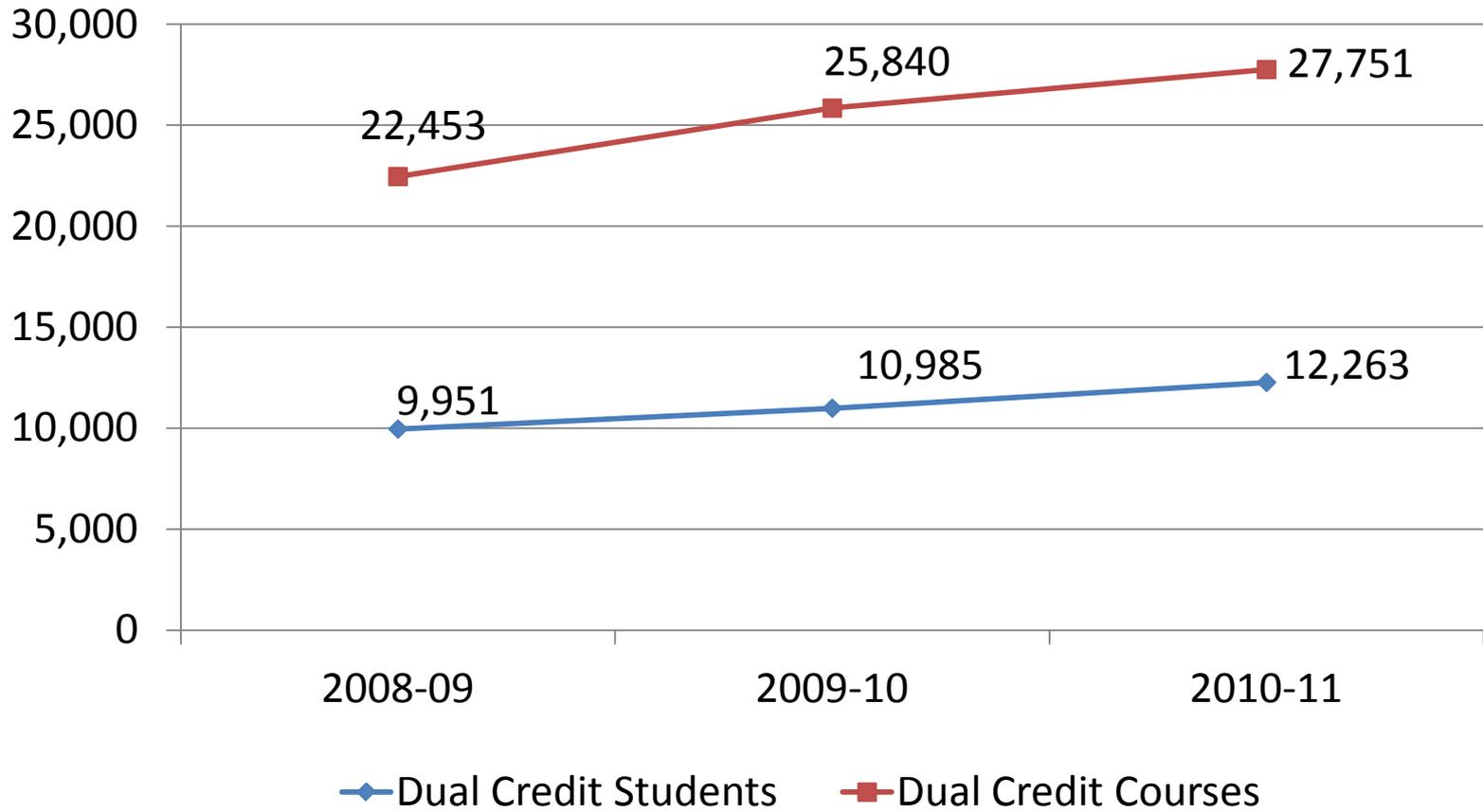
This map shows dual credit courses as a percentage of total community college enrollment, organized by community college geographic area of responsibility. Source: NM Higher Education Department

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



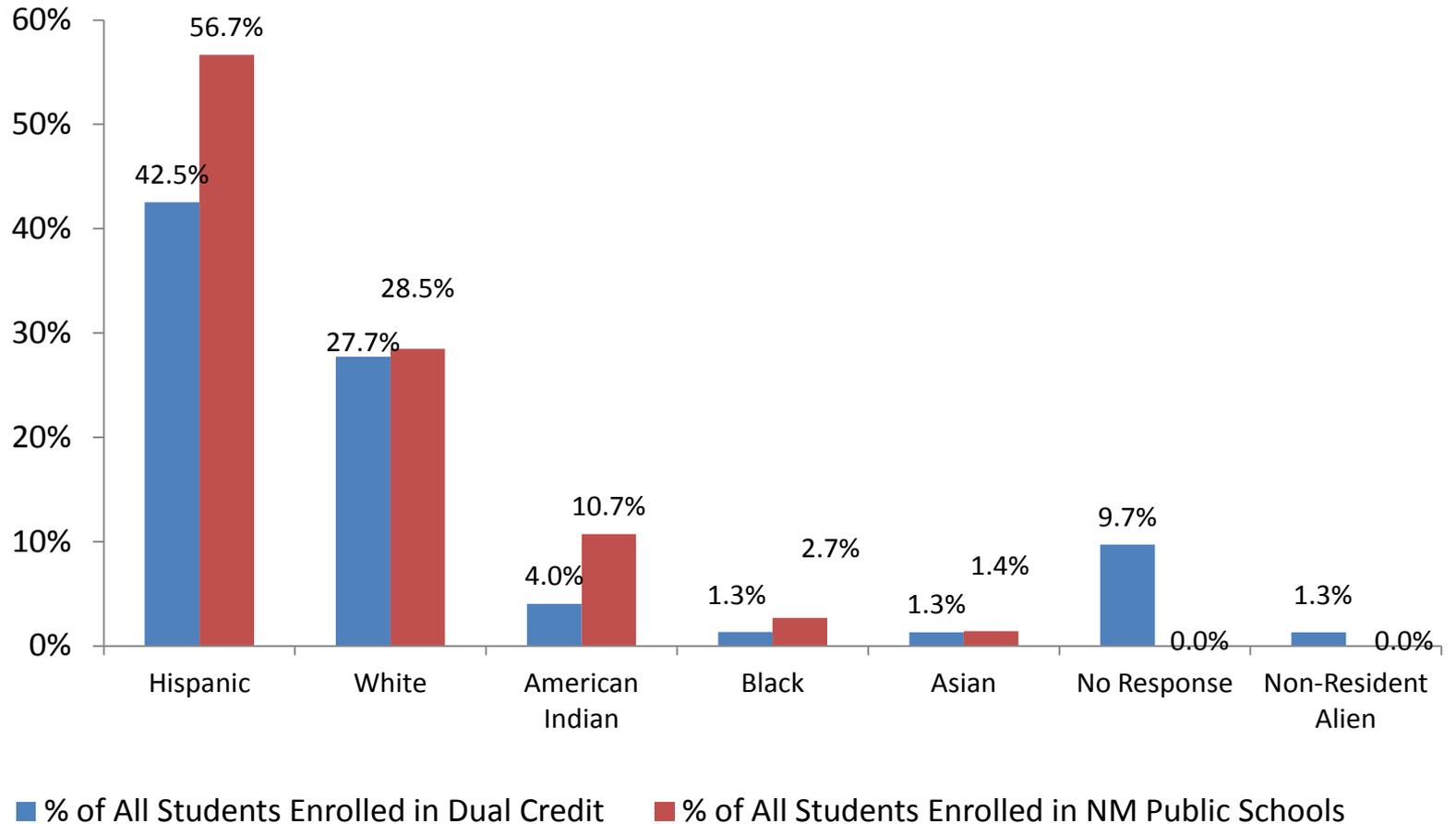
This map shows the percentage of individual colleges dual credit courses taught on high school campus, organized by community college geographic area of responsibility. Source: NM Higher Education Department

New Mexico Dual Credit Program Growth



This chart shows the total statewide enrollment growth in New Mexico's dual credit program, in terms of both number of students enrolled and number of courses taken. Source: New Mexico Higher Education Department

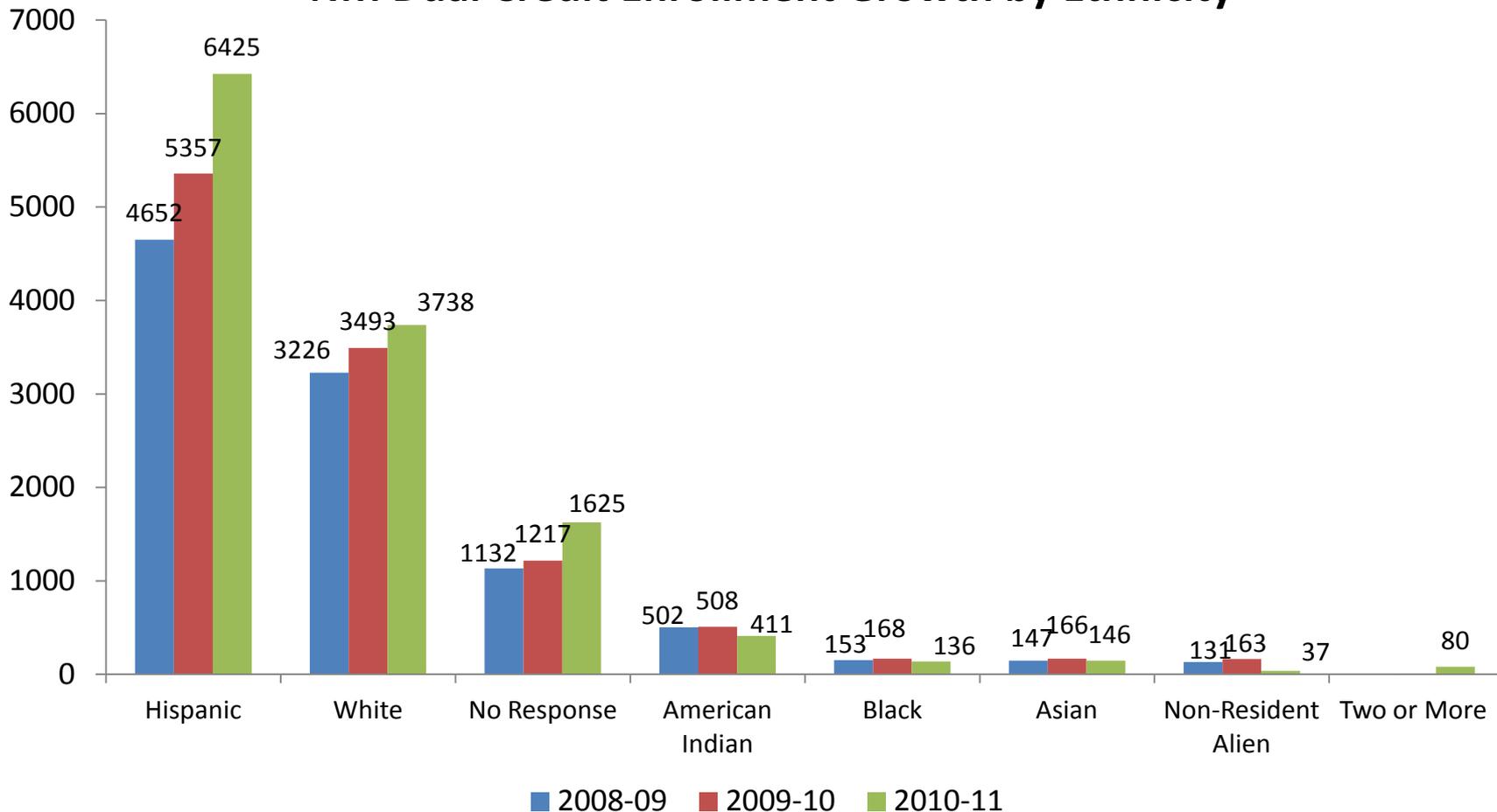
Underrepresentation of Minority Students in Dual Credit Programs, Academic Year 2009-10



This chart shows the underrepresentation of minority students in dual credit programs. Source: New Mexico Higher Education and Public Education Departments

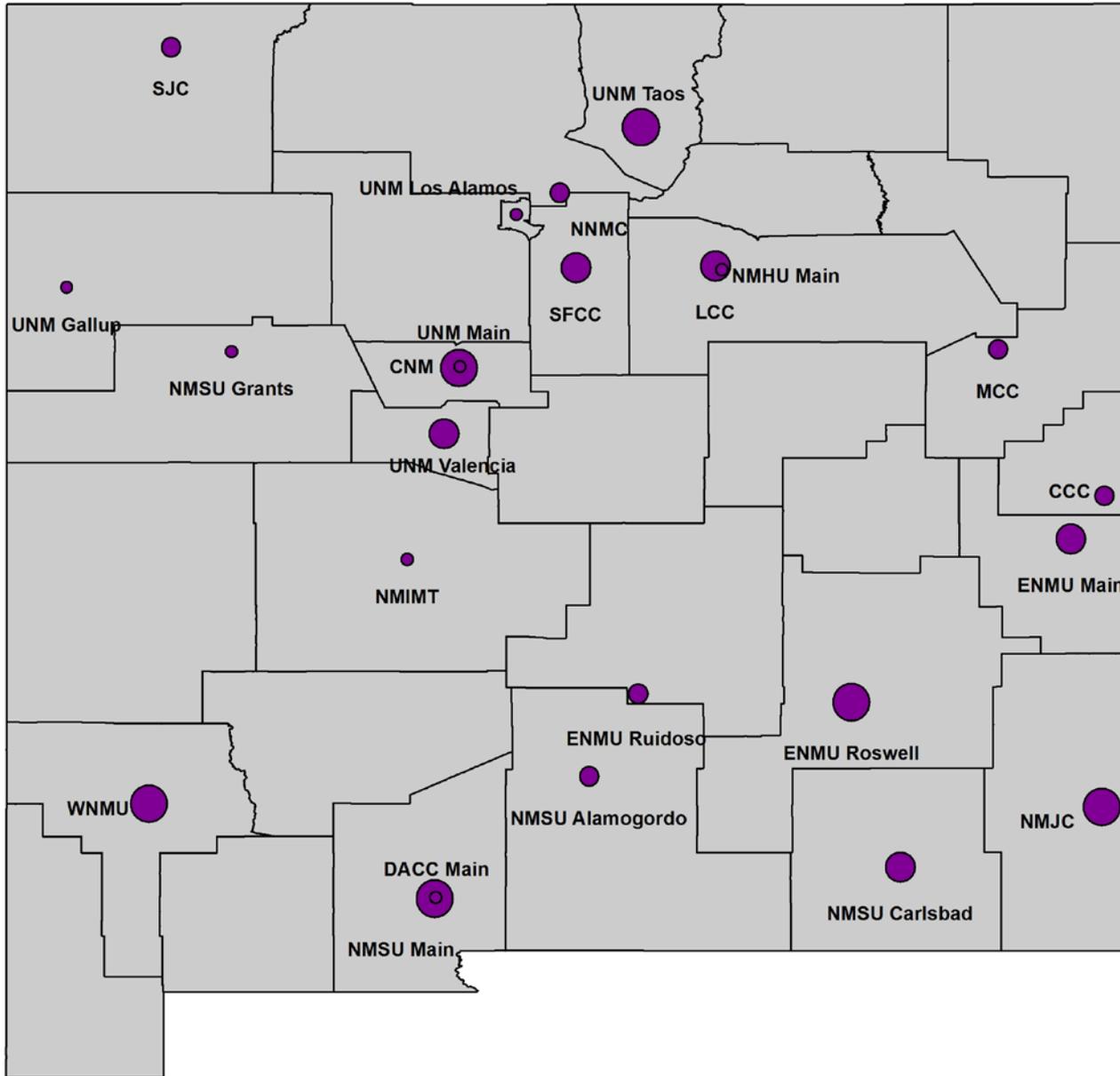
Though Still Underrepresented, Hispanic Student Dual Credit Enrollment is Growing Steadily Each Year

NM Dual Credit Enrollment Growth by Ethnicity



This chart shows New Mexico statewide enrollment by ethnicity of students taking dual credit courses each year. Source: New Mexico Higher Education Department

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



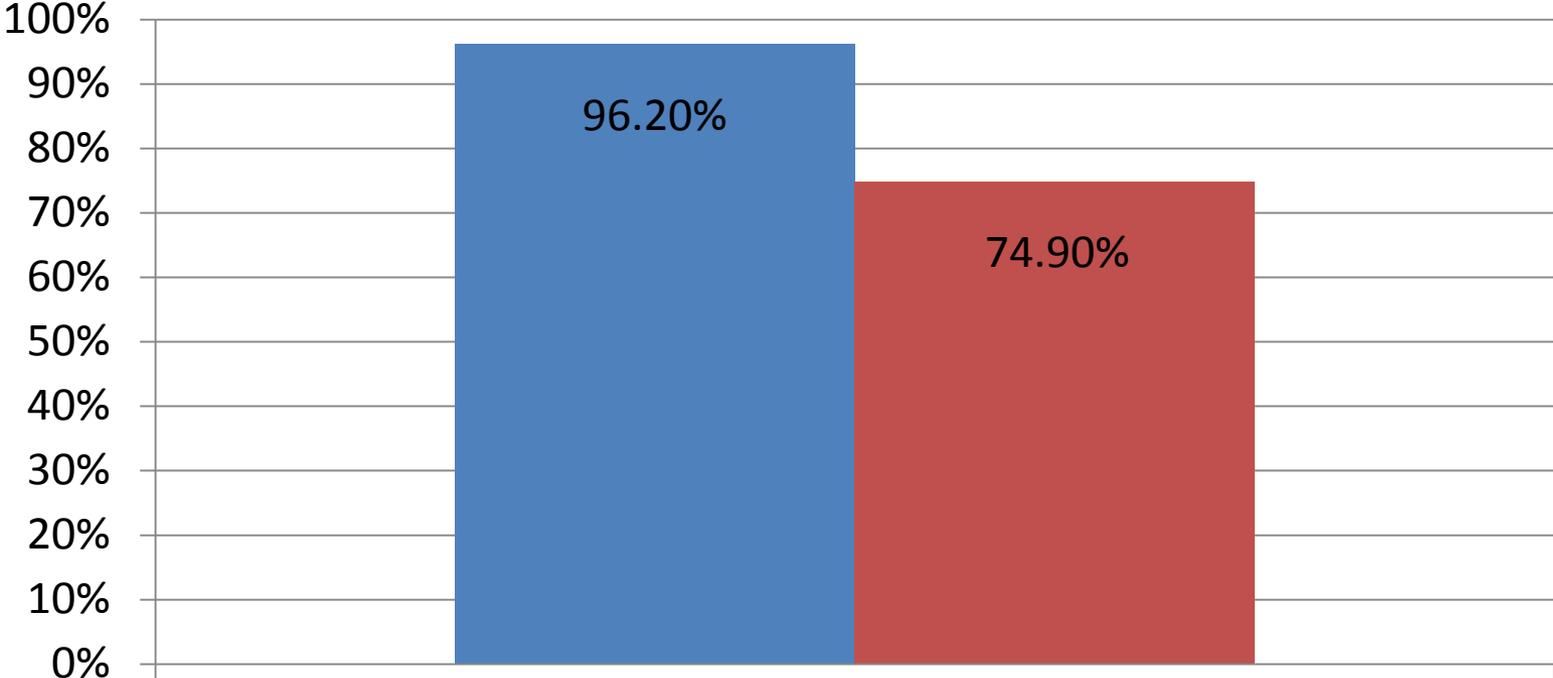
Number of Students Enrolled in Dual Credit, 2010-2011

- Less than 500
- 500 - 1000
- 1000 - 1500
- Greater than 1500

This map shows dual credit enrollments at each public college in New Mexico, with larger circles indicating higher enrollments. Source: New Mexico Higher Education Department

Dual Credit is Associated with Increased High School Completion Rates

Albuquerque Public Schools Completion Rates



% of 11th Grade Students Completing High School

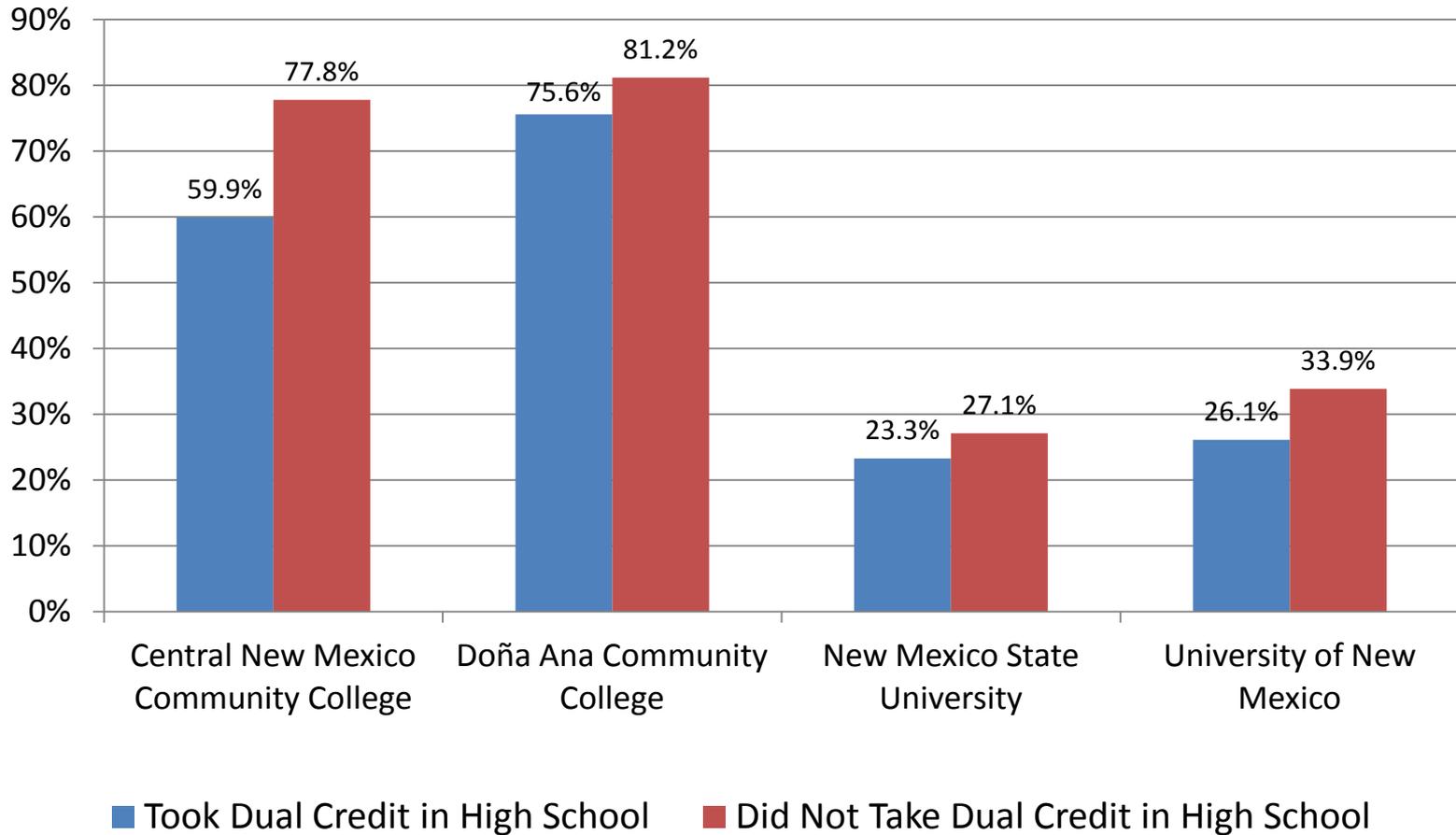
■ Took at Least One Dual Credit Course ■ Did Not Take a Dual Credit Course

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

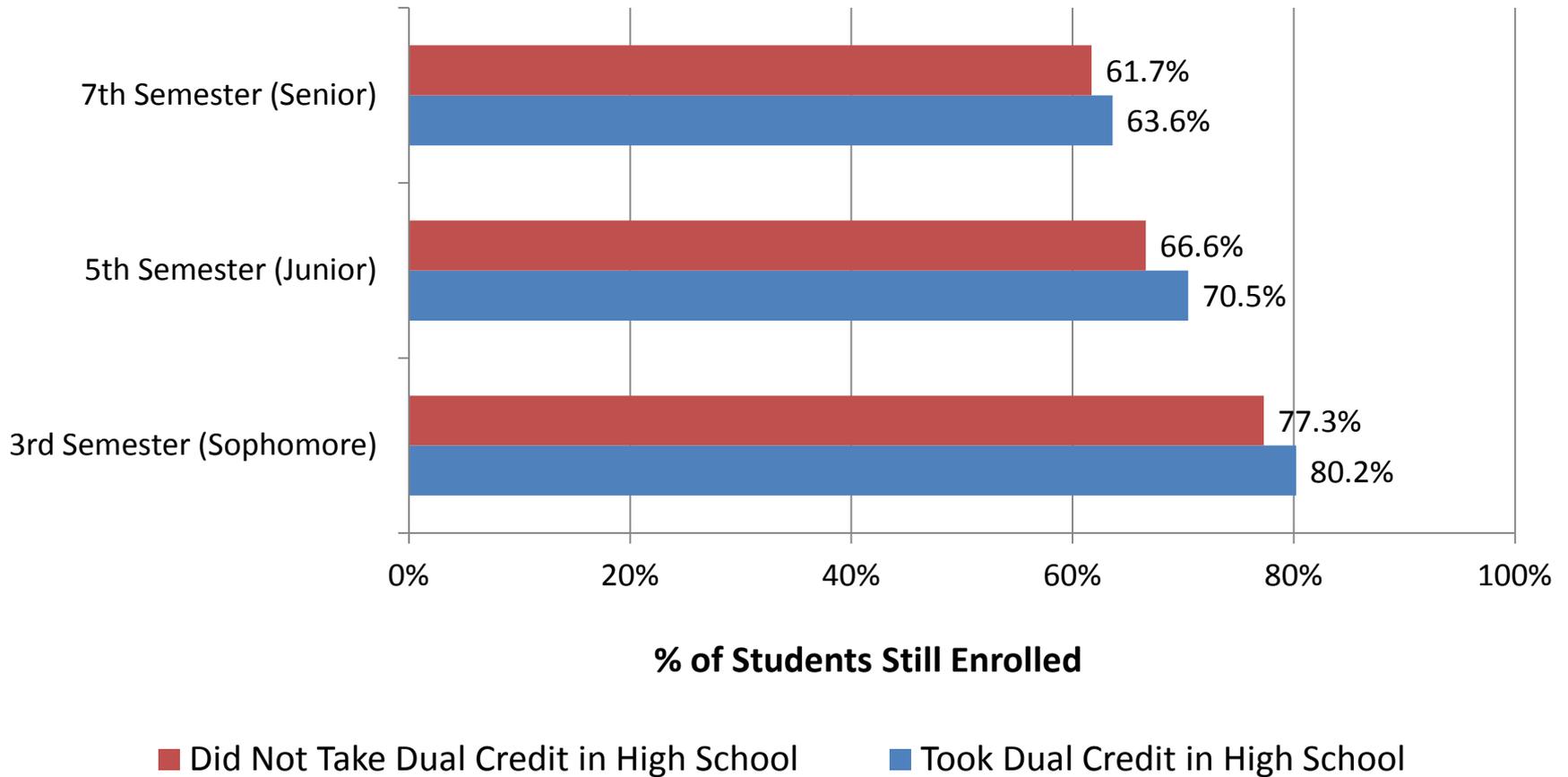
Comparison of Remediation Rates



Remediation rates are the percentage of students taking at least one remedial or developmental course from Fall 2009 to Fall 2010. Sources: CNM, DACC, NMSU, and UNM Offices of Institutional Research

Dual Credit is Associated with Increased Student Persistence

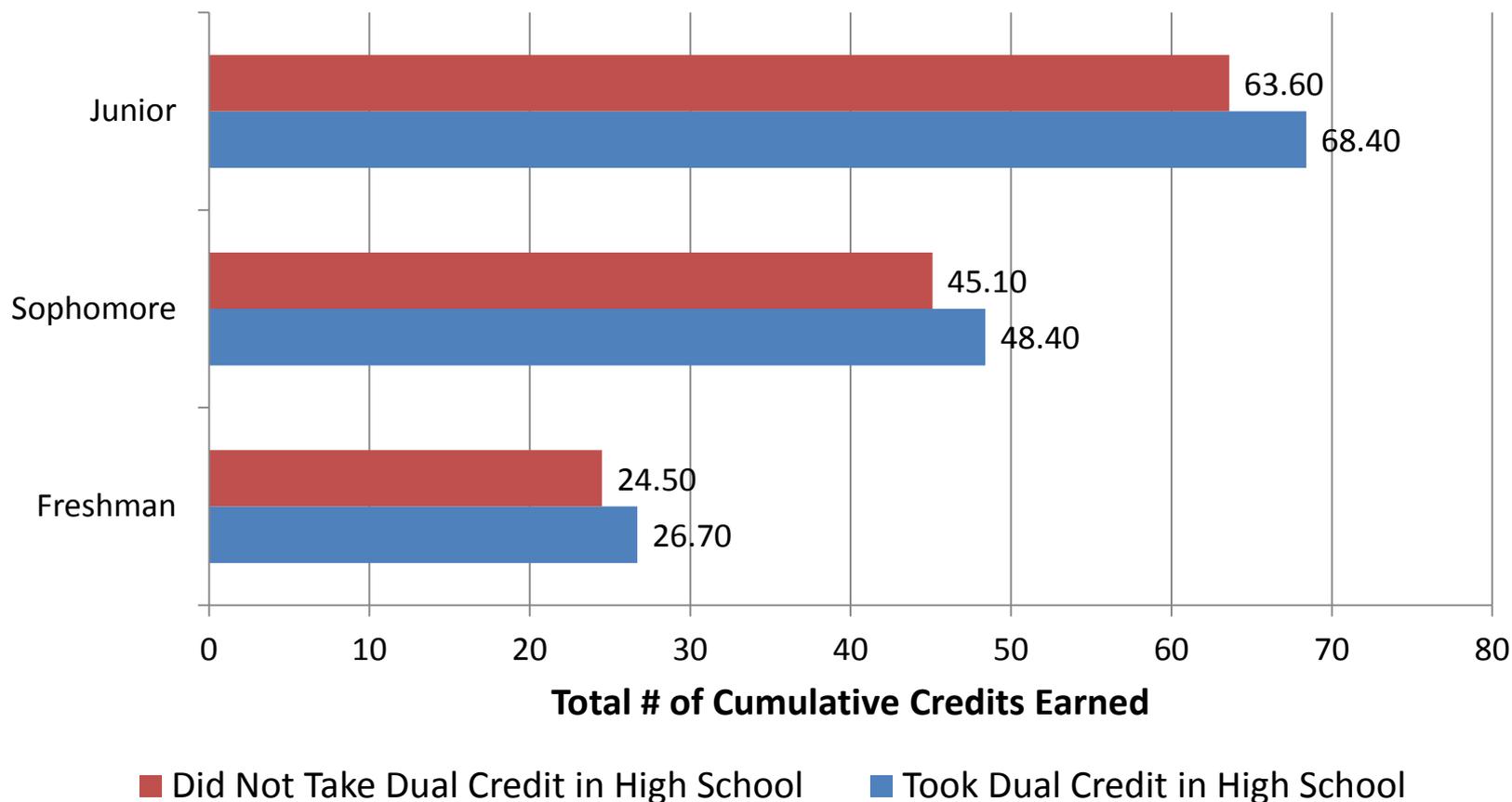
UNM Student Persistence Rates



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

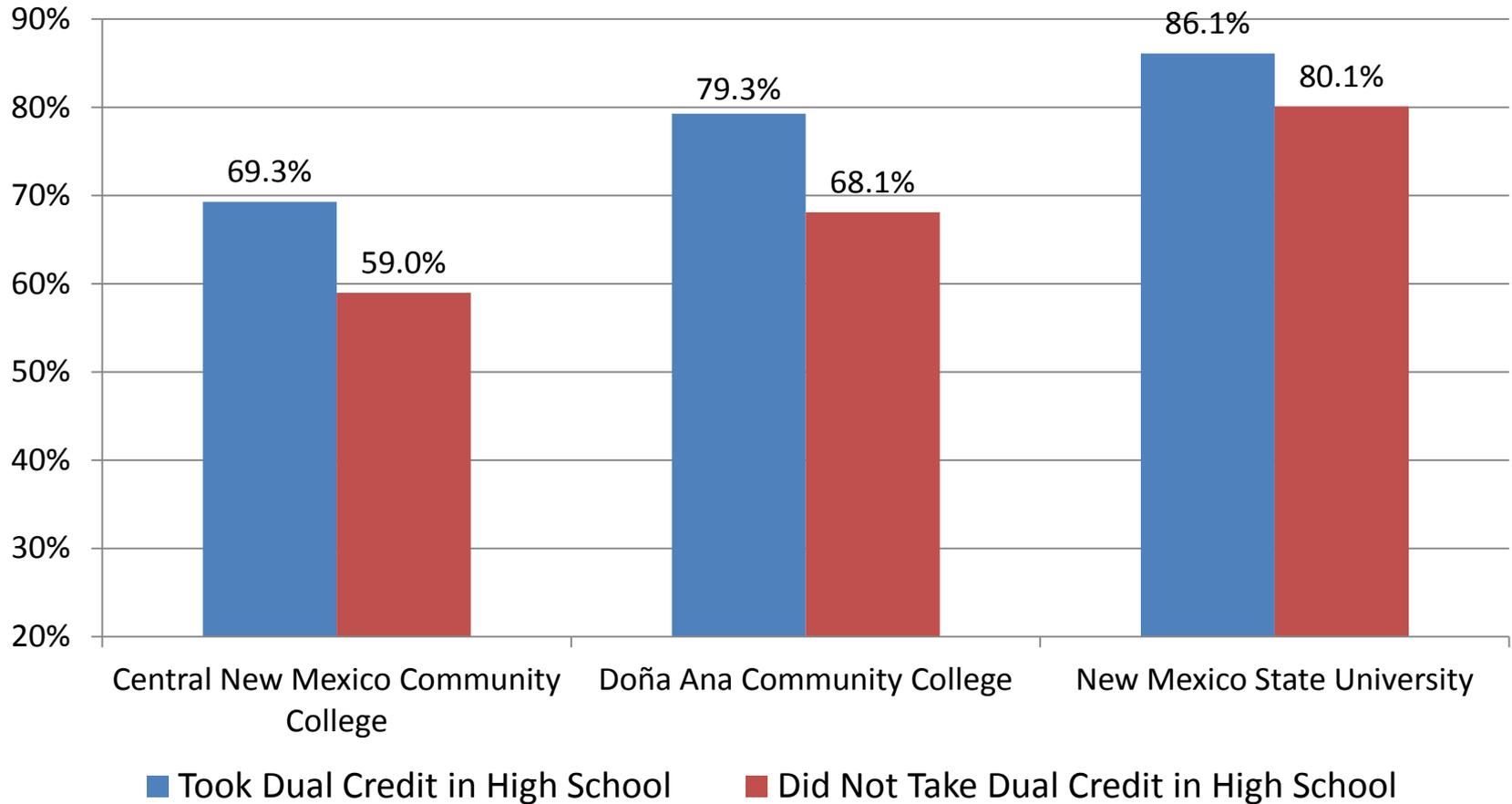
UNM Cumulative Credit Hours Earned



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

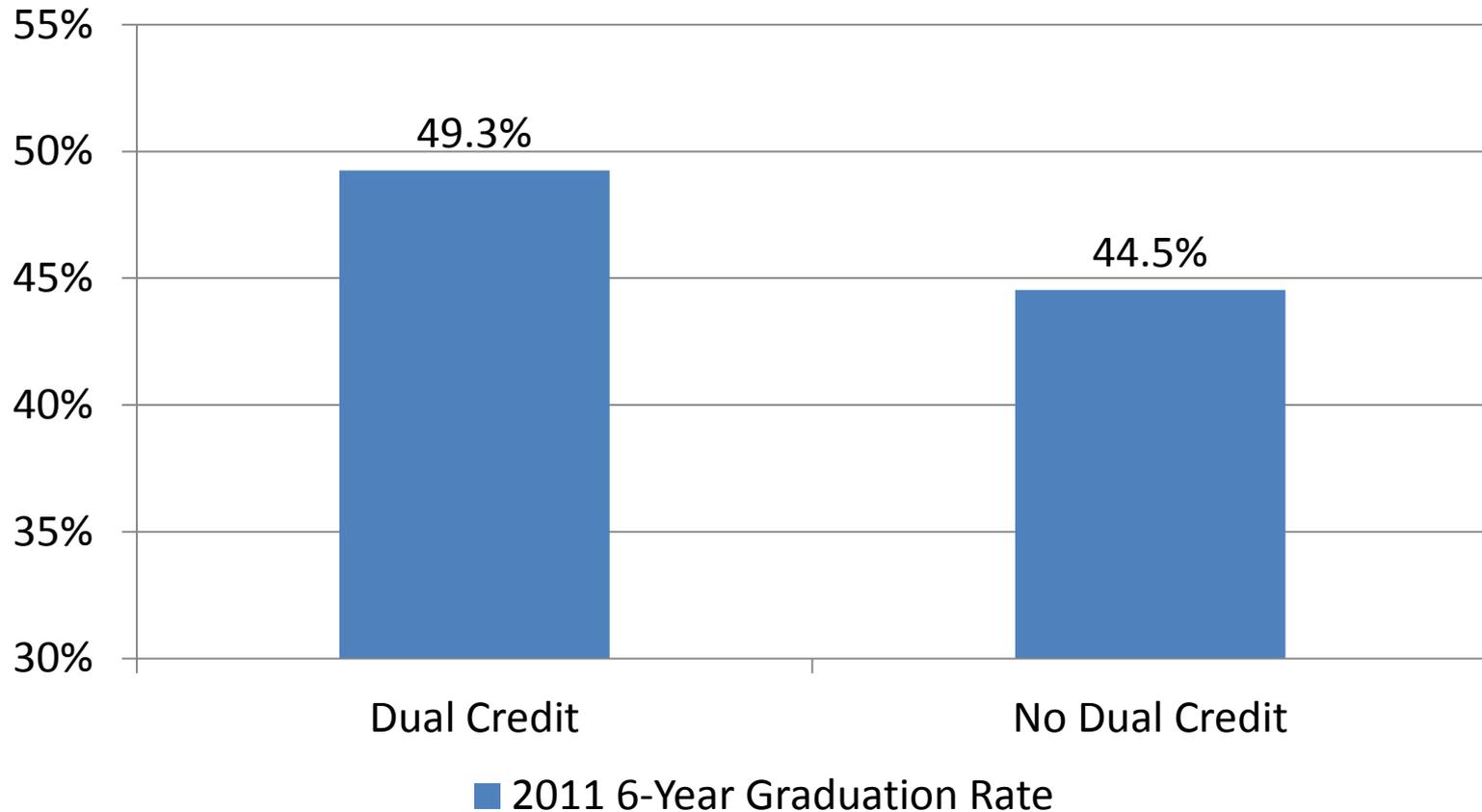
Comparison of Persistence to the Sophomore Year



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

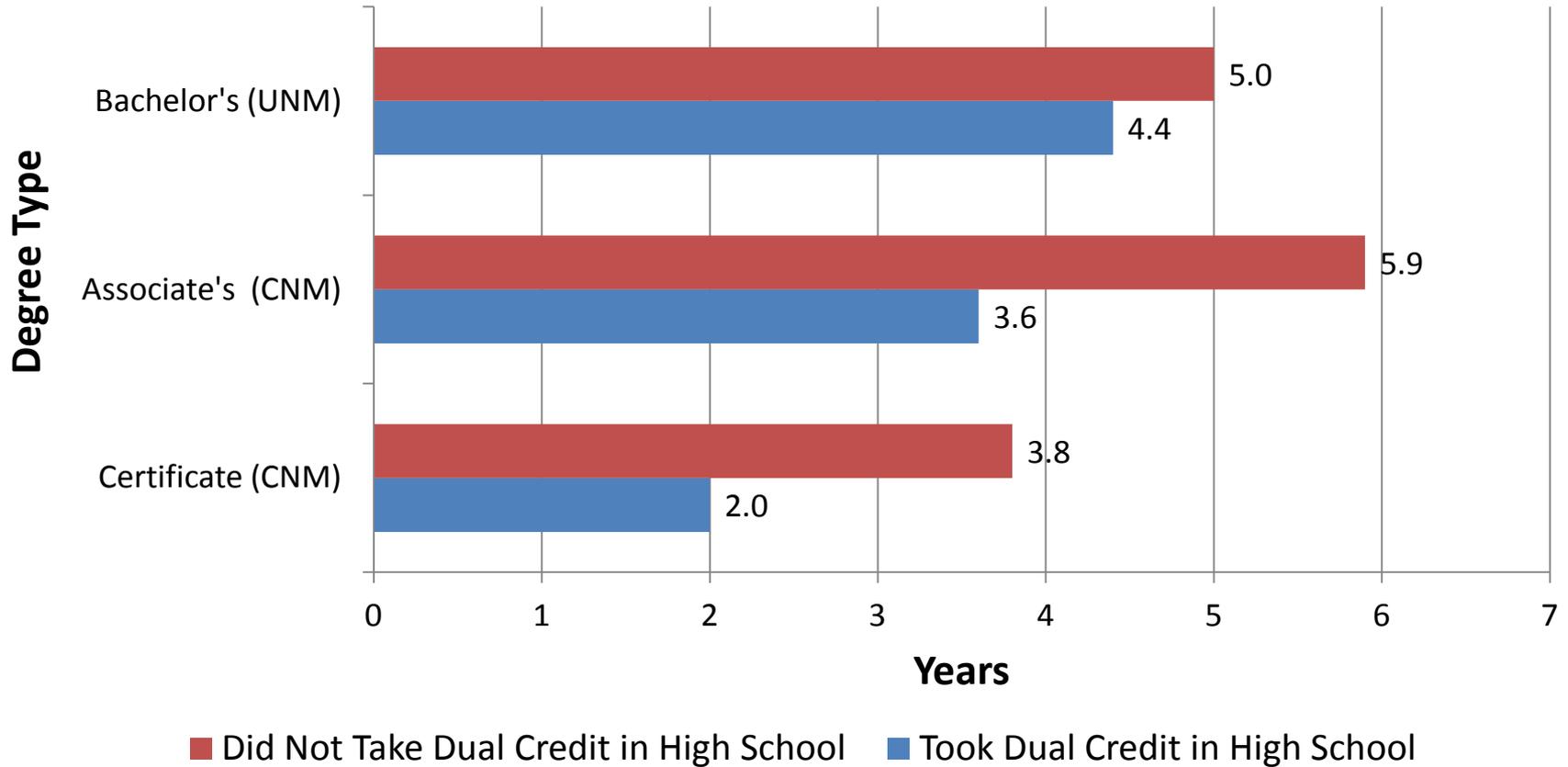
University of New Mexico 6-Yr Graduation Rates



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.

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	

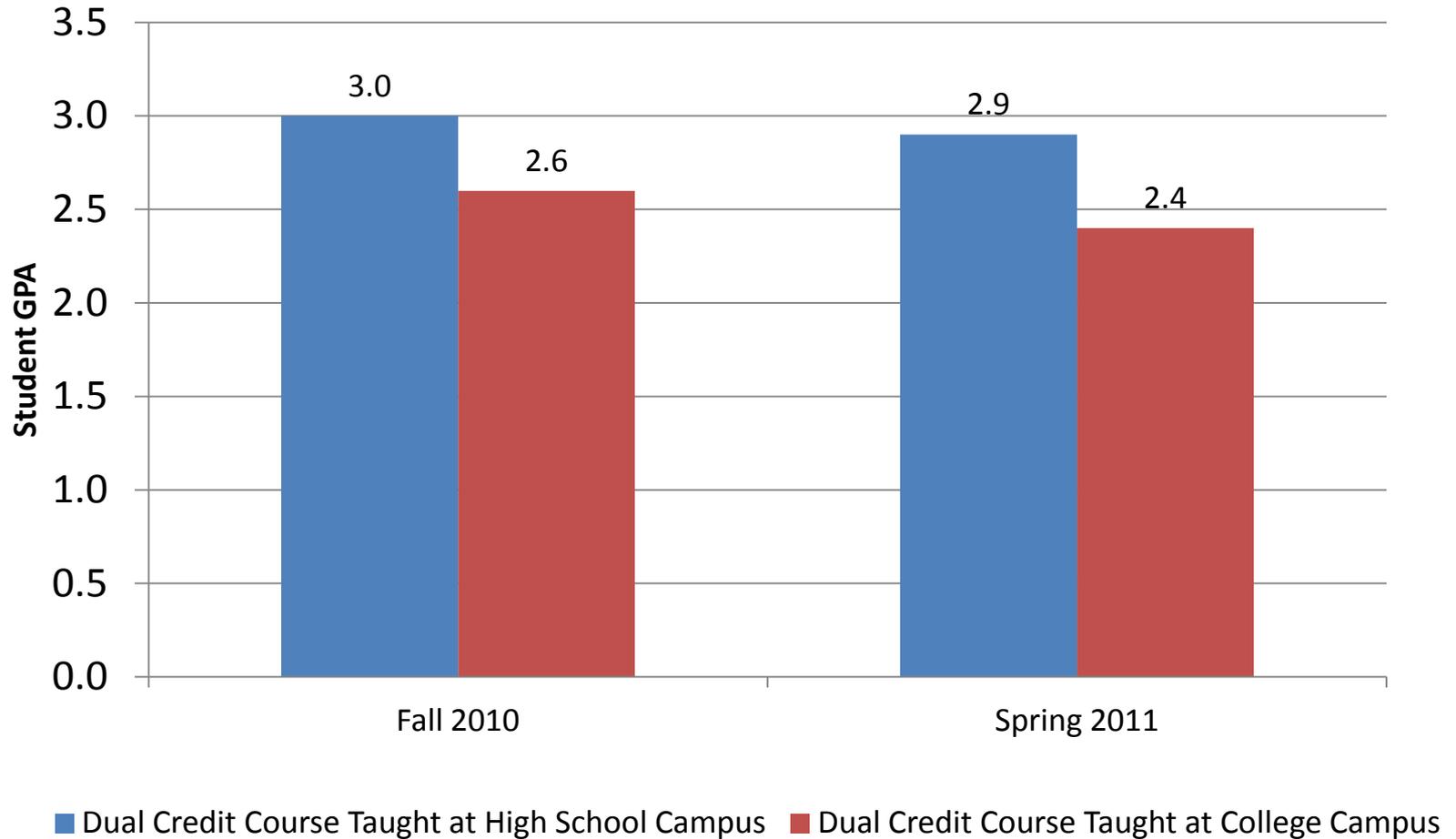
Amount of "double" funding

* 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

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

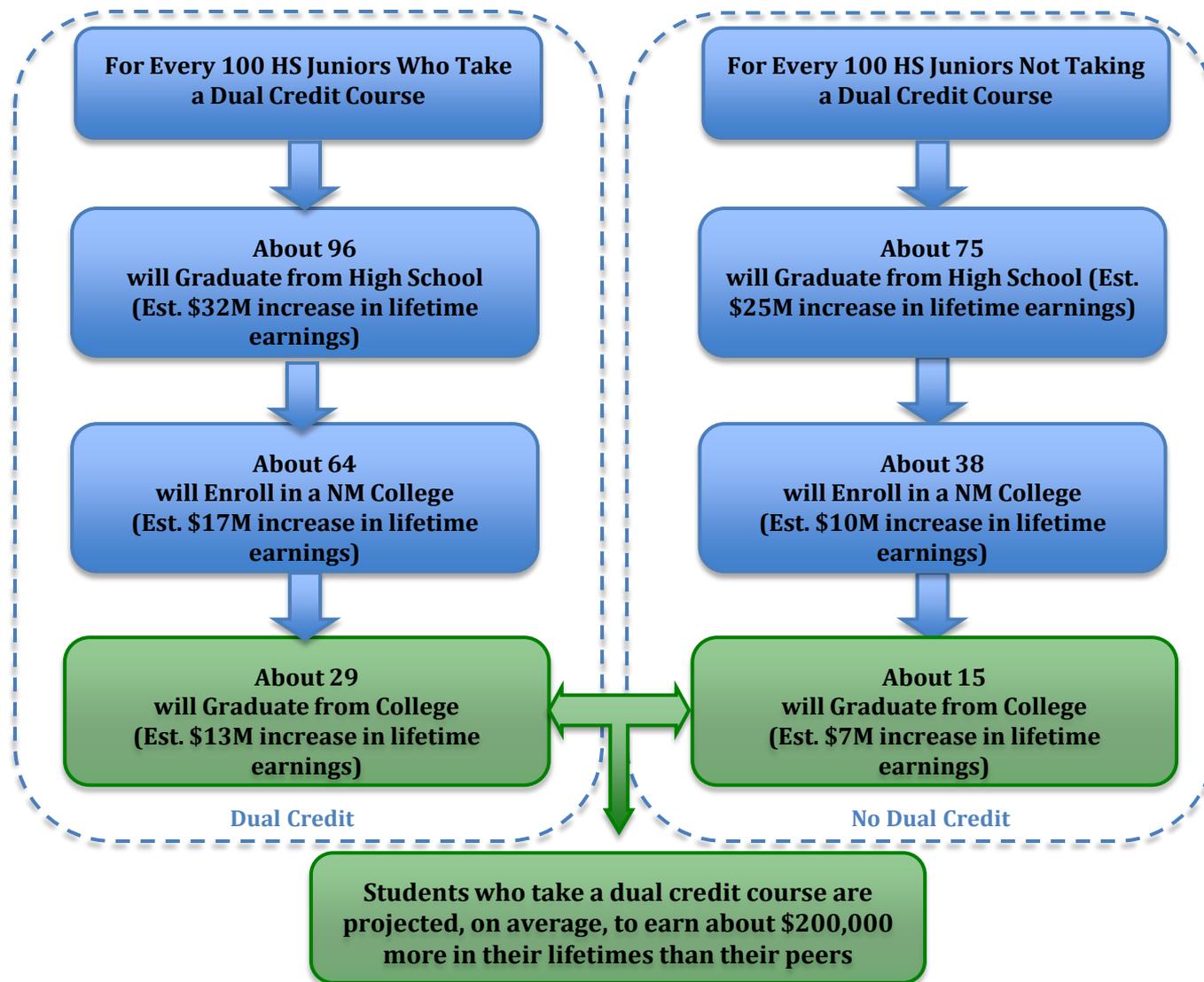
Gains in Student Performance Have the Potential to Save Students and Families Money

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 school completion rates based on APS class of 2011 11th grade completions; College enrollment rate based on *Ready for College 2010* (Winograd, Garcia, & Florez, 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.

DUAL CREDIT: THE CHALLENGES AHEAD

Dual Credit programs must overcome a number of fundamental issues if they are to make a permanent difference for large numbers of students. The central issue here is ensuring that public schools, higher education, and state agencies work collaboratively for the good of the students. New Mexico's state-wide dual credit initiative can teach us much about how to make our state's education system more flexible and responsive to the needs of all of our students. In addition, we believe that there is widespread agreement that the silos surrounding early childhood programs, K-12 education, higher education, and workforce development need to come down. Dual credit programs can teach us how to help different parts of the education system work together.

Challenges To Address

- **Collaboration.** Collaboration between the K-12 public schools and higher education institutions is a much more difficult challenge than it appears. The alignment of high school graduation standards and college admission standards, articulation agreements about which courses will count for what kinds of credit, concerns about college reputations and status, concerns about younger high school students attending college campuses with older students, regulations about which colleges can offer dual credit in which geographic regions of the state, and the practice of blaming public schools for the poor performance of students in higher education are some of the issues potential partners must resolve if they are going to work together.
- **Funding.** Most current funding mechanisms rely heavily on student enrollments and thus pit high schools and colleges against one another in terms of who gets the credit for dual credit students. These same funding mechanisms can pit high schools, community colleges, universities and families against one another because it may be less expensive to take some courses as dual credit rather than waiting until the student has graduated from high school and is attending a college or university. In addition, in these tight budget times, some legislators and educators are concerned about “double-funding” programs, in that both high schools and colleges would get funding credit for the same students. Finally, it is important to consider how the costs of transportation, technology, and instructional materials will be covered when public schools, colleges, and families are struggling to make ends meet.

Challenges To Address

- **Quality and Accountability.** High schools and higher education institutions often bicker about which courses can be taught at what locations and by whom and they use the issue of quality to mask a wide range of concerns. In addition, it is very difficult to get the data needed to assess the impact of these programs. A number of states have developed effective strategies for overseeing dual credit programs and we think these are promising strategies that should be expanded.
- **The Value of a College Degree.** Some of the most interesting debates about dual credit programs come from the differences in people's deeply-held beliefs about the purposes of high school and college. Although most New Mexicans agree that all students should graduate from high school, there is less agreement that all students should go to college. We don't think that everybody needs a four-year college education, but we also don't think that the staggering disparities in educational attainment related to race, ethnicity, and socio-economic status should go unchallenged.
- **Ensuring Equity and Accessibility to Dual Credit Programs.** One of the most disheartening findings to come out of our research is that dual credit, Advanced Placement, and other accelerated learning programs come too late for too many minority and high poverty students. 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.

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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