

NATIVE AMERICAN ACADEMIC PERFORMANCE: DOES SCHOOL TYPE MATTER?

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ABSTRACT

Native American youth have persistently been one of the lowest performing minority groups with regards to academic achievement. Reasons for such performance have been attributed to the economic and social disparities endured by many Native¹ communities, both on and off reservations. These disparities serve as obstacles to Native student success. Substantial research now points to the lack of culturally relevant curriculum and pedagogy for Native students within the larger education system as a possible obstacle to academic success. To test this hypothesis, this study uses alternative school self-identification in California between 2002-2007 to serve as a flag for the possible use of culturally relevant course material and teaching methods. This study conducts spatial, longitudinal, and regression analyses to identify trends in Native student proficiency rates by school type attended. These analyses used proficiency rates included in the state's Adequate Yearly Progress reports and a

¹ "Native" and "Native American" are used interchangeably throughout this paper to refer collectively to American Indian, Alaska Native, and Native Hawaiian people.

variety of school characteristics based on the National Institute for Education Statistics' Common Core of Data and Decennial Census information. The findings highlight the important opportunities afforded by alternative schools, as well as underscoring the importance of using and testing such schools effectively.

INTRODUCTION

Until only recently, Native American students have been one of the lowest performing minority groups in America with regards to attrition rates and standardized test scores. Academic performance in these areas has remained stagnant, and continues to negatively affect the future of Native communities across the nation. Efforts on the part of tribal, federal, state, and local governments have attempted to close this "achievement gap" through supplemental funding at the school level. Such support has proved mildly effective, as the gap has narrowed in recent years. The gap's persistence, however, supported by a growing body of literature on "Indian Education," highlights the necessity to consider alternative factors, like a lack of culturally relevant course materials, in shaping the poor academic performance of Native youth. This study engages this literature, and posits the hypothesis that

the emergence of alternative schools, like charter and magnet schools, provide the flexibility necessary to introduce culturally relevant curricula into the classroom experience of Native students, thereby testing its efficacy for the larger public education system. Before testing this hypothesis, however, more background information on the Native American academic experience must be provided.

LITERATURE REVIEW

BACKGROUND

Like the much-studied black-white achievement gap, the academic achievement of Native American youth has lagged behind that of their white peers for reasons both sociodemographic and environmental. The education of Native American youth, however, is different from that of other minorities in a major way. Based in the United States’ Constitution’s Commerce Clause² and affirmed throughout numerous treaties, executive orders, and legislative acts over centuries, tribal sovereignty guarantees federally recognized tribes the autonomy necessary to create their own governments, and see to the needs of their own citizens. Underscoring the relationship between the federal government and tribal nations is the federal government’s unique and legal fiduciary trust responsibility to provide education to the children of tribal nations.

Today, both the federal government and tribes are key partners in the education of Native American youth. Such partnerships are important in Native education, as they honor the knowledge base, history, and autonomy of these communities, yet such efforts have only been scattered throughout Indian Country. According to the Harvard Project on American Indian Economic Development (2008: 2),

² Known as the “Commerce Clause,” Article 1, Section 8, Clause 3 of the US Constitution gives Congress the power “to regulate commerce with foreign nations, and among the several states, and with the Indian tribes.”

these partnerships are key to tribal sovereignty, and opportunities for “taking over the management of [a] reservation’s schools [are] about gaining control to address local [tribal] needs.” Examples of successful partnerships have demonstrated the advantages for Native youth when “both tribal and [public] run schools are more readily incorporating tribal culture into the classroom, seeking to create a less alienating learning environment, and infusing high-quality learning with traditional knowledge and values” (Harvard Project 2008: 205). Tribes like the Navajo of New Mexico (George 2005) and the many tribes of Hawaii (In Our Way 2011) have pioneered educational partnerships with local institutions, yet such efforts remain rare within the larger American public education system, which continues to serve a majority of Native youth.

Today, 90 percent of Native American students attend public primary and secondary schools governed by state and local standards (Alliance for Excellent Education 2008). In addition, it is common that Native students attend public schools bordering reservations or on state land within the reservation boundaries, further complicating the jurisdictional issues of educating Native students. While Native youth are citizens of their tribes, non-tribal institutions are largely responsible for their education, highlighting the necessity to consider their achievement outside of a tribal context.

Despite gains over time, Native Americans continue to be one of the lowest performing student populations, as attrition rates demonstrate. As early as 1969, national reports “found that dropout rates for Indian students were twice the national average in both public and [Bureau of Indian Affairs] schools, with some schools approaching a 100% dropout rate.” (Dehyle & Swisher 1997: 128) In spite of marginal improvements, the attrition problem persists, with 2001 data demonstrating that Native Americans still graduated at lower rates than their non-Native peers (Strang 2001).

A review of more contemporary data shows that there have been mixed results in addressing the dropout rate of Native youth. The Harvard Project on American Indian Economic Development (Hensen 2008: 201) explains that on average, the dropout rate for Native American youth is often 50-100% higher than the national average. According to the National Center for Education Statistics (NCES) the national attrition rate for Native youth was 6.9% compared to 2.6% for their white peers, a marked increase from previous years (Grigg 2010: Table 6).

At the state level, gains have been unevenly distributed. Some states, like Oklahoma and New Mexico, have an attrition rate below the national average, whereas other states, like Alaska, Maine, Montana, South Dakota, and Wyoming, have rates well above the national average at 11.7%, 10.1%, 8.5%, 20.0%, and 21.2% respectively (Grigg 2010: Table 6). The fact that 20% of South Dakota Native students didn't graduate high school in 2007-8, while their white counterparts had an attrition rate a tenth the size, at 2.8%, highlights some severe inequalities in the ways Native youth are educated.

CONVENTIONAL DISCUSSIONS

Reasons posited for the low achievement of Native students have ranged from internal explanations that cite student and/or community deficits as obstacles, to external factors, like the general lack of resources that plagues many Native communities. For internal factors, Pavel et al. (2008: 27) list several community factors inhibiting Native students, such as “[increased] suicidality, higher mortality rate [than their non-Native peers], depression, alcohol and substance abuse, delinquency and out of home placement.” In a study commissioned by the Navajo Nation, “administrators cited lack of family encouragement, academic problems and performance, and home and family problems” as reasons behind dropping out (Dehyle & Swisher 1997: 130). Taken together, these factors inhibit student performance before they even enter the classroom.

Compounding these individual issues is the correlation between being Native American and living in rural poverty, which further stacks the deck against the academic success of Native youth. Poverty, and rural poverty in particular, affects academic performance (Williams 2003:3). Native American communities often have the highest poverty rates of all minority groups (Strang 2001). In addition, the rural nature of most reservations limits the educational opportunities of Native youth as they are impacted by “poor access to services, limited resources, transportation problems, and under-utilization of existing resources” (Strang 2001: 10). Various programs have been instituted to address these disparities.

As part of its trust responsibility to tribal governments, the federal government provides funds to local school districts to address the disparities affecting Native students in the form of Title VII funds, also known as “Indian Education.” According to Title VII of the Civil Rights Act, the federal government must provide eligible schools³ with Indian Education Formula Grant funds used to support “Indian Education” counselors, who provide academic counseling and support services to Native students (George & Cramblit 2010). Given their high number of Native Americans, public schools in states including Alaska, Oklahoma, and California are automatically eligible for Title VII funds, provided that they are spent on Native students. This initiative has provided schools funds for tutoring, cultural events and other activities demonstrated to improve Native student achievement. It is unclear how many schools have and how they use these funds, and for those who do have the money, the misuse of Title VII funds often limits the program’s efficacy, highlighting a need to consider an

³ Title VII Program eligibility is determined by the number and percent of a school’s population that is American Indian, Alaskan Native, or Native Hawaiian (“Indian Education Formula Grants”).

alternative approach to improving Native student academic achievement (George & Cramblit 2010).

RECENT DEVELOPMENTS

Native students tend to differ from their white counterparts in learning styles and appropriate assessment measures (Dehyle & Swisher 1997; Estrin 1995). According to Dehyle and Swisher (1997: 140), “an abundance of research has illustrated that Native children learn by observing and imitating the actions of [others]... learning through observation was reported in studies of Navajo, Pueblo, Eskimo, Yaqui, Warm Springs, Northern Alaskan Inupiat Eskimo, Yup’ik Eskimo, and Kwakuti children.” Such an inclination towards visual and kinesthetic learning styles unfortunately puts Native students at a disadvantage in the verbally intensive environment most western public schools offer.

In addition to unique learning styles, substantial literature indicates that the availability of culturally relevant course materials and teaching styles could have an effect on Native academic achievement, a hypothesis worth further engaging. According to Dehyle and Swisher (1997: 139), “an environment that communicates the fact that cultural differences are strengths and not deficiencies is the first step in addressing the educational needs of [Native] students.” Such an environment can be found in schools around the nation, as Estrin (1995: 1) asserts that “current curricula and pedagogies... that make no connections to the cultures, histories and languages of Native students are... alienating,” whereas “by contrast, curricula that support the building of cultural identity has been associated with lower dropout rates.” Such research points to the need to consider alternative models in educating Native youth, yet obstacles exist.

In a time of recession, resources are strapped and schools are increasingly unable to experiment with novel techniques and curricula. As such, public schools have struggled to implement culturally relevant course materials, despite the growing

evidence as to their efficacy. Charter schools, however, could provide a space for such methods.

Recently, charter schools have been mired in ideological debates about the free market and choice in education generally (Henig 2008), yet their original purpose was once far less political. According to the think tank EdSource (2011), charter schools, beginning in the 1990s, originally served to test the reforms and critiques lauded at the larger public education system within a small, controlled setting. It is difficult to generalize among charter schools, given their variety in funding sources, methodology, and mission statements, yet these schools can be grouped together based on the flexibility they are allowed, compared to mainstream public schools.

RESEARCH QUESTION

By virtue of their flexibility, alternative schools, such as charter schools and magnet schools, can provide an “experimental” space to try culturally relevant teaching methods and materials, and test their efficacy in meeting the needs of Native American students. I hypothesize that the flexibility of alternative school system creation could facilitate the use and assessment of culturally relevant curricula and teaching methods. The use of culturally relevant course material and teaching styles could have an effect on Native student academic performance. While studying this effect is key in identifying the efficacy of these methods, there is no dataset documenting where culturally relevant curriculum is implemented. As such, alternative schools can serve as a proxy for the use of these methods, thereby allowing some analysis of their effects.

To test this hypothesis of the effects of culturally relevant curriculum, this study asks the question: Did Native K-12 students in charter schools perform better academically than their Native K-12 counterparts in public schools in the state of

California from 2002 to 2007? In answering this question, this study uses a pooled sample of students that compares the academic performance of Native students in public K-12 charter and magnet schools with their mainstream public education counterparts in the state of California between 2002-2007.

DATA & METHODS

Methodologically, this study uses a longitudinal analysis of assessment data, complemented by a multivariate regression analysis to identify any relationships between the type of school attended and a Native student population’s testing proficiency rate. Using a dummy variable for alternative school attendance, the regression analysis identifies the relationship between the independent variable, attending a charter school, and the dependent variable, Native student proficiency rate. In addition, this study crafted a variety of control variables to control for the effects of a school’s location, community demographics, size, and poverty statistics. To complement the regression analysis, mapping software was used to examine any spatial correlations that could better explain the regression results.

California, the site for this study’s proposed research, falls near the lower end of the achievement gap, with an attrition rate of 4.4% for Native students, compared to 2.2% for white students. (Grigg 2010: Table 6). In the state of California alone, there are over 6 million K-12 students attending almost 10,000 schools, and over 700 charter schools that educate roughly 4% of the state’s student population. California is home to over 48,000 Native American students, presenting the unique challenge of meeting the needs of this minority group in addition to those of over 6 million other students (“Statewide Enrollment” 2006).

California was chosen as the case study for several reasons. First and foremost, it is the home state of both the author and her tribe, the Yurok Tribe of northern California. Such familiarity provides a

strong foundation for the project, based on personal knowledge of the state’s people, places, and unique struggles. In addition, California encompasses a microcosm of Indian Country, ranging from isolated reservations, to large off-reservation communities, and the largest urban Indian population in the nation (National Urban Indian Family Coalition 2008: 10). While the share of population that is Native is small compared to other minorities, California does have one of the largest populations of Natives by number in the nation (“California Quick Facts” 2011). The diversity of the California Native population does mute the uniqueness of each tribal educational experience, but this variation is important in identifying the wide array of school type possibilities, and best practices for educating Native youth therein. Finally, given the over 10,000 schools in California, the size of the public education system ensures that the sample of schools eligible for the analysis was large enough to find statistically significant results.

This study focuses solely on the achievement of Native American youth by school type, rather than trying to compare Natives to their white or other minority peers, for several reasons, using a “strengths approach.”⁴ By controlling for community and school characteristics, the regression analysis isolates the effects of school type on Native academic performance. While comparing Native students in charter schools to their non-Native peers

⁴ Comparing Native student achievement to the standard of white achievement uses a deficit model, which places the onus of poor academic achievement onto the students themselves because of whatever “deficits” they bring to the table. Such a model is flawed in that it not only places the responsibility for poor achievement onto the student, but also creates an artificial hierarchy of achievement (Villegas). A strengths-approach, however, compares Natives directly to other Natives, acknowledging that not all Native students are failing, and that their socio-cultural identity and lived experiences are strengths, not “deficits” to their educational experience (Villegas).

in both alternative and mainstream schools is an area for future research, this study focuses specifically on a Native-to-Native comparison.

The independent dummy variable, school type, was defined by a school’s self-identification in the Common Core of Data survey as either a charter school or a magnet school. Public schools self-identified, and all other schools, such as continuation schools or parochial schools, were dropped from the dataset as they weren’t relevant to the research question. All schools with statistically significant⁵ Native American population were included in the sample.

The dependent variable, academic performance, was based on data found within the annual Adequate Yearly Progress (AYP) reports, which are school-level testing data collected annually following No Child Left Behind in 2001. Comprised of data like standardized test scores and participation rates, AYP reports include a school’s proficiency rate, defined as the number of students who score “proficient” or higher on the state’s standardized test. The testing data available for analysis was a pooled sample, and as such, a longitudinal analysis was not conducted. Academic performance data was collected for all grade levels K-12, and for the years spanning 2002-2007. The time period of 2002-2007 includes the enactment of No Child Left Behind in 2002, which made AYP data collection mandatory, through 2007, the most recent year with complete testing data available.

Control variables were divided into three categories: location and demographic variables, educational attainment variables, and poverty variables. These variables were constructed based on school characteristics found in the Common Core of Data, complemented by school-district level demographic

⁵ Statistical significance determined by No Child Left Behind’s disaggregation of data standards (The Education trust 2003).

information measured by the 2000 Decennial Census.⁶ To address the impact of location, a typology created by the decennial census was used to classify schools on a scale of “urban” to “ex-urban.”⁷

PROJECTION

$$Prof = \beta_0 + \beta_1 Ch + \sum \beta_m Loc_m + \sum \beta_n Pov_n + \sum \beta_o Educ_o + \varepsilon$$

Where *Prof* is the proportion of Native students at the school who achieved proficiency. *C* is a dummy variable indicating whether the school is an alternative school (vs. public). *Loc_m* is a set of control variables related to the demographics of the location of the school, such as the number of Native students at a school. *Pov_n* is a set of control variables related to the poverty and public assistance statistics of a school, such as the number of students eligible for free or reduced price lunch. *Educ_o* is a set of control variables related to the educational attainment levels of the location of a school. See the appendix for the full list of control variables and how they are measured. The key value of interest is *β₁*, which measures the difference in proficiency rates between public and alternative schools after the addition of the controls.

⁶ Location and demographic variables included the number and percent of Native Americans in a school district, as well as that of whites, blacks, Hispanics, and “other,” as well as the educational composition of an area, and its proximity to a metropolitan area. Poverty variables included statistics like the poverty rate of a school district, the area’s median income, the number of SNAP recipients in a region, etc. Educational attainment variables included the spectrum of educational degrees obtained by a school district’s population, the percentage of college attendees, etc. For a complete list of the variables included in each control variable category, please see Appendix.

⁷ The typology, generated by the US Census Bureau, calculated an urbanization rate for each school district based on the area’s urban population divided by the school district’s total population.

LIMITATIONS

While each of the datasets used to compile the test data set are thoroughly documented and long established, it must be acknowledged that the dependent variable of academic performance is an imperfect measure at best. As with other parts of the legislation No Child Left Behind, AYP reports have been heavily critiqued for their complete reliance on standardized test scores to evaluate school performance (National Indian Education Association 2005). While this is a valid critique given the concerns surrounding standardized test scores and minority communities (Estrin 1995), the data collected by AYP is the most thoroughly and consistently documented assessment information made publicly available for analysis, and was chosen for this reason.

In addition to the standardized testing concerns, it is important to acknowledge that the dummy variable of school type serves as an imperfect flag for the possible presence of culturally relevant teaching methods and material, rather than a clear indicator of their presence. As such, the regression analysis highlights possible associations between school type and academic performance. Further research will be necessary to identify the relationship between culturally-sensitive methods and student achievement.

And finally, the selection bias associated with charter schools must be acknowledged. While the control variables can account for community and population variation to a certain extent, these variables cannot isolate the fundamental differences between charter school and regular public school attendees. Charters, and especially magnets, suffer from the “creaming” phenomenon, where they enroll students who might already be succeeding academically or are more inclined to do so based on personal characteristics. Alternatively, impoverished and/or minority communities may use charter schools to address their at-risk youths’ need, and it may be more difficult to prepare these students for success given their personal and/or community

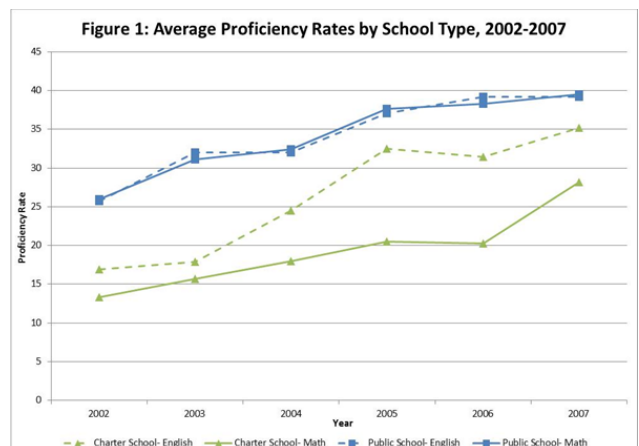
attributes. Consequently, it is difficult to attribute gains made by alternative schools to their own intrinsic qualities over student characteristics.

FINDINGS

CHANGE OVER TIME

Using the average of proficiency rates by school type, a look at change over time identified gains between 2002-2007 for both alternative and public schools, as evidenced by Figure 1. For public schools, the change in math and English proficiency rates tracked one another closely, totaling a 13.5% change in proficiency rates in the studied time period. Alternative schools started off at a lower proficiency rate on average, yet made significant gains over time. Between 2002-2007, charter schools witnessed a 14.9% increase in math proficiency rates and an 18.3% change in English proficiency rates.

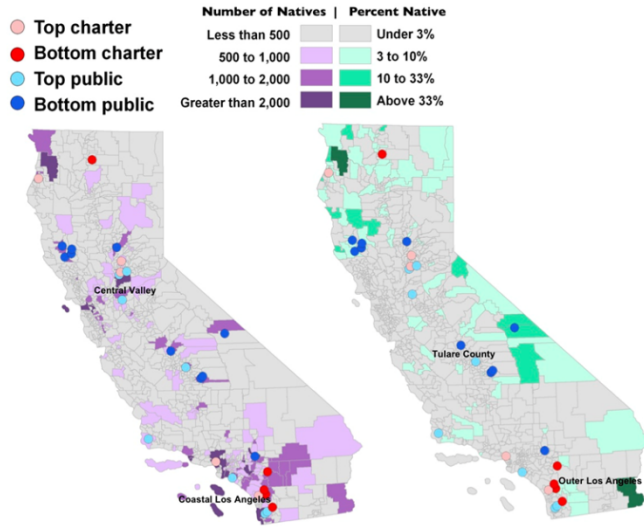
While these gains seem to show that charter schools have made more significant gains over time in English proficiency despite starting off at lower proficiency rates on average, this assumption is not supported by an interaction analysis between school type and year. When comparing the change over time of charter schools and public schools without any control variables, an interaction analysis identified a difference of 1.21 between the slope of alternative schools and public schools with regards to English proficiency rates. This difference was not statistically significant, however, and was reduced to .08 when controlling for all of the study’s control



variables, particularly location.

SPATIAL ANALYSIS

Figure 2.



After mapping the top and bottom performing public and alternative schools⁸ over the number and then percentage of Native Americans by school district, an interesting spatial correlation emerges in Figure 2. Top performing schools, both alternative and public, cluster where the percent of the school district population that is Native is small, like the Central Valley and coastal Los Angeles. Conversely, low performing schools cluster where the share & number of Natives is highest. Examples include outer Los Angeles, where the Morongo, Agua Caliente, Los Coyotes, and many other tribes live, and Tulare County, home to the Tule River reservation. While this spatial analysis doesn't include any of the control variables, it suggests, at a basic level, that school performance is affected by school and community composition.

⁸ Top and bottom schools were grouped by their proficiency rate in 2007. Alternative schools included the top and bottom 5% alternative schools in the sample, and public schools included the top and bottom 10% of public schools.

REGRESSION ANALYSIS

The regression analysis predicted that the flexibility of charter schools and their possible use of culturally relevant course material would lead to charter schools having higher academic performance than mainstream public schools. At the most basic level, without any control factors, the regression analysis, shown in Figure 3, identified a positive association between public school self-identification and proficiency rates, whereas charter school self-identification had a negative association with proficiency rates. When controlling for each subgroup of control variables, like poverty and location demographics, community make-up, etc., and then together as one large control group, this negative relationship persisted and increased between charter school attendance and lower proficiency rates, on average.

Figure 3.

	Coefficient of English PR	Coefficient of Math PR
Charter School (no controls)	-6.39**	-13.88**
Location & Population Variables	-9.06**	-14.82**
Educational Composition Variables	-7.32**	-13.10**
Poverty Variables	-11.04**	-16.20**
All Control Variables	-7.40**	-13.97**

**= p < .05

DISCUSSION

This analysis illustrated a negative relationship between school composition and academic performance, with alternative schools associated with lower proficiency rates, despite substantial gains in average proficiency rates between 2002-2007. These findings appear to contradict the original hypothesis of the paper, which predicted charter schools having higher, not lower, proficiency rates. One interpretation is that charter school practices actually hurt Native students. Another explanation is the selection bias of poorly performing students into charter schools. These

charters and magnet schools may have students with greater needs and lower test scores than their mainstream counterparts.

The findings suggest that alternative schools may negatively affect academic performance. Quite possibly, charter schools are not effective at improving Native student academic performance as measured by standardized testing proficiency rates. Such a conclusion highlights the necessity to carefully assess community needs when considering charter school creation, and to realize that such schools do not provide a panacea against the effects of rural poverty, substance abuse, and other obstacles in the lives of Native students. While there are successful examples of charter schools in Indian Country, they are not a “cure” for poor Native American academic performance by any means.

Despite a variety of control variables, it is impossible to isolate the intrinsic qualities of an alternative school from that school’s student body characteristics. Charter schools and magnet schools may educate populations that not only start off with lower academic performance than their mainstream peers, but also experience smaller gains over time, manifesting in a negative relationship between charter school attendance and academic performance compared to regular public schools. Further qualitative research could possibly get past this selection bias in ways that quantitative research cannot.

Finally, a third explanation includes the fact that test scores are not the best indicators of alternative school performance nor are they the best grounds for comparison. Given the alternative methods of many charter schools, their focus on a variety of educational topics outside of the scope of standardized tests, and their sheer variability, perhaps better assessment tools must first be created to more accurately gauge the effect of charter school methods on academic performance.

The fact that public schools are associated with higher proficiency rates in the state of California is promising given the critiques made previously about the larger public education system. While the use of culturally relevant course materials may be sparse, it seems that California public schools are effectively educating Native youth. Unfortunately, California’s strong public school performance might not hold true in other states, like South Dakota, where Native student performance was markedly lower than their white peers. This difference is worth further study, as educators move to close the gap between Native and non-Native youth.

POLICY IMPLICATIONS

This study’s findings do not detract from the posited hypothesis that flexibility in curriculum can provide unique opportunities for the use of culturally relevant course materials and teaching methods. Flexibility in education is increasingly being identified as the key ingredient to student success, regardless of ethnicity. Such flexibility holds promise for Native students as new curricula and teaching styles could increase Native academic performance and close the gap where previous policies have failed to. In addition to this curricular flexibility, alternative schools provide important opportunities for language preservation and community involvement. Given the importance of educational partnerships in realizing tribal sovereignty, alternative schools could provide tribal communities a way to improve the academic performance of their youth through maintaining their culture and exercising their sovereignty.

Further research is necessary to answer the questions this study’s results posit. In order to identify what methods are most effective in the instruction of Native youth, more detailed information about school curricula must be documented. In addition, more qualitative research is necessary to better understand the trends identified through statistical and spatial analysis. After understanding the effects of alternative school methods on the academic

performance of California students, an analysis of other state educational systems could determine how the state pattern holds true across the nation. Lessons gleaned from improving Native American education could also help inform the achievement gap facing other minorities as a result of culturally incongruous educational environments. Ultimately, this study

only scratches the surface of the complex issues surrounding the education of Native American youth, both in public and alternative schools. Further research is necessary to identify what obstacles persist in the lives of these students, and more importantly, what methods have been identified as “best practices” in meeting these needs.

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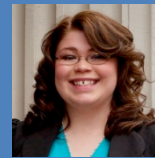
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APPENDIX – REGRESSION ANALYSIS AND CONTROL VARIABLES

Location and Demographic Control Variables

<i>Variable</i>	<i>Source</i>
Urbanization Rate (number of individuals living in a school district’s metro area divided by its total population)	Calculated
Number of students at a school	Common Core of Data ⁹
Percentage of school population that is black	Common Core of Data
Percentage of school population that is white	Common Core of Data
Percentage of school population that is American Indian/Alaskan Native	Common Core of Data
Percentage of school population that is Hispanic	Common Core of Data
Number of American Indian/Alaskan Native students at a school	Common Core of Data
Number of Asian students at a school	Common Core of Data
Number of Hispanic students at a school	Common Core of Data
Number of black students at a school	Common Core of Data
Number of white students at a school	Common Core of Data
Percentage of school district’s population that is American Indian/Alaskan Native and under 18	Decennial Census ¹⁰
Percentage of school district’s population that is American Indian/Alaskan Native and under 18	Decennial Census
Number of individuals in school district’s population that is American Indian/Alaskan Native and under 18	Decennial Census
Percentage of school district’s population that is American Indian/Alaskan Native and over 18	Decennial Census
Number of individuals in school district’s population that is American Indian/Alaskan Native	Decennial Census
Percentage of school district’s population that is American Indian/Alaskan Native	Decennial Census
Number of individuals in school district’s population that is white	Decennial Census
Percentage of school district’s population that is white	Decennial Census
Number of individuals in school district’s population that is black	Decennial Census
Percentage of school district’s population that is black	Decennial Census
Number of individuals in school district’s population that is Asian	Decennial Census
Percentage of school district’s population that is Asian	Decennial Census
Number of individuals in school district’s population that is Hawaiian	Decennial Census
Percentage of school district’s population that is Hawaiian	Decennial Census
Number of individuals in school district’s population that is an ethnicity other than American Indian/Alaskan Native, white, black, Asian or Hawaiian	Decennial Census
Percentage of school district’s population that is an ethnicity other than American Indian/Alaskan Native, white, black, Asian, or Hawaiian	Decennial Census
Number of individuals in a school district’s population that is over 30 years old and is living with their grandchild	Decennial Census
Percentage of school district’s population that is over 30 years old and is living with their	Decennial Census

⁹ The Common Core of Data is updated annually, so these control variables vary by each individual school and year.

¹⁰ Data from the Decennial Census was collected at the school district level in 2000. These control variables were applied to each school in a given school district, and do not vary by year.

POVERTY CONTROL VARIABLES

<i>Variable</i>	<i>Source</i>
Total number of free or reduced price recipients at a school	Common Core of Data
Percentage of free or reduced price recipients at a school	Common Core of Data
Number of American Indian/Alaskan Native female-headed households in a school district	Decennial Census
Percentage of American Indian/Alaskan Native female-headed households in a school district	Decennial Census
Number of American Indian/Alaskan Natives in a school district below the poverty level	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district below the poverty level	Decennial Census
Number of American Indian/Alaskan Native children in a school district below the poverty level	Decennial Census
Percentage of American Indian/Alaskan Native children in a school district below the poverty level	Decennial Census
Number of American Indian/Alaskan Natives of working age (18-65) adults in a school district below the poverty level	Decennial Census
Percentage of American Indian/Alaskan Natives of working age (18-65) adults in a school district below the poverty level	Decennial Census
Number of American Indian/Alaskan Natives on public assistance, such as welfare or SSI, in a school district	Decennial Census
Percentage of American Indian/Alaskan Natives on public assistance, such as welfare or SSI, in a school district	Decennial Census
Percentage of American Indian/Alaskan Natives receiving SNAP benefits in a school district	Decennial Census
Number of American Indian/Alaskan Natives in a school district that are employed	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district that are employed	Decennial Census
Number of American Indian/Alaskan Natives in a school district that are unemployed	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district that are unemployed	Decennial Census
Number of American Indian/Alaskan Natives in a school district that are not in the labor force	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district that are not in the labor force	Decennial Census

EDUCATIONAL ATTAINMENT CONTROL VARIABLES

<i>Variable</i>	<i>Source</i>
Number of American Indian/Alaskan Natives in a school district's population that is over 3 years old and enrolled in school	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district's population that is over 3 years old and enrolled in school	Decennial Census
Number of American Indian/Alaskan Natives in a school district's population that has less than a high school degree	Decennial Census
Number of American Indian/Alaskan Natives in a school district's population that have a high school degree	Decennial Census
Number of American Indian/Alaskan Natives in a school district's population that has completed some college	Decennial Census
Number of American Indian/Alaskan Natives in a school district's population that has completed a bachelor's degree or higher	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district's population that has less than a high school degree	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district's population that have a high school degree	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district's population that has completed some college	Decennial Census
Percentage of American Indian/Alaskan Natives in a school district's population that has completed a bachelor's degree or higher	Decennial Census