

**An Analysis of The Relationship between American Indian Public Education Funding and
Achievement in Oklahoma**

Full Report

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An Analysis of The Relationship between American Indian Public Education Funding and Achievement in Oklahoma

Introduction

Studies seeking to analyze funding for American Indian students are virtually nonexistent. This single district case analysis is to fill this huge literature gap by analyzing effects of relative funding mechanisms on Indian student achievement in Oklahoma, using a fiscal adequacy framework with a vertical equity lens. The study focuses on Indian students educated in public schools rather tribal or Bureau of Indian Education (BIE) schools, given most Indian students in the state attend public schools.

Indian students may well be considered an underserved population, as public education systems have not equipped American Indian for academic, formal schooling when compared to non-Indian counterparts (Powers, 2012; Pewewardy & Fitzpatrick, 2009; Powers, Potthoff, Bearinger, & Resnick, 2003). American Indian academic achievement has traditionally lagged other ethnic minorities (Grigg, Moran, & Kuang, 2010; Mead et al., 2010; Pewewardy & Fitzpatrick, 2009; St. Germaine, 1995). Many of these students attend public schools (Tippeconnic & Tippeconnic Fox, 2012; Pewewardy & Fitzpatrick, 2009), but do not receive an adequate education based on their needs (Glenn, 2011; Mead, Grigg, Moran, & Kuang, 2010; Pewewardy & Fitzpatrick, 2009; Powers, Potthoff, Bearinger, & Resnick, 2003). The problem of whether funding of public schools is adequate to address the challenges faced by this underserved population remains unclear given the lack of empirical studies.

Both policymakers and district leaders are concerned about the potential consequences of funding disparities on students, particularly students in underserved populations. Historically, the federal government has stepped in to support public school districts with large American

Indian populations when local governments have failed to provide adequate funding. However, supplemental federal funds may not reduce funding disparities depending on how these funds are distributed. This current single district case analysis attempts to draw on empirical evidence to examine if funding relates to academic achievement for American Indian students.

The purpose of this quantitative single district case analysis was to examine the extent to which adequate supplemental funding has been provided to promote academic achievement as it relates to American Indian students attending a high Indian enrollment (HIE) public school district (Pavel, 1999). As a minority population, American Indian students are supported with federal dollars, but little is known about the relationship between this funding and student academic achievement. Therefore, this study will explore fiscal trends and their impact on American Indian students in an Oklahoma public school district. This is a single district exploratory study, emphasizing a contextualization of new practical knowledge as it applies to quantitative research methodologies. This study is not intended to infer to a global population where a high Indian enrollment is present.

The present study was guided by a fiscal adequacy framework, using a vertical equity lens, as it pertains to academic achievement among American Indian students in a HIE school setting. Funding sources include general operating funds without federal revenue, Title I funding, and Title VII funding with direct instructional costs connected to each. This study questions whether general operating funds without federal dollars, Title I funding, and Title VII funding affect reading scores for American Indian students.

This study seeks to explain how school finances relate to academic achievement among American Indian students, which has critical implications for district leaders, policymakers, and tribal leaders seeking to understand how school funding is related to academic achievement.

Moreover, this study provides a framework of fiscal adequacy, in particular the vertical equity lens, to effectively generate district revenue based on fiscal trends. The study analyzes how district leaders should support eligible American Indian students with more funding to improve academic achievement via the vertical equity lens. The goal of this study is to use findings to critique and revise district and building policy to promote adequate funding for American Indian students' education.

This study addresses a critical gap in the literature, as there is an insufficient quantity of research on this issue (Pewewardy & Fitzpatrick, 2009). Few researchers have authored research about American Indian students (Huffman, 2010), particularly related to funding. Furthermore, quantitative studies about American Indian education is even more rare (Demmert, 2005).

The conceptual framework of this exploratory study is fiscal adequacy, which focuses on public schools' financial responsibility to educate special populations adequately (Ramirez et al., 2011). Building on the adequacy concept, the fiscal adequacy framework provides an understanding of minority groups and their needs within schools. Adequacy policy also attempts to supply special populations and minority groups with an adequate education (Picus & Odden, 2011; Ramirez et al., 2011). School principals tend to serve a majority group among their population, but the adequacy framework supports an alternative. Ladd, Chalk, and Hansen (1999) state, "Such a system should attempt to provide local school districts, local schools, and even classroom teachers with resources and inducements to tailor instruction for the characteristics of students" (p. 216).

Historical Background and Literature Review

The review of relevant literature focuses on two areas that help provide a theoretical rationale for the study. The first section establishes the importance of studying American Indian students, addressing issues pertinent to American Indian students, such as their communities, schools, and learning needs. This discussion provides cultural context surrounding issues of American Indian education and establishes the importance of studying American Indian students attending public schools, including the need for supplemental funding to support American Indian students. The second section reviews relevant literature on fiscal the adequacy framework and vertical equity and provides a rationale for using fiscal adequacy with a vertical equity lens to assess the extent to which supplemental funding promotes the academic achievement of American Indian students. Hopefully this review may enhance a reader's ability to understand how American Indian education and school finance has a historical and current relationship that exists in public schools.

Indian Student Education

American Indian students are an underserved population within the public schools. As an underserved population, American Indian students are not equipped for academic, formal schooling compared to non-Indian students in public schools (Powers, 2012; American Indian students have traditionally lagged behind other ethnic minorities in student achievement in public schools (Grigg, Moran, & Kuang, 2010; American Indian students often attend public schools (Tippeconnic & Tippeconnic Fox, 2012; Powers, Potthoff, Bearinger, & Resnick, 2003). American Indian communities have faced marginalization since the arrival of European settlers in the United States, making issues of American Indian education pertinent not only to education

scholars, but also to anyone concerned with social justice. In order to understand the oppression American Indians face in general, and the challenges American Indian students face in particular, one must understand the historical and cultural context in which American Indians live.

For decades, American Indians have endured governmental interference in education. According to the U.S. Census Bureau, the American Indian population makes up nearly one percent of the national population (Humes, Jones, & Ramirez, 2011). There are over six hundred American Indian tribes or nations residing in the United States (Tippeconnic & Tippeconnic Fox, 2012). In Oklahoma, American Indians are one of the largest minority groups, comprising over 8% of the state's population (U.S. Census Bureau, 2010). Citizens in Oklahoma have generally considered themselves to have American Indian ancestry, with over 33% of the total Oklahoma population considering themselves to be American Indian, Alaskan Native, or a combination of both (Norris, Vines, & Hoeffel, 2012). In terms of school demographics, American Indian students make up one of the smallest minority groups in public schools across the United States (Pewewardy & Fitzpatrick, 2009).

American Indian students need American Indian teachers. The literature discusses how American Indian youth seek American Indian mentors. American Indian teachers have an enormous influence on American Indian students, especially if their interactions are positive (Cummins, 1992). American Indian teachers are familiar with cultural norms and values practiced within American Indian communities. Sanders (1987) noted, "If schools are to be successful in retaining, motivating, and teaching American Indian students, new efforts must be made to recognize values as they operate within the school system" (p. 283). The literature on public school teachers revealed that American Indian teachers are critical for the educational

development of American Indian students in the classroom and therefore, provide practical implications.

Successful American Indian students learn to balance and sometimes blend the two cultures, American Indian and non-Indian. American Indian students experienced hardships and incongruence at school, yet their traditional culture can enable them to overcome problems (Whitbeck, Hoyt, Stubben, & LaFromboise, 2001). Again, successful American Indian students value their traditions at home and, at the same time, they learn how to adapt to non-Indian values and social norms at school. School administrators and teachers recognize that American Indian students value families and extended families. Subgroups such as ethnic minorities, including American Indian students, have led school administrators and teachers to seek solutions in order to improve academic achievement.

Fiscal Adequacy and Vertical Equity

The literature suggests heavy reliance on local property taxes produces fiscal inequalities between wealthy and poorer school districts (Kent & Sowards, 2008; Odden, Picus, & Goetz, 2010; Picus & Odden, 2011; Ramirez et al., 2013; Rodriguez, 2004; Toutkoushian & Michael, 2007). Poorer neighborhoods generally do not produce lucrative ad valorem taxes for their local school districts (Kent & Sowards, 2008). Further, the income disparity between White and non-White students is significant, and has widened the achievement gap among students (Wilson et al., 2006). Horizontal and vertical equity are a catalyst for scholars and practitioners to further investigate adequacy issues regarding school finance.

Fiscal adequacy is a conceptual framework for finance scholars to incorporate into their analyses of funding. Berne and Stiefel (1984) were scholars who transformed how researchers

analyze the school financial systems. Horizontal and vertical equity assist fiscal adequacy proponents by portraying the American education system as inequitable for all students, especially students who are in greater need of services. For the current study, fiscal adequacy answers the question, “Are American Indian students adequately supported in public schools?”

School finance adequacy policies, similar to vertical equity, are based on the premise that all students bring their basic needs to school and the school must fulfill those needs based on adequate funding and resources. Policymakers and school leaders are critical stakeholders who are in positions to establish more vertical equity ideologies for their districts to address inequity issues.

American Indian students are in need of additional resources as public school attendees. Generally, these students have to overcome greater obstacles in order to be successful in formal schooling. Berne and Stiefel argue vertical equity is a framework by which school leaders should devote greater resources and/or funding for those initiatives or subgroups who require more assistance. The vertical equity lens captures school finances in order to specifically address the needs of American Indian students in order to adequately support them.

American Indians are a unique population within the United States. Their cultural and community characteristics affect the formal, institutional education of American Indians. Due to local control, public school districts and states are the primary, formal agents of education in Oklahoma. Yet, there is minimal funding support to address the ‘special needs’ of American Indians as students who attend public schools. This literature review briefly provided historical and contemporary depiction of the educational context that American Indian families and students face as citizens that reside in Oklahoma. The federal government has interceded historically to supplement and support American Indians students, yet the literature clearly

reveals their needs are not being addressed. Empirical research is required to explore this phenomenon and its relationship to public school finance.

Design

Sample

The public-school district that served as the setting of this study is located in a suburban city that is surrounded by rural populations located in close proximity to a metropolitan city in Oklahoma. According to the 2010 US Census Bureau, there were 29,857 residents in the land area of 44.13 square miles. The population demographic consists of 73.1% White alone, 4.2% African American alone, 14.2% American Indian and Alaskan Native alone, 0.8% Asian alone, 5.1% Hispanic alone, and 6.4% Two or More Races (US Census Bureau, 2010). In terms of educational attainment, 20.2% of the citizens who are 25 and older have a bachelor's degree or higher. The median household income from 2008 to 2012 was \$36,655 (U. S. Census Bureau, 2010).

The study sample included 1,679 American Indian students educated in four elementary schools and one middle school in a single district in Oklahoma over the course of seven years. Several grade levels across the five sites were selected, thus maximizing the number of students in the sample. The case analysis focused exclusively on American Indian students, without including any comparisons to students from other ethnic groups, because of the vertical equity lens of the study. Students from other ethnic groups do not have the special historical relationship with the federal government, especially in the form of supplementary revenue, as with Indian students. This special relationship was an ideal case analysis for researchers to examine federal supplementary revenue and its relationship with academic achievement. As

mentioned in the literature review, there is immediate need for empirical research via quantitative methodology for American Indians attending public school districts.

The sample school district includes one early childhood center, four elementary sites, one middle school, one alternative school, and one high school. There are approximately 4,065 students and 273 certified staff members in the district. The public-school district receives Title I funding; 74% of its student population are eligible for free and/or reduced school lunches. The American Indian population was situated among area nations/tribes such as the Citizen Potawatomi Nation, Absentee Shawnee Tribe of Oklahoma, Kickapoo Tribe of Oklahoma, Sac and Fox Nation, and Seminole Nation of Oklahoma. The school district was surrounded by nations/tribes boundaries such as those of the Citizen Potawatomi Nation, Absentee Shawnee Tribe of Oklahoma, Kickapoo Tribe of Oklahoma, and the Sac and Fox Nation.

Data Sources

The study utilized extant data maintained by the case school district. We prepared and collected reading scores from the seven years of the study for Indian students who were enrolled in the district and maintained FAY status. Oklahoma Performance Test Indicators (OPTI) scores, based on Oklahoma Core Curriculum Tests (OCCT) reading scores, were primarily utilized as achievement indicators. Fiscal data such as general operating funds without federal revenue, Title I, and Title VII records were collected from district's central office.

The OCCT standardized assessments are Criterion Referenced Tests (CRT) for elementary and middle school students. Criterion Referenced Tests are administered to formally assess individual performance based upon absolute levels of proficiency (Oklahoma State Testing Program, Oklahoma Core Curriculum Tests Grades 3-8 Test Interpretation Manual 2009-

2010). The CRT formal assessments ensure test scores are valid based on individual student performance.

The fiscal data were calculated by per-pupil revenue per site for a total sum of that particular site. All fiscal data were converted to current dollars to control for inflation. Impact Aid is proportioned with 75% directed to general operating funds and 25% directed to administration costs of Indian education for the district. Impact Aid federal funding was not categorized as direct instructional revenue for this analysis. The study additionally used general funding and Title I funding as control variables.

Johnson O'Malley Act (JOM) federal monies were not incorporated into this study. Johnson O'Malley funds are controlled by local nations and tribes as they maintain fiscal accountability. This particular tribal nation monitors and supports several public school districts that reside on its traditional reservation. Johnson O'Malley fiscal data were not examined due to insufficient accountability records to develop reliable statistical conclusions. More importantly, JOM funding is not categorized as direct instructional revenue for a school district.

Methods

This exploratory single district case analysis employed an ex post design, utilizing historical data. Procedures included regression analyses, one for each grade level. The dependent variable was the Oklahoma Performance Test Indicator (OPTI) score. The independent variables included fiscal data, including general operating funds without federal revenue, Title I, Title VII funds, and Impact Aid. The relevant variables included Site Instructional Expenditures Per Pupil (SIEPP) represented general operating funds without federal revenue per site, TITLE1PP represented Title I revenue per pupil, STVIIPP represented Title VII

revenue per pupil, and SIAPP represented Site Impact Aid Per Pupil. A multiple regression analysis was conducted for each grade level to identify if there was any relationship between federal supplementary revenues and academic achievement among American Indian students within the sampled population.

Results

In an exploratory study such as this, descriptive statistics describe a general perspective of how fiscal revenues and academic achievement trended over the seven-year period. Table 1 includes OPTI performance levels of the students included in the sample, overall and by sex.

Within a HIE public school district, is there a relationship between funding trends and academic achievement trends of American Indian students? The research utilized a multiple regression analysis per grade to analyze the research question. The multivariate analysis focused on OPTI scores as they related to general revenue without federal funds, Title I, Title VII, Impact Aid, and Year. Results for grades 3 through 5 are included in Table 2.

The model for third grade Indian students is a good fit for the data, $F(5, 307) = 4.50$, $p = .001$). The model accounts for 6.8% of the variation in the third-grade OPTI scores. The overall model is statistically significant, $p < .001$. General revenue without federal funds, Title I, Title VII, and Impact Aid revenues did not contribute significantly to OPTI scores. The independent variable Year is statistically significant, $p < .05$, indicating a statistically significant decline in OPTI scores for third grade students over the years included in the study.

The model fourth grade students is also a good fit for the data, $F(5, 297) = 10.38$, $p = .000$). The model accounts for 14.9% of the variation in the fourth grade OPTI scores. The

overall model is statistically significant, $p < .001$. General revenue without federal funds, Title I, Title VII, and Impact Aid revenues did not contribute significantly to OPTI scores. The

Table 1 Student OPTI performance levels in the sample

Oklahoma Performance Index Test Indicators Performance Levels and Score Ranges

	Advanced	Proficient	Limited Knowledge	Unsatisfactory
Grade				
3	891-990	700-890	649-699	400-648
4	845-990	700-844	658-699	400-657
5	830-990	700-829	641-699	400-640
6	828-990	700-827	647-699	400-646
7	802-990	700-801	668-699	400-667
8	833-990	700-832	655-699	400-654

Descriptive Statistics for Male and Female Students and OPTI Reading Scores

	Mean	Standard Deviation	Minimum	Maximum
Male				
<i>Reading</i>	672.23	150.38	223	990
Female				
<i>Reading</i>	701.15	118.73	230	990

Oklahoma Performance Test Indicator Score by Grade

	Mean	Standard Deviation	n	Minimum	Maximum
Grade					
3	710.93	139.43	313	235	990
4	691.03	140.62	303	234	951
5	677.16	148.97	277	225	990
6	664.40	132.05	273	223	860
7	681.12	124.40	258	223	934
8	693.82	120.92	255	233	982

Note. Source, Field Notes.

Table 2 Multiple Regression Analysis Grades 3, 4 and 5 Reading Achievement

Grade 3 Reading Achievement

Variable	B	T	Sig	R	R²
<i>Model</i>			.001*	.261	.068
<i>SIIEPP</i>	-.10	-1.59	.113		
<i>STIEPP</i>	-.08	-1.40	.162		
<i>STVIIPP</i>	.09	1.46	.146		
<i>SIAPP</i>	.06	.87	.384		
<i>Year</i>	-.16	-2.33	.021*		

Note. n=313, Source. Field Data

*p < .05

Grade 4 Reading Achievement

Variable	B	T	Sig	R	R²
<i>Model</i>			.000*	.386	.149
<i>SIIEPP</i>	.17	2.79	.006		
<i>STIEPP</i>	-.09	-1.61	.109		
<i>STVIIPP</i>	.03	.52	.606		
<i>SIAPP</i>	.00	.02	.985		
<i>Year</i>	-.39	-5.56	.000*		

Note. n=303, Source. Field Data

*p<.05

Grade 5 Reading Achievement

Variable	B	T	Sig	R	R²
<i>Model</i>			.028*	.212	.045
<i>SIIEPP</i>	.11	1.55	.122		
<i>STIEPP</i>	-.05	-.78	.434		
<i>STVIIPP</i>	.00	.00	.998		
<i>SIAPP</i>	-.08	-1.02	.306		
<i>Year</i>	-.25	-3.02	.003*		

Note. n=277, Source. Field Data

*p<.05

independent variable Year is statistically significant, $p < .05$. As with third grade students, test scores declined significantly across the six years included in the study.

Again, the model is a good fit for the data, $F(5, 271) = 2.56, p = .028$) for fifth grade students. The model accounts for 4.5% of the variation in the third-grade OPTI scores. The overall model is statistically significant, $p < .001$. General revenue without federal funds, Title I, Title VII, and Impact Aid revenues did not contribute significantly to OPTI scores. The independent variable Year is statistically significant, $p < .05$. The pattern for fifth grade students is equivalent to the pattern for third and fourth grade students.

Results for grades 6 through 8 are included in Table 3. The sixth grade student model is a good fit for the data, $F(5, 267) = 5.74, p = .000$). The model accounted for 9.7% of the variation in the sixth grade OPTI scores. The overall model is statistically significant, $p < .001$. The general revenue without federal funds, Title I, Title VII, and Impact Aid revenues do not contribute significantly to OPTI scores. Unlike previous grade results, the Year variable does not contribute significantly to OPTI scores.

The model for seventh grade students is not a fit for the data $F(5, 252) = 1.51, p = .187$). The model accounted for 2.9% of the variation in the seventh Grade OPTI scores. None of the variables contribute significantly to the OPTI scores. Similar to grade seven students, the model for eighth grade students is not a fit for the data, $F(5, 249) = 1.96, p = .086$). The model accounted for 3.8% of the variation in the eighth grade OPTI scores. Similarly, none of these variables contribute significantly to the OPTI scores.

Overall, the findings suggest that supporting revenues do not contribute significantly to OPTI scores. The multiple regression models were a good fit for grades three through six. In the

Table 3 Multiple Regression Analysis Grades 6, 7 and 8 Reading Achievement

Grade 6 Reading Achievement

Variable	B	T	Sig	R	R²
<i>Model</i>			.000*	.312	.097
<i>SIIPP</i>	.09	.85	.397		
<i>STIIPP</i>	.19	1.44	.151		
<i>STVIIPP</i>	-.11	-1.20	.233		
<i>SIAPP</i>	.23	1.55	.121		
<i>Year</i>	.02	.09	.927		

Note. n=273, Source. Field Data

*p<.05

Grade 7 Reading Achievement

Variable	B	T	Sig	R	R²
<i>Model</i>			.187	.171	.029
<i>SIIPP</i>	-.02	-.20	.841		
<i>STIIPP</i>	.06	.41	.679		
<i>STVIIPP</i>	.02	.18	.861		
<i>SIAPP</i>	.05	.30	.764		
<i>Year</i>	-.12	-.64	.523		

Note. n=258, Source. Field Data

Grade 8 Reading Achievement

Variable	B	T	Sig	R	R²
<i>Model</i>			.086	.194	.038
<i>SIIPP</i>	-.03	-.31	.754		
<i>STIIPP</i>	.04	.31	.755		
<i>STVIIPP</i>	-.05	-.47	.637		
<i>SIAPP</i>	.21	1.37	.172		
<i>Year</i>	.07	.34	.733		

Note. n=255, Source. Field Data

multiple regression models, Year was reported to contribute inversely and significantly for the third through sixth grades. The findings suggest that as OPTI scores are reported there is a natural decline from grades three to six. Similarly, the descriptive statistics indicated that American Indian students are proficient in third grade, yet their OPTI score means decrease as they enter middle school. In middle school, OPTI scores tend to increase for American Indian students. Unfortunately, the OPTI scores remained on the “limited knowledge” performance level.

Discussion

The fiscal trends illustrate that federal monies are unpredictable for this particular case analysis. Title I and Impact Aid revenues were not constant throughout the seven years. However, Title VII revenue was relatively stable and served as a minimal amount of federal incoming supplementary revenue during the study. General revenue without federal funds was consistent throughout the study as ARRA monies provided a slight increase for school districts. The findings suggested OPTI reading scores gradually digressed from *proficient* to *limited knowledge* as the student transitioned from third grade to sixth grade. In middle school, OPTI reading scores gradually increased from sixth to eighth grade but findings suggested this population still remained in the *limited knowledge* category.

We found that fiscal revenues do not contribute statistically to OPTI reading scores. In addition, the study included multiple regressions per grade level with general funds without federal dollars, Title I, Title VII, Impact Aid, and Year as independent variables. The multiple regression models were a good fit for grades three through six. In the multiple regression models, the Year control variable bore a statistically significant inverse relationship to OPTI reading scores.

Federal revenue was not constant and predictable. However, general revenue without federal funds remained consistent. As ARRA monies were collected, general revenue increased during the latter years of the study, while Title I revenue increased during the earlier years. Title VII revenues remained consistent during the span of the study. Federal Impact Aid revenue was inconsistent, and it decreased in the latter years of the study.

The OPTI reading scores decreased from third to sixth grade yet gradually increased from sixth to eighth grade. Third graders scored *proficient* yet the remaining grades scored *limited knowledge*. The literature suggests that academic achievement among American Indian students decline as they transition from elementary to secondary grades (Powers, 2005). This study found that American Indians scored “proficient” on their OCCT reading tests in third grade, but as they transitioned to middle school, their OPTI scores declined. American Indian students consistently scored “limited knowledge” on the OCCT reading tests, but their scores improved from sixth to eighth grades.

The study reveals that organizational inputs (fiscal revenues) do not contribute significantly to organizational outputs (OPTI scores). Federal supplementary revenue is unpredictable and therefore prevents any causal linkages to academic achievement. Organizational inputs and outputs in an educational system remain unresolved.

American Indians are a unique minority group with special needs. District and building leaders should recognize their specific needs and apply concepts of vertical equity to address these needs. The fiscal philosophy of vertical equity enables leaders to devise budgets that support American Indians and their specific needs. The current study indicates that superficially there may have been some degree of vertical equity in inputs, this did not translate into vertical equity (and adequacy) of *outcomes*.

Scholarly research can identify systemic disconnectedness among nations/tribes, parent advisory committees, and public school districts and encourage partnerships among stakeholders to improve the education of American Indian students. For example, this case analysis identified critical empirical research in a HIE population. Local stakeholders must encourage more empirical research in order to established sound decision making for their American Indian students.

There is a need for scholarly research to explore vertical equity (and fiscal adequacy) related to American Indian students in greater depth. Vertical equity would require administrators to direct federal supplementary funding such as Title I, Title VII, and Impact Aid to increase academic achievement for American Indians. Empirical research must lead the way in order to establish sound arguments and encourage effective support mechanisms for American Indian students.

The fiscal adequacy framework suggests that revenues should be directed to organizational outputs that need improvements. This case analysis reveals fiscal trends are so inconsistent that is difficult to report concrete findings. As prior research argues, fiscal adequacy is difficult to measure. In order to measure fiscal adequacy, scholars must continue to attempt to connect organizational inputs to outputs. This organizational relationship is also apparent in production-function models. Aspiring doctoral students who are also practitioners are critical for linking organizational input to outputs because they are able to identify incoming revenue and outcome products. It is crucial for practitioners who are doctoral students to author applied research because they are building administrators and leaders who can develop practical inquiry at the state and local levels.

The contemporary literature focuses on American Indian students and their achievement levels. Powers (2005) argues that American Indian students' achievement levels decline as they get older. Powers (2005) states, "Thus, older American Indian students were less likely than younger American Indian students to report passing grades, consistent attendance, and high levels of engagement with school activities-all important indicators of education and attainment and success" (p. 339). During middle school years, American Indian students tend to become disengaged, fall behind, and contemplate dropping out of school. The findings of this study support the argument that American Indian students' academic achievement declines from grades three to six, but also slightly increases from grades six to eight. American Indian students are at risk, especially as they proceed through their formal schooling.

The literature argues that American Indian programs should be supplementary to support American Indian students in public schools. The literature review established that American Indian and special education students are to be served by public school districts. American Indians and IDEA students are both protected under the Equal Protection Clause of the U.S. Constitution (Carter, 1974; Skiba et al., 2008). Similar to federal programs such as Title I, Title VII, and JOM, the IDEA revenues are supplementary monies used in support of students with disabilities. Thompson et al. (2008) argue that special education funding is similar to funding for other special needs programs because it is a combination of federal, state, and local revenues (2008). As supplementary revenues, Indian education and special education monies cannot supplant general operating fund dollars. This study contributes to the literature with arguments that federal revenues are supplementary monies intended to support American Indian students. Descriptive analysis also reveals that federal revenues are inconsistent and unpredictable. Federal revenues are directed to aid American Indian students, but federal revenues are so

inconsistent that it is difficult to relate academic achievement to current federal, state, and local fiscal practices. School leaders must tailor Indian programs to support American Indian students, even though federal revenues are minimal and unpredictable.

The study is practical for American Indian scholars and practitioners and it is replicable. More important, this exploratory study utilizes quantitative methodology to investigate academic achievement among American Indian students in public schools. The findings are critical to reaffirm arguments that American Indian students' academic achievement declines as they get older. The study does not focus on deficit thought; it spotlights American Indian students who attend a HIE public school district in Oklahoma. The study supplies practitioners and policymakers with contemporary research by providing a glimpse of Indian education in this case analysis. Furthermore, the study constructs new knowledge for future scholarly research and extends empirical evidence concerning American Indian students that attend public schools.

The contribution of this case analysis suggests there is a need for more quantitative studies focusing on American Indian students. Scholars must be careful to not gravitate to BIE and reservation concentrations yet identify HIE populations and seek those phenomena among these special populations. In addition, scholars must be careful on the type of research questions they explore. This process suggests scholars explore positive topics instead of deficit thinking. If future scholars consider positive topics, they can produce more effective arguments for American Indians.

The study also serves as a springboard for critical discussions of federal revenues in support of American Indian education. The study is a practical inquiry into a HIE public school district in Oklahoma. The study is conducive for replication by district leaders to analyze how fiscal revenues relate to academic achievement for American Indian students.

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