Special Education Enrollment and Graduation Trends in Texas

Logan Minshew

A Scholarly Delivery Submitted in Partial Fulfillment

of the Degree Requirements for

DOCTOR OF EDUCATION

West Texas A&M University

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Scholarly Delivery Framework

The focus of this scholarly delivery and research addresses improving academic outcomes for underrepresented populations. The first scholarly deliverable is a case study to facilitate discussion about collaborative social justice leadership. The article is titled "Social Justice Leadership in Schools" and is intended as a teaching tool for graduate students pursuing master's or doctoral degrees in education. The case examines the challenges school leaders face while attempting to introduce solutions to improve student outcomes. The second scholarly deliverable is an empirical research article titled "Special Education Enrollment and Graduation Trends in Texas." The article examines 17 years of student enrollment and graduation data from 1,020 Texas public school districts and focuses on trends for students who qualify for special education services.

Acknowledgments

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Table of Contents

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Abstract

This case examines challenges faced by principals in implementing strategies to improve the educational outcomes of students. Piney Woods High School is a rural community with a shifting demographic in the school population. The school has an ethnically diverse breakdown, 51% Hispanic, 47% White, and 4 % other, and 53% of the students qualify for free or reduced lunch. This contrasts with the aging background of the community, where 65% are White and has a high concentration of millionaires per capita. The differing populations have created a disconnect between the school and the community. Within the school, there is a struggle to establish healthy relationships between the students and staff; the teaching staff averages over 15 years of experience, and 80% come from White upper-middle-class families. This case will examine how leaders can promote positive change and encourage social justice.

Keywords: social justice leadership, rural, poverty, community, school

Case Narrative

Piney Woods High School is located an hour from two large cities in a rural community. The community has a small but award-winning hospital. There is a solid draw to move to the area for retirees because of the location, infrastructure, and low taxes. The community economy, both in the town of Springwells and the surrounding county, is primarily supported by tourism. Tourism growth has spurred growth in the hospitality and service industry. The increase in this industry has led to a more diverse population coming to work in the community.

While the diverse population helps supply the workforce, the older residents believe that despite someone's financial situation or cultural background, they should assimilate into the community's cultural norms established long ago. Within the last six months, parents and the children of Springwells sought a bond to build parks for the local families to use. The families went door to door to ask for support. The bond would not have raised the taxes for anyone over 65; that population makes up most of the voters in Springwells. Despite the efforts, the town voted down the issue two separate times. Many older residents also believe that individuals should provide for themselves and that taxes should not be levied against them to benefit others.

School Facility Concerns

Mary is the people-focused principal of Piney Woods High School. Many describe Mary as one of the kindest people they have ever met. Students, staff, and parents often report that Mary listens to them and supports them with their needs. Mary became the principal of Piney Woods two years ago. This is Mary's second time at Piney Woods High School. Earlier in her career, Mary had several successful years at Piney Woods but left for another opportunity. When the previous principal left for another

school district, Mary was asked to return. At that point, Piney Woods High School had a fractured faculty and a deteriorating relationship with parents.

Mary used the first year back at Piney Woods to reestablish old relationships and build rapport with the faculty. If Mary did not improve staff morale, she feared the school would continue in a negative direction. Mary also built a rapport with many Hispanic students and parents because of her Spanish fluency and ethnic background. Despite the ability to build rapport quickly, Mary hesitated to implement any substantial changes to the school. District leadership was concerned that significant changes could upset stakeholders. Mary felt that supporting people where they were and providing consistency and stability would continue to boost the climate and potentially evolve into positive outcomes.

The failed bond elections have worried school officials because 5 of the 6 campuses in the district are in dire need of upgraded facilities. District and campus officials want to strengthen the relationship with the community and discover ways to improve postsecondary outcomes for students. Parents and staff members believe upgrades to facilities will be needed to provide students with educational opportunities comparable to other communities across the state.

School Academic Concerns

The student population of Piney Woods High School consists of a nearly even split between Hispanic and white students; the teaching staff is 80% white. Many teachers have taught for over 20 years, and most have spent at least 15 years at Piney Woods High School. A few veteran teachers are concerned about students' lack of motivation. Previous campus administrators tried to address student engagement by improving parental involvement. These actions were met with resistance from teachers

because it was more work to contact parents, and students should be motivated intrinsically to do well in classes. The former campus principal also required tutorials and opportunities to do test corrections, and some staff voiced concerns that the students were lazy, which was not realistic. One teacher said, “Students should get zeros and fail. If the schools would let the students fail, then they would learn a lesson and be motivated to do better in the future.” A large group of teachers is hoping that with Mary back, they can return to the way things used to be and not have all this extra work for kids who do not care.

While hearing the teachers' concerns, Mary understands that the student population and their needs have changed since she was last at Piney Woods High School. Still, because of the teachers’ beliefs, she will need to approach any change carefully to win over the support of the staff. The school board is also highly concerned about advanced academic offerings and class rank. The children of multiple school board members are vying for top-ranking spots in their respective classes. The school board and AP teachers have advocated for policies that would lessen the ranking points of the more economical dual credit classes because they question if the rigor is equitable to AP.

The state performance ratings for Piney Woods High School have remained consistent and could be considered good compared to similar schools. Still, post-secondary readiness is one area that the school board has asked Mary to improve. Mary has established a community advisory board of representatives from several local industries, parents, teachers, and alumni. The committee was presented state-wide data that showed programs used by schools to help improve postsecondary readiness. Site visits were arranged to a few exemplary campuses. Mary was able to get some of the advisory board to come and each high school department head. After the tours and review

of other programs, the committee recommended increasing dual credit offerings, providing students with opportunities to earn industry-based certificates, and adding apprenticeship programs with local businesses. The committee recommended a career-centered approach that would encourage teachers to help students understand that the coursework they were completing would help them with their chosen careers. To eliminate barriers, the committee recommended supplementing the costs of these programs so that they did not create financial hardships for families. Mary has the support of about half of the staff to take on the task of increasing these options.

Staff Concerns

Some Piney Woods teachers agree that the school could improve student readiness but are still determining if adding more options and supplementing the costs is the right solution. Bobby, the agricultural science (ag) teacher, is concerned that the new emphasis will take away from his award-winning ag program. The ag program has won several competitions and assists students with thousands of dollars in scholarship money each year. Despite the program's success, several staff, students, and community members feel that other programs like athletics receive substantially more funding and support than ag. Bobby vocally objects to new programs because he reports that over 400 students participate in the Future Farmers of America (FFA) program, and they should see an increase in funding. Mary knows that the active participation of students is lower than the claimed number, and even fewer students who qualify as low socio-economic status (SES) participate in the FFA program. Mary appreciates all that the ag program adds to the school, but she is concerned that simply adding more funding to the ag program will not address the needs of all students. When approached about ways to add dual credit, industry-based certificates, and apprenticeships to ag, Bobby let Mary know

that those programs have not won any national championships or scholarships for Springwells kids; ag has, and if these programs hurt ag, then the big donors and supporters in the community would get involved.

In addition to the ag program concerns, the counseling staff also has concerns about new programs. They have approached Mary about implementing academic strategies to address the perceived failure problems they see on campus. They fear that the students need to be academically ready for dual credit courses and need additional support and changes. One strategy recommended by the counselors is improving and increasing parent contact with teachers. Additionally, the counselors advocate for a positive reward system to encourage better attendance and work completion. One counselor mentioned that we could enable students to turn in all work each week and provide a weekly reward for no missing assignments. Another counselor thinks the school needs to begin providing transportation from after-school tutorials so that students can stay if they need help. Mary is reluctant to implement these recommendations because many staff feel that students should be self-motivated. The transportation department has resisted after-school transportation due to a lack of drivers. Several teachers also present the case that if we are preparing students for college, they need to self-advocate, and their parents cannot help them in college. Teachers also complain they are overworked and need more time to call parents about missing assignments or student failures.

Financial Concerns

Mary understands that to improve the outcomes of students, more investment is needed. Mary also understands that financial support is not the only investment required. The acquisition includes the time, resources, and expertise of community stakeholders.

Another area to invest in is human capital. The staff must feel supported and appreciated so that they will invest more time into establishing healthy relationships with parents and students. Parents can play a vital role in improving outcomes, but they will also need to feel valued and appreciated by the school. Even if the school can address many of the financial concerns, additional support will be required from the community. A recently established educational foundation has agreed to help cover some of the costs that could be incurred by students or staff to offer dual credit classes. Local businesses have agreed to contribute to the industry-based certificate training for students. The local hospital has established a simulation lab that students preparing for a medical certificate could use to prepare better.

Although this is challenging, Mary knows that changes are needed to improve student outcomes. While there is resistance from some, the students with the greatest needs can benefit the most from many of these changes. Establishing an educational path that leads to postsecondary readiness can also show the students' economic mobility. By focusing on students, Mary knows that Springwells will be proud of the students graduating from Piney Woods High School.

Teaching Notes

Every student deserves every chance to learn and develop into a good citizen (Wasonga, 2009)**.** Addressing social injustices demonstrates a deep commitment to the students and community with the creation of a more equitable and compassionate society by creating inclusive educational communities that value students' cultures (North, 2006). School leaders should be willing to engage in often tricky processes that lead to more inclusive mindsets and practices that create the potential for socially just reforms (Theoharis, 2007).

Collaboration and advocacy are vital strategies for social justice reform and addressing educational challenges (Harmon, 2017; Wasonga, 2009). Engaging families and school staff in combined efforts to improve student learning can lead to meaningful change (Lewallen et al., 2015). Schools are permeable institutions and what happens outside of them with families and communities affects the students inside them (Kaplan & Owings, 2013). High schools provide an environment where students actively develop their cognitive and emotional abilities (Kim et al., 2017). Working with families improves attendance, lowers discipline referrals, increases graduation rates, and increases enrollment in postsecondary education (Kaplan & Owings, 2013). Students are also vital collaborators; while this can present challenges, students have a unique perspective and can provide insight and buy-in from their peers (Kim et al., 2017). Collaborative initiatives provide opportunities for advanced student educational attainment and create more positive learning environments that improve school employees' physical and mental health (Hunt et al., 2015). Leaders who collaborate recognize the best in people and encourage the community to promote student success and well-being (Harmon, 2017).

When schools partner with families to encourage student learning, students tend to succeed in school and life (Kaplan & Owings, 2013). Including students in the collaborative effort to address inequities provides them with the tools to improve the school and community (Welton et al., 2015). School community partnerships not only provide a means to improve student achievement, but they can reduce dropout rates, assist in school reforms, and improve the overall school climate (Tunison, 2013). Engaging local businesses and other community organizations to create partnerships with schools can provide students with new learning opportunities (Carter et al., 2020). When schools partner with local community groups, staff and families can also benefit from

services provided in addition to students (Hunt et al., 2015). Schools are both places of learning and places of work (Lewallen et al., 2015). Active support from campus principals can improve the quality of family and community involvement and the productivity of school staff (Epstein et al., 2011; Hunt et al., 2015). Including students in the collaborative effort to address inequities provides them with the tools to improve the school.

Developing good ideas is one thing, but putting them into practice can be pretty different (Carter et al., 2020). Leadership is vital to school improvement (DeMatthews & Izquierdo, 2020). Leaders that encourage positive, people-focused relationships with students, parents, staff, and community members clearly communicate the importance of collaboration (Epstein et al., 2011; Harmon, 2017). While school-community collaborations are crucial to increasing student success, educators often lack insights into creating these cooperative relationships (Kaplan & Owings, 2013). Leaders can facilitate collective action between the community and the schools to improve student achievement and eliminate inequities (DeMatthews & Izquierdo, 2020).

This case provides learning opportunities for those focused on developing social justice leadership in schools. Creating community school partnerships in which all students have an opportunity to succeed is a challenge that many schools currently face. Establishing an inclusive culture of collaboration with social justice is an avenue to improve student outcomes. Social justice requires people to answer tough questions and be willing to change.

Discussion Questions

1. How do you engage all stakeholders (students, parents, teachers, and community members) to address issues in providing access to programs to improve student educational outcomes?
2. What steps should school leaders take to help teachers and the community understand inherent bias?
3. What role, if any, should the school play in advocating for social reforms within a community?
4. What role, if any, do campus administrators play in changing the personal beliefs and values of the staff and community?
5. What policies, programs, or practices can campus leaders implement that mutually benefit students and the community?
6. What are appropriate ways to evaluate policies, programs, or practices that are in place to improve student outcomes?
7. How do campus administrators balance the need for systemic change with their job security?

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Abstract

Federal and state mandates, in addition to local policies, influence the public education students receive. States have developed accountability systems to meet federal requirements and to hold public schools accountable. Local districts, in turn, adopt policies to comply with state and federal requirements. While the motive is not clear, Texas incentivized districts to cap the number of students districts enrolled in special education to 8.5% of their total population. Accordingly, school districts took numerous steps to adjust their enrolled special education numbers. Limiting the number of students who received special education services also had the potential to impact the students' ability to graduate adversely. This research examined special education student enrollment and graduation trends of public school districts in Texas from the 2003-2004 through 2020-2021 school years.

This research was nonexperimental in nature. Publicly available data from the Texas Education Agency website were examined. Measures of frequency, central tendency, and variation were calculated to analyze trends in special education student enrollment and graduation rates during the time specified using data provided by all public schools in Texas. The results of the study showed that a concave-shaped pattern of special education student enrollment existed with decreasing and then increasing enrollment percentages. Special education student graduation rates were observed to be in a steady decline during the time frame observed. After the 2016-2017 school year both the statewide enrollment and graduation percentages increased at a higher rate than previously observed in the study.

Keywords: special education, Performance-Based Monitoring and Analysis System, IDEA, enrollment, graduation

Special Education Enrollment and Graduation Trends in Texas

Meeting the unique educational needs of students is challenging. Public schools attempt to meet student needs while also navigating various mandates. Federal legislation enacted the Individuals with Disabilities Act (IDEA) which required a free and appropriate individualized education program that meets the unique needs of students with diagnosed disabilities (Connolly & Wasserman, 2021; Mitchem et al., 2006; Simmons et al., 2021; Yell et al., 2007, Yell, 2013; Yell & Bateman, 2017). Nearly 6 million students qualify for individualized education programs through the IDEA (Gumas, 2018). States and local schools receive additional funding to meet these needs (Simmons et al., 2021).

In addition to the IDEA, other federal laws impact states' public education. The No Child Left Behind act (NCLB), was a federal law that required state accountability systems to monitor funds and focus on student achievement at both the district and individual campus levels from 2001- 2015. Updates and changes were made to the NCLB, and it was replaced with the passing of the Every Student Succeeds Act (ESSA) (Klein, 2016). High-stakes testing is one measure that the NCLB used to monitor schools' academic progress. While the IDEA called for individualized education, the NCLB required all children to meet set standards. Schools faced distinctive challenges in meeting the requirements of these laws (Oden, 2008).

The Texas Education Agency (TEA) developed a Performance-Based Monitoring Assessment System (PBMAS) for Texas public and charter schools to comply with the NCLB. Schools transitioned to PBMAS during the 2003-2004 school year. Indicators in PBMAS were designed to assess student performance, program effectiveness, and data integrity. The most comprehensive system within PBMAS was special education. In the

2004-2005 school year, 14 special education indicators were introduced, and by the 2006-2007 school year, 20 indicators were being utilized (Oden, 2008).

Disproportionate identification of students served by special education concerned educators and scholars for many years (DeMatthews & Knight, 2019b; Morgan et al., 2020; Sullivan et al., 2015). Oden (2008) suggested that high-stakes testing to meet the NCLB requirements coincided with increased special education enrollment in tested grades. To address the increased identification of special education students, a PBMAS indicator was introduced to incentivize districts with a target special education enrollment percentage. Districts with 8.5% or less of their student population enrolled in special education could receive a perfect score on this indicator. Additional PBMAS indicators created percentages based on the school populations of student subgroups to determine how many students could qualify for special education services to address the disproportionate identification of these populations (Oden, 2008; Knight & DeMatthews, 2020). Local school district administrators developed policies to meet the state guidelines (Mandel & Pendola, 2021). The districts' policies enacted to meet performance measures limited the number of students who received the IDEA services, resulting in a secondary outcome of limiting their access to a Free and Appropriate Public Education (FAPE). Failing to provide FAPE violated the students' rights and federal law (Hudson, 2018).

In the fall of 2016, an investigative report by the Houston Chronicle raised concerns and was soon followed by an investigation from the U.S. Department of Education (USDE). The USDE intervened and released a report that Texas' PBMAS violated federal law in three areas that included FAPE, chi ld find, and monitoring. From 2003- 2017 PBMAS effectively created a cap for special education enrollment, resulting in fewer students receiving support. Despite a state-wide increase in overall student

enrollment, special education enrollment dropped, and local districts engaged in practices that delayed or denied the identification of students for special education services and access to FAPE (DeMathews & Knight, 2019a, DeMathews & Knight, 2019b, Knight & DeMathews, 2020). This study examined how state requirements for PBMAS potentially impacted local Texas schools' special education enrollment and graduation trends.

Statement of the Problem

Texas school districts responded to federal mandates and state PBMAS criteria by implementing additional steps for staff to complete before testing students for special education (Oden, 2008). Texas districts used a process called Response to Intervention (RtI) and Section 504 of the Rehabilitation Act of 1973 to delay or prevent students from qualifying for placement in special education (Michals, 2018). Struggling students were provided interventions through RtI and could stay there for years. Accommodations were provided under Section 504 instead of the IDEA to keep special education enrollment numbers down. However, these actions only provided support in a general education setting and failed to provide the same level of support required by the IDEA (Samuels, 2018a). Public school district policies developed to meet the monitoring guidelines denied services to over 200,000 students for over a decade (Michals, 2018).

The investigative news series completed by the Houston Chronicle unveiled what some considered an illegal cap that set an enrollment target for districts to adhere to when identifying students for special education (Simmons et al., 2021). After the media coverage, a federal investigation found that Texas had denied services to students with disabilities for years, and soon a statewide special education overhaul was announced. The USDE investigation concluded students' rights under the IDEA were violated by failing to provide FAPE, child find, and adequate monitoring the provision of services to

all students with disabilities (Knight & DeMathews, 2020). The TEA enacted new policies to guard against future identification limits for children with disabilities (Harris, 2018). Texas Governor Abbott worked with state legislators to pass a law to prevent schools from limiting the number of students receiving special education services (U.S. Department of Education, 2018). While significant progress for special education students in Texas was noted after almost a decade of restrictive policies, the USDE believed there were additional corrective actions the state had to take (Samuels, 2018b).

Purpose of Study

This research observed the trends of special education enrollment and graduation percentages. Specifically, the study examined special education enrollment and graduation trends of individual public school districts in Texas from 2003-2004 through 2020-2021. Student characteristics were also examined over the same time frame to compare to enrollment and graduation patterns. Special education data were also observed by district classifications according to the 12 urban-centric definitions used by the National Center for Education Statistics (NCES) to see potential effects of public school districts' sizes and locations. The study used measures of central tendency over the time frame to observe the potential influence of PBMAS policies that incentivized school districts to cap special education enrollment and the potential impact of corrective actions taken after 2016.

Research Questions

The study was guided by four research questions to investigate whether the corrective actions taken by the Texas Legislature and TEA influenced the enrollment and graduation trends of special education students in Texas.

1. What were the state-level special education enrollment and graduation trends from the 2003-2004 school year through the 2020-2021 school year?
2. How did district special education enrollment and graduation trends vary by district NCES classifications?
3. How did district special education enrollment and graduation trends vary by district percentages of students classified as bilingual, economically disadvantaged, African American, Hispanic, American Indian, and White?
4. Was there a structural break in district special education enrollment and graduation rates following the 2016 PBMAS corrective action?

Definition of Terms

Academic Excellence Indicator System (AEIS)- The data system used by TEA from 1990-2012 (Texas Education Agency, 2022b)

City-Large- Territory inside an urbanized area and inside a principal city with a population of 250,000 or more (Texas Education Agency, 2022a).

City-Midsize- Territory inside an urbanized area and inside a principal city with a population less than 250,000 and greater than or equal to 100,000 (Texas Education Agency, 2022a).

City-Small- Territory inside an urbanized area and inside a principal city with a population less than 100,000 (Texas Education Agency, 2022a).

Individuals with Disabilities Education Act (IDEA)- 1990 Public Law 94-142 was amended and renamed the Individuals with Disabilities Education Act (Yell, 2013).

Individualized Education Program (*IEP)*- established with Public Law 94-142 and amended with IDEA provides eligible students with disabilities receive services in public schools and are not excluded from public schools (Yell & Bateman, 2017).

Free and Appropriate Public Education (FAPE)- Special education services are provided at public expense, under public supervision, and without charge, and meet state education agency standards, including appropriate preschool, elementary, and secondary school education, provided to conform with an individualized education program (Yell & Bateman, 2017).

Least Restrictive Environment (LRE)- Requirement that students with disabilities are educated/ included to the greatest extent appropriate with peers who are not disabled (Yell, 2013).

National Center for Education Statistics (NCES)- The primary federal entity for collecting and analyzing data related to education in the U.S. and other nations (NCES, 2021).

Percent Correct Classification (PCC)-The proportion of test observations that are correctly classified (Grice, 2011).

Public Education Information Management System (PEIMS)- The data system that houses all data requested and received by TEA about public education (Texas Education Agency, 2022b).

Response to Intervention (RtI)- An instructional system, often with tiers of support, designed to improve the educational outcomes of all students (Kahn, 2013).

Special Education- The population of students served by special education programs (Texas Education Agency, 2022b).

Special Education Enrollment- The number of students districts report as qualified for services under the IDEA (Texas Education Agency, 2022b).

Special Education Graduation- The number of students who qualify for services under the IDEA that districts report as graduating (Texas Education Agency, 2022b).

Suburban-Large- Territory outside a Principal City and inside an Urbanized Area with a population of 250,000 or more (Texas Education Agency, 2022a).

Suburban-Midsize- Territory outside a Principal City and inside an Urbanized Area with a population less than 250,000 and greater than or equal to 100,000 (Texas Education Agency, 2022a).

Suburban-Small- Territory outside a Principal City and inside an Urbanized Area with a population less than 100,000 (Texas Education Agency, 2022a).

Texas Academic Performance Reports (TAPR)- Report that provides extensive information about student performance by school and district (Texas Education Agency, 2022b).

Town-Distant- Territory inside an Urban Cluster than is more than 10 miles and less than or equal to 35 miles from an Urbanized Area (Texas Education Agency, 2022a).

Town-Fringe- Territory inside an Urban Cluster that is less than or equal to 10 miles from an Urbanized Area (Texas Education Agency, 2022a).

Town-Remote- Territory inside an Urban Cluster that is more than 35 miles from an Urbanized Area (Texas Education Agency, 2022a).

Review of Literature

Delivering a quality learning experience that meets individual student needs presents numerous challenges to schools (Johnson et al., 2018). Schools must navigate regulations and statutes at the federal, state, and local levels (Pazey et al., 2015; Walsh et al., 2018; Yell, 2013). NCLB and IDEA are federal laws that have caused states and schools to rethink how they provide special education (Oden, 2008). Federal statutes, state laws, and policies, along with local district policies, can be confusing and

challenging to implement. This can create situations where schools unknowingly fail to provide services to students (DeMatthews & Knight, 2019a).

Federal Laws

The IDEA guarantees that students with disabilities receive FAPE and that they receive it in the least restrictive environment (LRE) (Deardorf et al., 2021; Hudson, 2018; Losen et al., 2014; Schanding et al., 2017; Simons et al., 2021; Yell, 2013; Yell & Bateman, 2017; Yell et al., 2007). Students with disabilities require additional resources such as tutoring, remediation, or other support because they are often behind their peers both academically and in readiness for postsecondary outcomes (Plotner et al., 2016; Weis et al., 2016). Graduation is an important outcome that impacts both the individual and the community (Lenderman & Hawkins, 2021).

Schools offer individualized education plans that support students in achieving their personal best (Delgado, 2017). The IDEA and other laws attempt to facilitate a fair and equitable education environment (Hooper et al., 1999; Superfine, 2013). Schools are provided federal funding to assist in meeting the needs of students who qualify for special education under the IDEA (Yell, 2013; Simmons et al., 2021). Meeting the needs of students with disabilities improves the opportunity for graduation and employment post-graduation (Southward & Kyzar, 2017). To receive the funds, schools must comply with all federal laws and ensure students receive FAPE in the LRE (Michaels, 2018). However, federal funding needs to be more comprehensive, and some studies have shown that these funds cover only 8%-20% of the programs' costs. States must come up with additional funds to meet the requirements of the law (Michaels, 2018; Yell, 2013).

The NCLB required states to establish performance goals for all students and to make adequate yearly progress toward those goals. Title I federal funding could be

withheld from states that did not adhere to this standard. Annual testing was administered to students to track this progress (Imazeki & Reschovsky, 2004). Students' grade level promotion and graduation could be impacted by these high-stakes exams (Katsiyannis et al., 2007). The NCLB promoted improving education for all students, including students with various challenges. Financial incentives were created with the NCLB to encourage standardization for all students (Hodges, 2018). School leaders faced difficulties following students' IEPs established under the IDEA while also preparing all students to achieve a prescribed academic standard created with the NCLB (Mandel & Pendola, 2021). Congress increased Title I funding to assist schools in meeting the rigorous standards of the NCLB (Oden, 2008). Despite the increase, funding was still insufficient to cover the complexities required by the law and the educational programming needed to raise the academic outcomes of all students (Imazeki & Reschovsky, 2004).

School Accountability

In response to public demand for more efficient and effective schools, the Texas Legislature created incentive programs based on performance criteria (Rutherford, 2014). Texas began school accountability systems in the 1980s, and for many years Texas was regarded as the model for standards-based reforms (Haney, 2000). Districts soon focused on becoming "successful" by using data from test scores to drive their decisions. In the initial systems, special education students could be excused from standardized tests, take an alternative assessment, or have their test scores excluded from state-accountability measures (Booher-Jennings, 2005). Consequently, the number of students qualifying for special education began increasing. Increased enrollment in special education equated with increased state-funding while also increasing the number of testing exemptions (Greene, 2007.) Some school districts that received the state's highest rating had special

education populations of over 30%, while the state average at the time was closer to 12% (Grubbs, 2000). Higher ratings were also accompanied with financial incentives, and consecutive poor ratings led to punitive state interventions (Haney, 2000).

To meet requirements of the NCLB, Texas adopted PBMAS. Under PBMAS, Texas collected student data from districts to improve student performance and determine program effectiveness. Standardized high-stakes testing was used as one of several reform measures to improve student achievement (Pazey et al., 2015). With numerous indicators, PBMAS was a complex accountability system that monitored and enforced the annual yearly progress of students in schools (Oden, 2008). Accountability systems and high-stakes testing changed teaching practices and district policies (Booher-Jennings, 2005). Schools began adjusting educational programs to meet the requirements of policies instead of the needs of students (Mandel & Pendola, 2021).

A significant component of several PBMAS indicators was special education enrollment. When the TEA first introduced its monitoring system in 2004, nearly 1,100 of the state's 1,200 school districts provided special education to more than 8.5 % of their students (DeMatthews & Knight, 2019a, DeMatthews & Knight, 2019b). PBMAS also penalized schools if the number of African American or Hispanic students who received special education services was more than one percent higher than the district's total special education percentage (Morgan et al., 2022). After the indicators were enacted, more than 96% of districts lowered their special education enrollment rates. School districts also reduced special education staff and increased paperwork to delay students qualifying for special education. One district reduced its special education staff by 40%. Cuts to diagnosticians slowed the evaluation process, and cuts in other areas reduced the quality of services provided. This policy reduced the number of students that districts

allowed to qualify for services, and that action then reduced the amount of IDEA funds for which the districts qualified (Rosenthal, 2016b; Rosenthal, 2016c; Rosenthal, 2016d; Rosenthal, 2016e; Rosenthal & Barned Smith, 2016).

While no data reflected a drop in the overall population of students who qualified for special education, local leaders took steps to meet the requirements of PBMAS (DeMathews & Knight, 2019). These steps were necessary to avoid losing funding. Previously, state funding was provided to districts based only on the number of students who qualified for special education; educational outcomes were not a factor (Grubbs, 2000). PBMAS included an indicator that penalized districts with their ratings and potentially with funding if they had more than 8.5% of their students in special education (Mandel & Pendola, 2021). Local districts developed various procedures to meet the state's guidelines. Many districts utilized the RtI process to prevent students from being evaluated and placed into special education (Michals, 2018).

Graduation Rates

Graduation rates serve as a key measure of school districts' success for parents, community members, and policymakers (Lenderman & Hawkins, 2021). The NCLB included graduation rates for student subgroups, including students who qualified for special education as an academic measure for schools (Katsiyannis et al., 2007). Some considered graduation simply as an academic outcome, but graduation impacts students' future economic opportunities (Lenderman & Hawkins, 2021). Helping connect schoolwork to jobs after graduation is an important component of transition planning within a student's IEP (Johnson et al., 2013). Engaging students with relevant instruction while providing support and accommodations improves their opportunity for a high school diploma and increases their chances of successful postsecondary outcomes

(Wilkins et al., 2014). Improving graduation rates can also improve economic factors in a community (Messacar & Oreopoulos, 2013). Studies have shown an increase in both postsecondary education and paying jobs for students with disabilities (Katsiyannis et al., 2007).

District Actions

Under pressure to achieve high accountability ratings despite decreased support, school leaders faced tough decisions (Mandel & Pendola, 2021). Administrators sought solutions to maximize ratings, lower the number of students who qualified for special education, and increase funding. To stay at or below the 8.5% target, districts slowed the identification of students for special education by reducing both staff and services for students with disabilities (Rosenthal & Smith, 2016). In addition to reducing special education staff, principals referred students to 504 instead of special education. They began requiring RtI to be completed before referring a student to special education (Mandel & Pendola, 2021).

RtI is a process that schools implemented to provide instructional interventions to help students succeed in a general education classroom (Martinez & Young, 2011). Some teachers lacked the instructional knowledge and associated practices needed to meet the diverse needs of students in the general education classroom. This lack of knowledge was found to contribute to the over-identification of struggling students into special education programming (Johnson et al., 2018). RtI provides training to teachers with techniques to help address the unique needs of all students. It is an approved federal intervention; however, RtI should not be required before evaluating a child for special education (Rosenthal, 2016a, Zirkel 2009).

Other Factors

To implement interventions for students with disabilities, all stakeholders should receive adequate training and resources (Landmark & Zhang, 2012). Still, access to professional development, service providers, funding, and additional resources can be challenging for schools (Simmons et al., 2021). Schools are often faced with difficult choices in meeting the complex requirements for special education with finite resources (McKittrick et al., 2019). The distance from resources amplifies this problem for small schools (Johnson et al., 2018, Mitchem et al., 2006). School location and size are the strongest predictors of staffing and funding differences (Kettler et al., 2015). Funding formulas are often inadequate in addressing the needs of rural districts (Bigham et al., 2019; Jimerson, 2005; Mitchem et al., 2006). A school's size can also affect teacher salaries and resources available to students (Eacott et al., 2020). The remote location of some schools may limit access to resources found in larger, more metropolitan, or urban areas (OCED, 2021). Despite the challenges, smaller schools often are better suited for creating IEPs for students (McKittrick et al., 2019).

Corrective Action

Students across the state were affected by the PBMAS cap; after implementing PBMAS, enrollment in special education declined significantly compared to the national data despite an increase in overall student enrollment (DeMatthews & Knight, 2019a; Rosenthal, 2016a). The investigative report and data gathered by the Houston Chronicle triggered federal oversight and legislative actions to restore access to FAPE for students across the state (Knight & DeMatthews, 2020). In the fall of 2016, TEA responded by committing to no longer using the PBMAS indicator that capped special education

enrollment. Texas Legislators pre-filed bills to address these concerns before the 2017 legislative session (DeMatthews & Knight, 2019a, Morgan et al., 2022). Additional corrective actions were taken in subsequent years and legislative sessions to prevent future limitations and to increase funding to meet the needs of students. The state also passed a law to establish a special education advisory committee (Simmons et al., 2021).

Method

Research Design

This quantitative descriptive-comparative research was nonexperimental in nature. This study used data publicly reported by the TEA via state-level TAPR and AEIS reports. Over 1,200 independent school districts reported the data to TEA. This retrospective study used measures of frequency, central tendency, and variation to examine trends in special education enrollment and graduation during a specified time frame. The data served as a census from pre-PBMAS (2003-2004) through 2020-2021. This time frame allowed the study to explore pre- and post-PBMAS requirements that possibly influenced special education enrollment and graduation percentages for students in Texas public schools.

Data Collection

In 1993 the Texas Legislature mandated a public school accountability system, PEIMS (TEA, 2022b). PEIMS houses demographic, academic, financial, personnel, and organizational data collected from campuses and districts across the state. School district personnel submit PEIMS data electronically to TEA. Student performance data were reported with the AEIS from 2003 and TAPR from 2012 to 2021. The TEA collects and houses data from districts and campuses across the state that is accessible on its website.

Data were collected data from publicly available online information using the databases found on TEA's academic accountability website. The statewide district data was available in both Excel and ASCII format. District-level accountability data were downloaded to an Excel file, beginning with the 2003-2004 AEIS reports. This process was repeated for each subsequent year through the 2011-2012 AEIS report. The appropriate AEIS glossaries were used to identify and label the data needed for this study. Statewide TAPR reports were also available in both Excel and ASCII formats. TAPR reports were downloaded to an Excel file for each year, beginning with the 2012-2013 TAPR report and ending with the 2020-2021 TAPR report. The accompanying online TAPR glossary was used to create appropriate labels for each data set used in the study. When all 17 files were downloaded and labeled, the data from districts were compiled into a single master spreadsheet in Excel.

Data included in the master sheet included student special education enrollment numbers, the total student enrollment, student characteristics, and data for annual graduation for each district. The 2019 NCES urban locale classifications data for each district were also downloaded from a separate report on TEA's website and added to the master spreadsheet. Some districts were deleted from the data set because they did not meet all the criteria to be included in the research. Finally, a logic = function was used to determine if districts were in all 17 reports. TEA reported that there were over 1,200 public and charter schools in Texas at the time data were being collected. This study found that 1,020 districts met the requirements needed for comparison over the longitudinal time frame.

Inclusion/Exclusion

Although this is a census study, some school districts were excluded because of their unique characteristics. Charter school districts were not included in this study. State-operated schools, the Texas School for the Blind and Visually Impaired, the Texas School for the Deaf, and the Texas Juvenile Justice Department school were also excluded. To be included in this study, the school districts were operational during the 2003-2004 AEIS report and continued to operate through the 2020-2021 TAPR. Student characteristic information was based on categories currently reported to the state in TAPR reports. The characteristics that were used in this study are African American, Hispanic, White, American Indian, special education, economically disadvantaged, and emerging bilingual/ English learner. Asian, Pacific Islander, and Two or more races were not included in this study because they were reported differently or not reported before the 2010-2011 data. Although the data is publicly available, it is not currently all available in one singular report.

Economically disadvantaged and bilingual student characteristics were included for enrollment percentages but were excluded for graduation observations. The economically disadvantaged and the bilingual student characteristics were excluded from the graduation comparison because the data were not included in the reports available on TEA's website.

Data Analysis

Several observational analyses were performed for this study. Prior to the analyses, percentages were calculated based on total enrollment and graduation numbers reported by the individual districts from each report. Initially, descriptive statistics were calculated in Excel. The program provided information on the measures of frequency,

central tendency, and variation. The data were then analyzed with Observation Oriented Modeling (OOM) software (version 5.4.2022; Grice 2011; 2016). Descriptive statistics were run with special education enrollment, and because of the high variance of numbers reported by districts, median values were used. The median was used as a basis for ordinal pattern analyses (concatenated orderings) to observe the trends over time. Descriptive statistics were calculated for enrollment and graduation trends for all years studied for special education, economically disadvantaged, White, African American, Hispanic, Native American, and bilingual students. The data were also separated and observed by NCES urban-centric definitions. Once the median trend lines for both special education enrollment and special education graduation were established, ordinal pattern analyses (concatenated orderings) were performed.

Results

Observations

This study was guided by four research questions. Findings are organized according to the research questions.

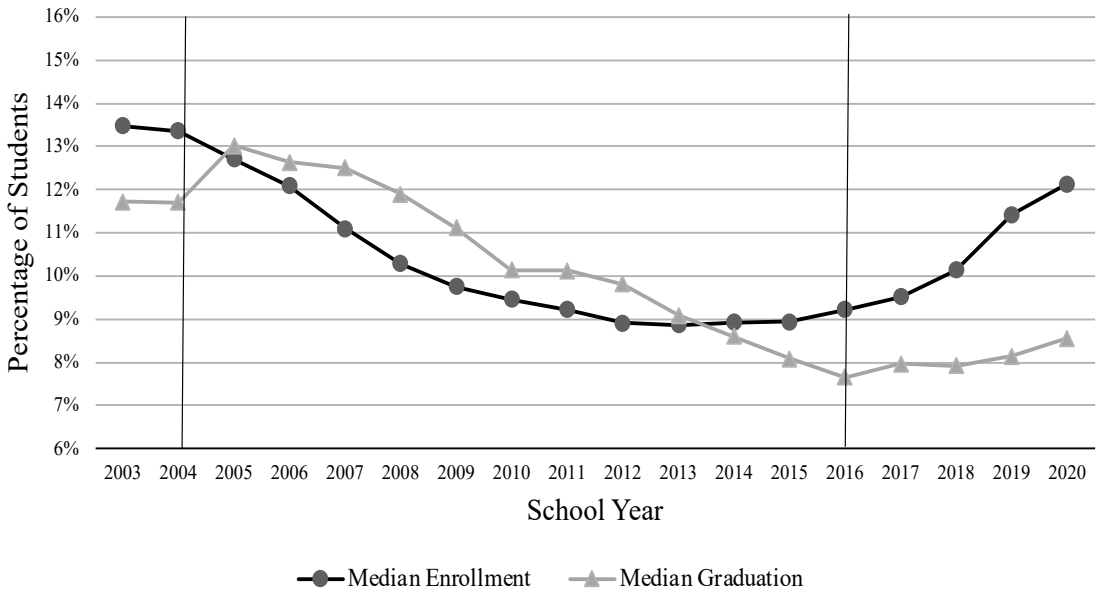
Research Question 1: What were the state-level special education enrollment and graduation trends from the 2003-2004 school year through the 2020-2021 school year?

The median special education enrollment percentage for Texas was its highest, 13.48%, in the 2003-2004 year. During the same year, the maximum percentage enrolled for a single district, 40%, was reported. In two years, the maximum enrollment percentage dropped to 34.58%, but in the subsequent 10 years, there were both increases and decreases in the percentage of students enrolled in special education. In 2016-2017 the lowest maximum enrollment of 23.35% was reported by a district. The 2020-2021 year reported a maximum enrollment of 26.52%. The medians followed a more easily

observed pattern than the maximums. From 2003-2013 the median enrollment percentages of districts across the state declined. The lowest enrollment of 8.87% was reported during the 2013-2014 year. Over the next seven years, median enrollment increased to 12.13% by the 2020-2021 year. Seventy-seven percent of the time, districts matched the ordinal pattern evidenced in state medians depicted in Figure 1 for special education enrollment over the period of time studied. This means that for 23% percent of the 1020 districts studied, enrollment patterns strayed from the pattern depicted in Figure 1. For special education enrollment, a concave-shaped pattern was observed, with a rate increase after 2016 (Figure 1).

Figure 1

Texas Special Education Enrollment & Graduation Rates, 2003-2020



Statewide special education graduation trends did not demonstrate the same concave pattern. Instead, after an initial increase, there was a steady downward trend in special education gradations until 2016 (Figure 1). Over the 17-year period, special education graduation percentage maximums fluctuated between 33.33% and 100%.

Variance in graduation rates was greater than the enrollment percentage variance. Median special education graduation percentages began in 2003-2004 at 11.72% and peaked at 13.02% in 2006. The rate declined to a low of 7.6% in 2017 and rose to 8.56 % in the 2020-2021 school year. Fewer individual district special education graduation rate trends matched the median state-wide median trends for special education graduation than enrollment. Individual districts matched trends in state median special education graduation rates depicted in Figure 1 60% of the time. There was a decline in the median special education graduation rate until 2016, with a rate increase after 2016.

Table 1

Texas Public Schools SPED Enrollment and Graduation Rates, 2003-2020

Year	*M*	*Mdn*	*SD*
Enrollment 2003	13.89	13.48	4.04
Graduation 2003	12.63	11.72	7.83
Enrollment 2004	13.9	13.36	4.09
Graduation 2004	12.81	11.7	7.92
Enrollment 2005	13.14	12.71	3.75
Graduation 2005	13.76	13.02	8.11
Enrollment 2006	12.35	12.09	3.44
Graduation 2006	13.59	12.64	8.37
Enrollment 2007	11.36	11.1	3.19
Graduation 2007	13.77	12.5	9.58
Enrollment 2008	10.51	10.29	2.92
Graduation 2008	13.11	11.9	9.44
Enrollment 2009	9.98	9.75	2.75
Graduation 2009	12.41	11.11	9.8
Enrollment 2010	9.63	9.46	2.75
Graduation 2010	11.42	10.14	7.5
Enrollment 2011	9.43	9.23	2.65

Graduation 2011	11.4	10.12	7.57
Enrollment 2012	9.11	8.91	2.49
Graduation 2012	10.98	9.81	7.99
Enrollment 2013	9.04	8.87	2.57
Graduation 2013	10.02	9.09	6.92
Enrollment 2014	9.14	8.93	2.67
Graduation 2014	9.75	8.61	7.39
Enrollment 2015	9.16	8.95	2.67
Graduation 2015	9.05	8.09	6.41
Enrollment 2016	9.32	9.22	2.46
Graduation 2016	8.4	7.66	5.99
Enrollment 2017	9.67	9.52	2.66
Graduation 2017	8.71	7.96	5.8
Enrollment 2018	10.33	10.14	2.81
Graduation 2018	8.52	7.93	5.33
Enrollment 2019	11.57	11.43	3.18
Graduation 2019	9	8.14	6.38
Enrollment 2020	12.25	12.13	3.11
Graduation 2020	9.29	8.56	5.91

Research Question 2: How did district special education enrollment and graduation trends vary by district NCES classifications?

Every district studied was assigned 1 of 12 NCES categories. The districts were grouped together based on their NCES classification to answer RQ2. Descriptive statistics were calculated, and ordinal pattern analyses were performed in the same manner as the statewide observations. PCC values were calculated for each category and are displayed in Table 2. Rural-Fringe schools matched the state-wide median enrollment pattern 83% of the time.OPA. Rural-Remote schools, matched the median enrollment pattern about 70% of the time.

Table 2

Degree of match to the median Texas SPED enrollment and graduation rate trends, 2003-2020

		Enrollment	*Graduation*
NCES Classification	Cases	PCC	PCC
Rural-Remote	218	69.98**	52.11**
Rural-Distant	303	76.29	57.33
Rural-Fringe	119	82.45*	65.46
Town-Remote	73	79.8	65.14
Town-Distant	96	80.32	58.08
Town-Fringe	31	79.06	68.33
Suburb-Small	6	82.24	65.26
Suburb-Midsize	25	78.75	65.51
Suburb-Large	77	76.67	64.73
City- Small	22	74.81	65.75
City-Midsize	19	78.57	70.66
City-Large	31	79.55	72.19*

Note. All c-values <.001
* Indicates highest match
** Indicates lowest match

Rural-Remote schools had a higher standard deviation each year than any other classification. These school communities were smaller and located further from urban centers. One case observed in this category had a maximum student enrollment of 20 students during the time frame studied. The small population of these schools could be a contributing factor in the variations that were observed. Despite the variations, the concave pattern was observed in all 12 NCES categories as seen in Figures 2 and 3. The figures also mark the time frame of PBMAS incentivizing an 8.5% cap in special education enrollment. After 2016 variance of special education enrollment percentages

become more compressed for all 12 classifications. City-Large and Suburban-Large districts demonstrated less variance than districts in smaller classifications.

Figure 2

Texas Rural and Town Median SPED Enrollment by NCES classification, 2003-2020

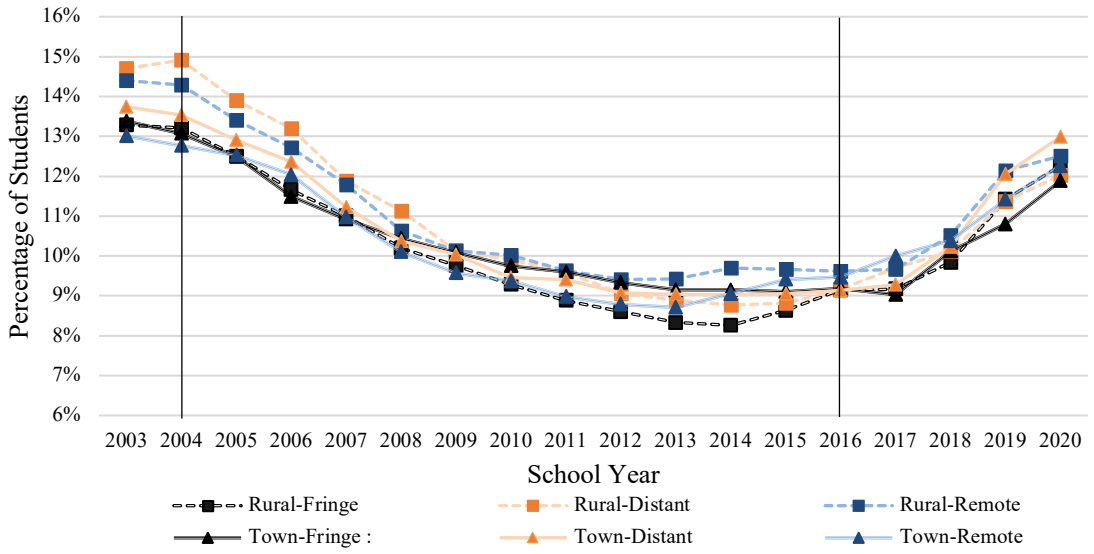
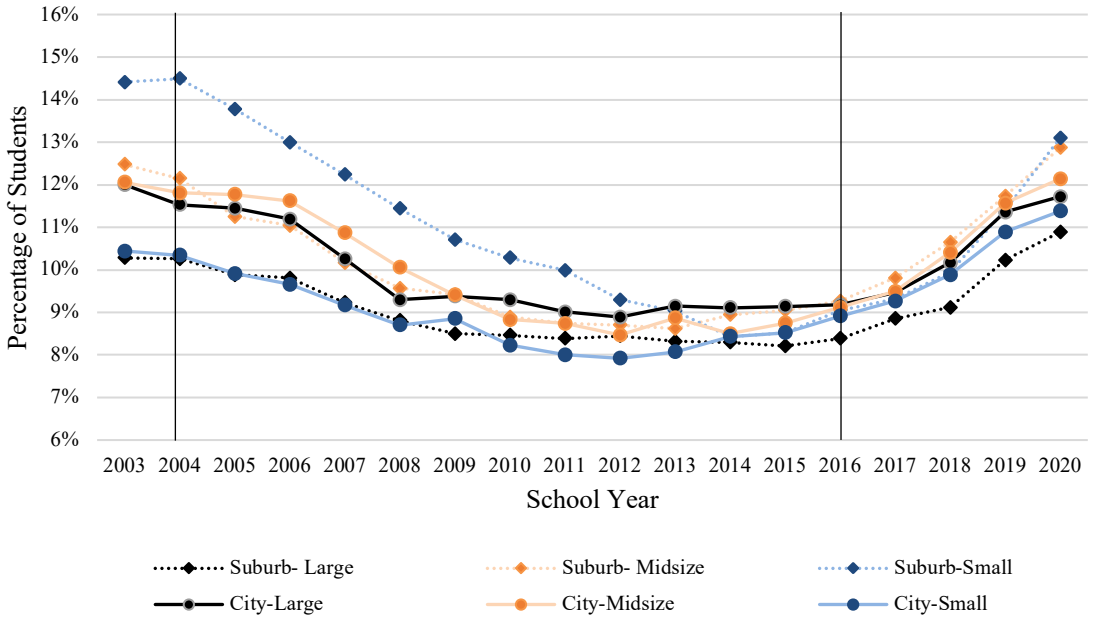


Figure 3

Texas Suburban and City Median SPED Enrollment by NCES classification, 2003-2020



Special education graduation trends for each classification did not match the statewide graduation trend as closely as they matched the enrollment trends. Figures 4 and 5 display the median trends of the 12 classifications. All Suburban and City-Large and City-Size increased the percentage of special education graduates until 2007. After 2007 all 12 classifications appear to follow the overall state graduation trend more closely. The highest PCC value was City-Large at 72%. The smallest graduation PCC value was Rural-Remote at 52%. For both enrollment and graduation, Rural-Remote had the largest variance and for all classifications studied over the time frame.

Figure 4

Texas Rural and Town Median SPED Graduation by NCES classification, 2003-2020

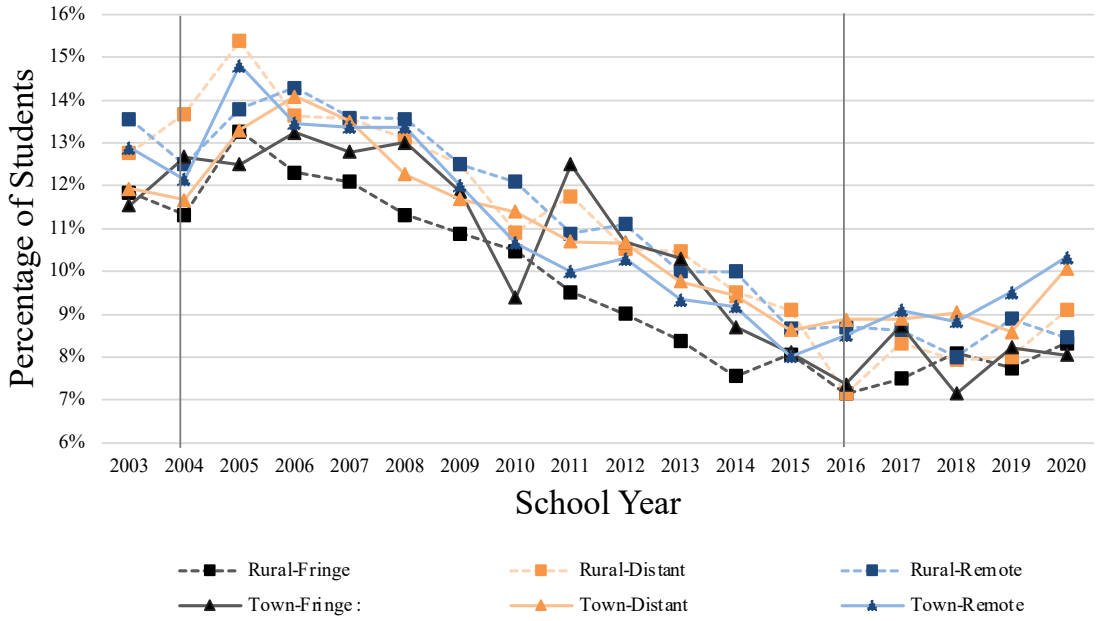
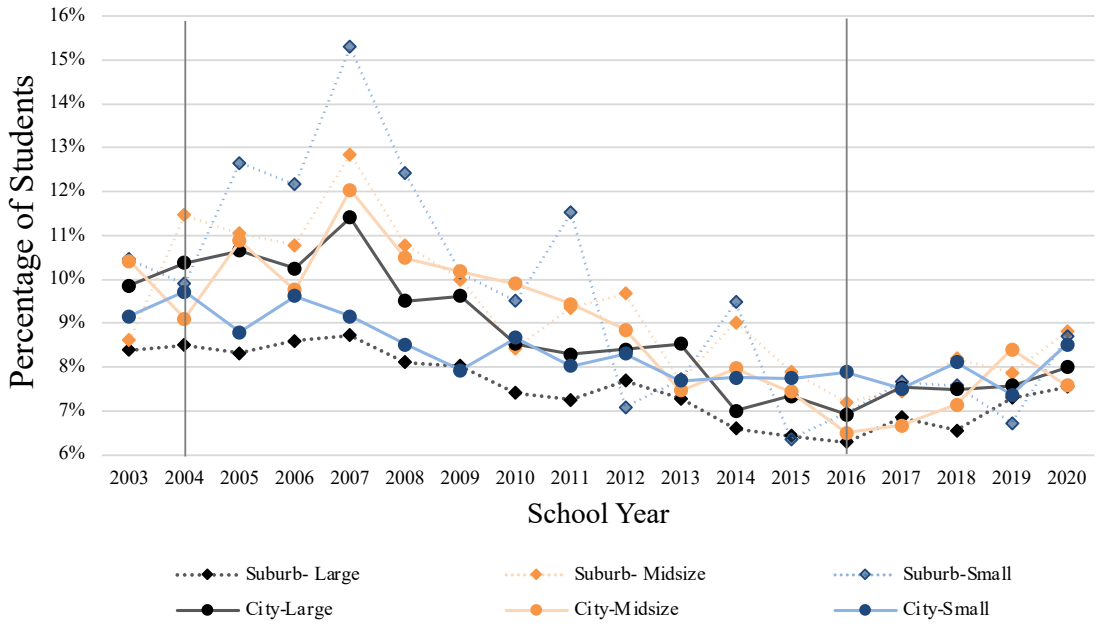


Figure 5

Texas Suburban and City Median SPED Enrollment by NCES classification, 2003-2020



Research Question 3: How did district special education enrollment and graduation trends vary by district percentages of students classified as bilingual, economically disadvantaged, African American, Hispanic, American Indian, and White?

Across districts, special education enrollment maximums and minimums fluctuated less than all other characteristics studied, excluding American Indian. District American Indian student enrollment fluctuated from 0%-30% compared to special education enrollment of 0%-40%. The median enrollment trends for both bilingual and economically disadvantaged students trended up or increased over the time frame of the study. The median enrollment trend of African American students and White students decreased while Hispanic student enrollment increased.

American Indian student graduation demonstrated less fluctuation across districts than any other group. African American, Hispanic, White, and special education student graduation fluctuated greatly across individual districts from 0%-100%. The median trend line for both African American student and American Indian student graduation remained fairly flat. Hispanic student median graduation rates increased and demonstrated an upward trend, while White student graduation rates decreased.

District student characteristic data were observed for variance from the median trend patterns for special education enrollment and graduation for RQ 3. To capture the proportion of students with each classification over the 17 years studied, yearly percentages were summed, with totals representing the overall weight of that characteristic for the years studied. Following this a median-split was performed for each characteristic. Similar to how variation in enrollment and graduation trends by NCES categories were analyzed, districts at or above the median ("high") were compared to districts below the median ("low") for each district student characteristic examined. The greater the difference in the degree district patterns matched state patterns of enrollment and graduation rates (as depicted in Figure 1) between the high and low groups was considered evidence the characteristic influenced enrollment or graduation trends. The

PCC values for each category are included in Table 3. The lowest PCC value for both the enrollment and graduation trend was the below-median group for African American students. The low case value for African American student enrollment was 74.86, and the high case value for African American student enrollment was 78.35 as shown in Table 5. Graduation PCC values varied by 6% to 9%. The high case American Indian student PCC value was the only high case to have a lower PCC value than the low cases. Overall special education student enrollment patterns did not vary by student characteristics when divided into median-split groups.

To further test for variance, the characteristics were divided into quarter splits. African American students demonstrated the most variance with the low category PCC value of 73.08, moderately low 76.65, moderately high, 77.97, and high 78.73. White and Hispanic student groups demonstrated less than 1% variance for enrollment with the median split and less than a 2% variance with the quarter split. The quarter split tables are in the Appendix. While more variance appeared in the quarter split over the median split, the differences remained below 6% for enrollment. White and Hispanic student graduation rates had a PCC variance of 10% and 12% between low and moderately low. There was less than a 2% variation for those categories between moderately low, moderately high, and high. American Indian student high value had the lowest PCC for graduation at 50.16 and a variance of 14% between high and moderately low. African American students had a variance of 16% between moderately low and high. There was no difference observed with either the quarter split or the median split so the study infers there is not a difference with special education enrollment or graduation as it relates to the observed student characteristics.

Table 3

Demographic Median Split PCC values compared to the established median patterns

	Enrollment		Graduation	
	<Mdn	*=>Mdn*	*<Mdn*	*=>Mdn*
Economically Disadvantaged	76.74	76.47	-	-
Bilingual	76.13	77.08	-	-
White	76.74	76.48	57.69	63.13
Hispanic	76.81	76.41	57.34	63.49
African American	74.86	78.35	55.55	65.28
American Indian	76.15	77.06	63.38	57.47

Note. All c-values <.001

Research Question 4: Was there a structural break in district special education enrollment and graduation rates following the 2016 PBMAS corrective action?

The observations conducted with the 17 years of data do not demonstrate a clear structural break with the trends after the corrective actions taken in 2016-2017 in enrollment percentages or graduation percentages, but there is a faster rate of increase observed after 2016. The districts also showed less variation with both special education enrollment and graduation percentages after the corrective actions.

The enrollment demonstrated a concave pattern with decreasing enrollment percentages from 2003-2004, with an unanticipated bottoming out in 2013-2014. Special education enrollment rates began to increase in 2014 having reached the low point in 2013. Out of the 1,020 districts, 886 had a lower special education enrollment in 2015-2016 than 2003-2004 and 2020-21. Pairwise comparisons show that 84% of districts' enrollment median percentages have increased each year between 2016-2017 and 2020-2021.

Overall, special education graduation rates showed a decline between 2003-2004 and 2020-2021. The highest median graduation rate was 13.02% in 2005-2006 and the lowest was 7.66% in 2016-2017. The special education graduation rate did not show a structural break, but it did show a gradual increase to 8.56% in 2020-2021 with a faster rate change occurring after the 2016-2017 school year. There was more variance with graduation rates; only 51% of districts followed the pairwise comparison of graduation median percentages from 2016-2017 and 2021.

Discussion

Summary

This study examined special education enrollment and graduation trends by district in the state of Texas and added to previous studies that examined the potential impact of district policies on special education enrollment. The findings in this study helped describe enrollment and graduation trends over the last 17 years. The research questions focused this retrospective study on descriptive analysis. A pattern in special education enrollment that differed from other student characteristic enrollment patterns emerged. A concave-shaped trend was identified for special education median enrollment percentages during PBMAS. Student enrollment in special education showed a rate increase after the suspension of the PBMAS indicators that incentivized an enrollment cap. No other student characteristics studied demonstrated a similar pattern. Special education graduation median percentages declined over the time frame of the study until the 2016-2017 school year.

The NCES classifications of districts appeared to impact variance more than the overall trend. Rural-Remote had more schools in its classification than others and consistently had variations. Town-Fringe was another classification that demonstrated

more variance than other categories, and schools within these communities are closer to resources found in more populated areas. City and Suburban schools had higher populations and potentially more access to resources. Schools within these categories seemed to have less fluctuation with special education student enrollment than Rural or Town schools. After the 2016-2017 school year all NCES groups showed less variance and clustered closer together.

Student characteristics were not observed to impact the special education student enrollment or graduation trends. American Indian student median enrollment has remained steady at under 1% of total enrollment over the last 17 years. African American student median enrollment has shown a slight decrease over the years from 3% to 2% of total enrollment. The median population of Hispanic students has shown a steady increase over the last 17 years, while the population of White students has shown a decrease. Bilingual student enrollment has shown a steady increase from 4% to 6% of total enrollment. One of the biggest percentage changes occurred with the economically disadvantaged student enrollment. In 2003-2004 50% of students in Texas schools qualified as economically disadvantaged. In 2020-2021 over 60% of Texas students qualified as economically disadvantaged.

Assumptions & Limitations

This study has several limitations. This study is limited to the data provided by districts to the state on the number of students who qualify and graduate. This study assumes that accurate data was reported to TEA. Some individual district variances could be attributed to bad data being reported to the state. The global COVID-19 pandemic impacted enrollment in schools and affected the number of students assessed for special

education. The global pandemic also influenced students' educational support and could have impacted graduation rates.

It is possible that data entry requirements and procedures changed over time and could have played a factor in the data reported to the state. The study did not calculate for changes to data requirements or changes to student eligibility requirements.

Graduation requirements were changed during the timeline of this study. The study did not calculate for changes to graduation requirements. Individual student enrollment and graduation data were not tracked in this study, so there is no way to identify what grade the students entered in special education to determine what year they should graduate. Standardized tests and testing requirements also changed during the time frame of this study, and those changes could also impact the graduation rate change. The study did not test the interaction between graduation and enrollment.

Recommendations for Future Studies

This study did not determine causation for the concave-shaped pattern in enrollment. Subsequent studies should examine the decline and increase in special education enrollment to determine if the concave-shaped pattern was an effect of district policies created to meet the 8.5% cap for PBMAS ratings in special education graduation rates in more detail. Future studies could examine the cause and effect between special education enrollment and district NCES classification to determine if the district's classification affects special education enrollment. Another causal study could examine the interaction between special education enrollment and special education graduation. The patterns of graduation for all student characteristic groups should be further explored. Additionally, student characteristics could be studied in more detail for each

NCES classification to identify potential trends. Studies could also examine the potential impacts of limiting students' access to special education.

Conclusion

Educational leaders and policymakers must recognize the complexities of challenges faced in education. Texas education leaders took actions to address a perceived problem (over-identification of students for special education services), and the consequences of those actions limited student enrollment in special education. This study observed student enrollment and characteristic changes over 17 years. For more than 10 years during that period, regardless of a school's location or size, thousands of Texas students did not receive access to special education services as a result of State and local policy. In the 2016-2017 school year, policy changes were implemented by the TEA to prevent future students from missing out on needed services. Still, it is impossible to go back and correct the potential setbacks for students who did not receive services.

After the corrective actions taken in 2016, special education enrollment and graduation percentages have increased. The increased special education enrollment signals that more students are gaining access to special education services; it also means that districts could need additional resources to effectively serve this growing student population. Another population trend observed is the steady increase of students identified as economically disadvantaged. Students identified as economically disadvantaged face substantial challenges, and schools must make concise efforts to support these students fully. Notable changes in Texas demographics are increases in both special education enrollment and the students identified as economically disadvantaged. District and state leaders should not only be aware of these student

population trends but also take steps to support schools in addressing the needs of the students.

A significant challenge is providing a quality education that focuses on individual student needs and outcomes, regardless of whether they qualify for special education or are economically disadvantaged. Texas is a large state with numerous public school districts with varying student populations. Despite the diverse student populations, school districts are tasked with preparing students for life after high school. When developing policy and accountability measures, extra care should be taken by those creating the policy or measures to understand perceived problems and avoid unintended adverse effects on students. It is vital that leaders are proactive in placing the needs of students first, as their actions or inactions have lasting implications on the students.

In addition to achieving academic goals, local districts must also meet financial standards set forth by the state and their communities. Local districts often face budget constraints and want to maximize financial incentives from the state and federal government to provide the highest quality education to their students. Not only did the PBMAS sped indicators lower the number of students receiving services, it also lowered the amount of funding districts received. Students who were no longer qualified or students who were not placed in special education still needed supports. Reduced funding to districts required local leaders to attempt to do more for students with less money. Adequate funding for education at the federal, state, and local levels is paramount for meeting the needs of changing student populations.

Ensuring laws and policies do not influence schools to impede students from receiving services that enable students to achieve their desired outcomes is a never-ending journey of collaboration and cooperation. Public education in Texas is a trove of

data and percentages; administrators and community leaders can be hypnotized by scores and ratings tied to data. Leaders need to be vigilant in keeping the focus on meeting the needs of students and not grasping low hanging fruit for accountability scores. School districts and the state will need to work together to ensure all students receive the appropriate levels of support and services. Leaders should ensure that policies do not have unintended negative consequences for students. Collaborative efforts to meet all students' needs could have a lasting positive impact on both students and their communities, no matter the characteristics of the student population.

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Appendix

Table A1

Demographic Quarter Split PCC values compared to the established median patterns

	Enrollment			
	Low	Moderately Low	Moderately High	High
Economically Disadvantaged	75.79	77.69	77.28	75.67
Bilingual	74.65	77.62	77.23	76.94
White	76.93	76.54	77.13	75.82
Hispanic	76.58	77.03	77.18	75.63
African American	73.08	76.65	77.97	78.73
American Indian	74.51	77.8	78.02	76.04

Table A2

Demographic Quarter Split PCC values compared to the established median patterns

	Graduation			
	Low	Moderately Low	Moderately High	High
White	52.28	63.1	62.99	63.27
Hispanic	51.21	63.46	63.48	63.5
African American	59.72	51.38	63.26	67.29
American Indian	61.68	65.07	64.71	50.16