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AN EARLY INTERVENTION TO REDUCE THE RISK FOR DROPPING OUT OF HIGH SCHOOL: A CASE STUDY OF A LARGE URBAN TITLE I SCHOOL DISTRICT

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by

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Dedication

I can do all things through Christ which strengthens me.

Phillipians 4:13

First, I give honor to my Heavenly Father in which my faith is grounded. I dedicate this work to my family. I thank my wonderful husband. You have been patient with me as I juggled my time between work, school, family, and time for us. You picked up the slack when I could not. You encouraged me when I wanted to give up. You always believed in me, even when I did not believe in myself. You are truly the love of my life.

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AN EARLY INTERVENTION TO REDUCE THE RISK FOR DROPPING OUT OF HIGH SCHOOL: A CASE STUDY OF A LARGE URBAN TITLE I SCHOOL DISTRICT

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NCLB and now the more recent ESSA law hold school districts responsible for graduation rates, passing state mandated assessments and dropout prevention. The purpose of this mixed methods case study was to examine the effectiveness of a system wide middle school intervention program that addressed the educational needs of struggling students. It was also conducted to identify school instructional policies and procedures, curriculum frameworks, ongoing assessments, and planning and decision making structures aimed to accelerate the academic performance of overage students. Data from the school district's student management system was collected to analyze Research Question 1: What impact on student attendance and academic performance will the intervention have on participating overage middle school students compared to overage middle school students not receiving the interventions? Thirteen school district employees were interviewed and responded to Research Question 2: What are the central office and school based stakeholder's perceptions of the overall effectiveness of the system-wide intervention program? The study found that students in the overage pilot had better attendance, higher grades in Math and ELA and performed better on the STARR, the Texas state mandated assessment, then overage students who were not in the pilot. The four themes that emerged from the stakeholders' perceptions of the overall all effectiveness of the system wide intervention

program were the Need for a Differentiated Program Model, a Need for Early Intervention, Perception of the Web-based Curriculum as Effective, and a Need for A Systemic Process to Identify and Track Overage Students. Contributions to the success of students in the intervention were also impacted by principal leadership and focus, program expectations for student work, scheduling and implementation of the programs, teacher certification and training and mentor incentives and motivation.

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Chapter 1
Introduction

This study addressed problems related to the impact on the economy and the community due to high school graduation and dropout rates. These issues have been discussed continually by federal and state legislators as well as school districts' campus leaders and central administrators. The study encompassed the overage student, dropout, and graduation rates, state accountability issues, socioeconomic factors related to the costs of low graduation rates, as well as the legal implications of dropping out of high school. Due to the crisis of overage students having the greatest likelihood of dropping out of high school, the findings could lead to earlier interventions with at-risk students. The remainder of this chapter provides the background of the problem, statement of the problem, rationale for the study, significance of the study, assumptions, and limitations, research questions, and definition of terms.

Background of the Problem

Individuals leave school at various grades and skill levels and for different reasons. In addition, young people might have one or more additional risk factors, such as involvement with the criminal justice or foster care systems, pregnancy or parenting, facing housing instability, or struggling with substance abuse or mental health challenges. In any of these instances, poor attendance impedes learning and graduation (Bangser, 2013). Grossman (2015) stated that schools that are effective in addressing the dropout rate have:

> Adopted data systems to track freshmen progress, carefully picked the right teachers for ninth-graders, created weekly grade checks, provided mentors and tutoring sessions, stepped up truancy monitoring, set aside 1-day weekly for students to make up work, and started freshman seminars that teach kids to "do high school." Some schools also

switched to forms of grading that are designed to be more fair and modern—less emphasis on turning in homework on time and more emphasis on actually learning—but have been accused of inflating GPAs.

Every year students who are over age and behind in credits and have failed state-mandated exams yielding them off track for graduation, attempt to enroll in public high schools. Instead of enrolling these students, school administrators steer them to alternative paths to obtain a high school equivalent education. That is, students are directed to GED programs, on-line programs, or alternative educational sites. These sites may lack curriculum that bridge the gap for struggling learners, may not have the content specific certified educational personnel or the programs themselves may not be accredited by the state. Either way, these alternative paths, push students out of traditional school settings and free districts and high schools of the responsibility of graduating students thus reducing the districts' and schools' dropout rates and increasing their graduation rates.

Struggling students, who are age appropriate, and by law, must be enrolled in school but might have failed courses and state mandated assessments, can be scheduled in web-based classes within the school day. Such classes are meant to remediate failed areas of the state assessments, recover failed classes and accelerate students back on track to graduate. However, credit recovery classes restrict admittance to lower grades and largely support students in upper-grade levels even though ninth grade remains the most predictive year of high school students dropping out. Due to the lack of data measuring the effectiveness of alternative educational pathways and state reports that reveal significant numbers of students who leave traditional high schools but are not counted in the state's dropout rate, a need for further research on the effectiveness, systemic implementation, and monitoring of programs that address high school

dropouts provided impetus for the completion of this study (Center for Public Education [CPE], 2012).

District policy requires students in Grades 1 through 5 to be promoted to the next grade level based on their average grade of a 70 on a scale of 100 according to grade-level TEKS standards along with earning grades of 70 or above in the following core courses of English language arts (ELA), mathematics, science, and social studies. For Grades 6 through 8, promotion to the next grade level shall be based on an overall average of 70 on a scale of 100 based on TEKS grade-level standards for all subjects and a grade of 70 or above in at least the three of the core courses including language arts, mathematics, science, and social studies.

In the event a student is not promoted to the next grade, the district can assign the student to an age-appropriate campus unless the student's parents request or the district's grade placement committee determines that the student should be assigned to a specific campus setting. Criteria to be considered for this decision may include recommendations from the student's teachers and evidence of social and emotional development of the student. This issue becomes relevant when the student is 16 years old or older on or before September 1 of the following school year and is retained in Grade 8. The state requires students in Grade 8 to be promoted to Grade 9, and students must meet all the provisions of the Grade Advance Testing Requirements by meeting performance standards on the Grade 8 STAAR reading and mathematics assessments.

Statement of the Problem

Young people who do not complete high school face many more problems in later life than do people who graduate. The U.S. Department of Education in 2008 required states to establish ambitious but achievable graduation goals and targets and to intervene if a subgroup of

students fell short of these targets ("ESEA waivers," 2013). Though national leaders have demanded action and hold districts, schools, and communities accountable, the high school dropout rate remains controversial. Districts' attempts to develop programs meant to remediate and accelerate students toward graduation have been problematic due to a lack of consistency in systemic implementation and monitoring (Schwartz, 1995). Consequently, when students finish high school, but are not eligible to graduate with a diploma, schools undergo repercussions, and local economies, communities, and more importantly, students' quality of life suffer from poor outcomes. Few programs exist for intervening with students at risk for dropping out when they are in middle school, and even fewer are offered to overage middle school students. Therefore, the problem investigated was about overage middle school students having the highest risk of dropping out of school.

Rationale for the Study

The case study examined the effectiveness of a system-wide middle school intervention program that addresses the educational needs of struggling students. It identified school instructional policies and procedures, curriculum frameworks, ongoing assessments, and planning and decision-making structures aimed to accelerate the academic performance of overage students. This case study was conducted in two middle schools within a large urban Title I school district in North Texas enrolling over 87,000 students.

Overage Students

Data were taken from Focus, the school districts' student data management system. As of October 2, 2015, 39,815 secondary students were enrolled in Grades 6 to 12, according to data drawn from the Focus data management system. Overage status was determined using the school districts' 2015-2016 Age and Grade Eligibility chart. A cohort was defined as a group of

students who began Grade 9 together and were expected to complete the grade 12 during the 4-year progression of Grades 9, 10, 11, and 12, leading to graduation (McMillion et al., 2015). Graduation rates were calculated by cohorts, and each cohort began in Grade 9. The students enrolled in secondary grades as of October 2, 2015, are discussed in the following paragraph.

Middle school grade levels consist of sixth, seventh, and eighth grades with a total enrollment of 19,049 students when all three grade levels are combined. For example, 3,605 students are considered overage and behind their peers by 1 year; 532 students are overage by 2 years, and 10 students are over age and behind their peers by 3 years. There are 21,567 students enrolled in Grades 9 through 12 in the school district; 3,771 are overage and 1-year behind their cohort; 1,060 are 2-years behind, and 325 students are 3-years behind their cohort as seen in Table 1. The ninth and 10th graders show the highest numbers of students who are 1- and 2-years behind their cohort with ninth graders demonstrating the highest numbers of students who are 3-years behind their cohort. Meanwhile, 94 seniors are 3-years behind their cohort. The rationale for this study involves reducing the students' likelihoods for dropout by assisting their entry into the ninth-grade cohort.

Table 1

District Overage Information

Grade Level	Number Overage	Total Enrolled	Percent Overage	Female	Percent Female	Male	Percent Male	1 Year Over	Percent 1 Year	2 Years Over	Percent 2 Years	3+ Years Over	Percent 3+ Years
Total	**9,304**	**39,816**	**23.4%**	**3,713**	**39.9%**	**5,591**	**60.1%**	**7,376**	**79.3%**	**1,593**	**17.1%**	**335**	**3.6%**
6th	1,397	6,124	22.8%	554	39.7%	843	60.3%	1,228	87.9%	168	12.0%	1	0.1%
7th	1,358	6,066	22.4%	524	38.6%	834	61.4%	1,172	86.3%	180	13.3%	6	0.4%
8th	1,392	6,059	23.0%	558	40.1%	834	59.9%	1,205	86.6%	184	13.2%	3	0.2%
9th	2,272	6,896	32.9%	894	39.3%	1,378	60.7%	1,648	72.5%	483	21.3%	141	6.2%
10th	1,658	5,623	29.5%	679	41.0%	979	59.0%	1,200	72.4%	374	22.6%	84	5.1%
11th	311	4,977	6.2%	124	39.9%	187	60.1%	262	84.2%	43	13.8%	6	1.9%
12th	916	4,071	22.5%	380	41.5%	536	58.5%	661	72.2%	161	17.6%	94	10.3%

Hispanic or Latino student enrollment was 24,856 making up 62.4% of the enrollment. African American enrollment was 8,801 and was 22% of the population, as seen in Table 2.

White student enrollment was 4,553 and was 11.4% of the student population. The percent of secondary Hispanic or Latino students who were at least 1-year over age was 22.2%, students composed of two or more races had an enrollment of 742 or .02%, and .02% of the 768 Asian students enrolled in secondary schools were overage. Additionally, 28.3% of African-American students were at least 1-year overage at the secondary levels. While American Indian/Alaskan students had the highest percentage of students who were overage at 31% of its population; however, the numbers were small with only 58 students enrolled and 18 identified as overage. More than half, 54.7%, of the 3,255 students receiving special education services were overage. However, 6,972 LEP students and 5,111 LEP transition students both showed overage percentages of 33.7% and 33.5%, respectively.

Table 2

District Overage Student Demographics

Student Subgroup	Overage *N*	*N* Enrolled	Overage %
African American	2,493	8,801	28.3
American Indian/Alaska	18	58	31.0
Asian	158	768	20.6
Hispanic or Latino	5,510	24,856	22.2
Pacific Islander	4	37	10.8
Two or More Races	185	742	24.9
White	935	4,553	20.5
Special Education	1,782	3,255	54.7
Limited English Proficient	2,349	6,972	33.7
L-T English Language Learner	1,710	5,111	33.5

When considering grade levels, students in Grade 9 had the highest percentage of overage students at 32.9%. Grade 10 students had the second highest percentage at 29.5% followed by

eighth grade with 23% of the students being overage. Approximately 22% of Grade 6, 7, and 12 students were overage. Grade 11 students showed the lowest percentage of overage students at 6.2% as seen in Figure 1.

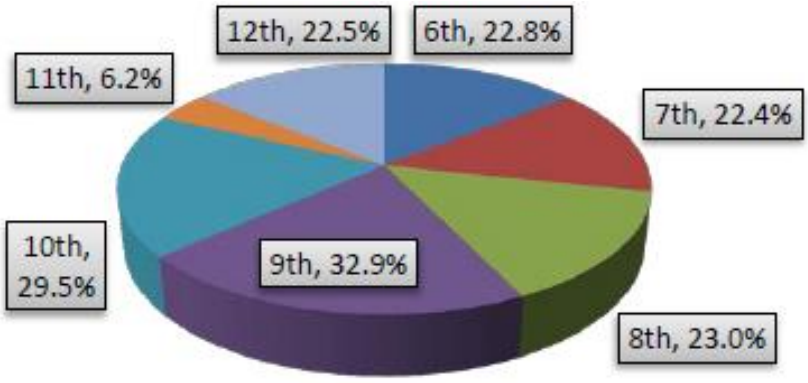

Figure 1. Pie chart of overage status by grade for the district based on the district's 2015-2016 age and grade eligibility chart.

High School Intervention

Students in the district were enrolled in the web-based program to accelerate overage high school students who have failed courses or are off track for graduation. The program is managed by a certified teacher whose certification may not necessarily be in a core course such as Math, English, Science or Social Studies. The web-based program allows flexibility for teachers and administrators to customize units and lessons to fit the district's curriculum frameworks and align with the districts' instructional calendars. Teachers and administrators can prescribe lessons based on skills needed to remediate TEKS from the state assessment in which students have been unsuccessful. When taking core courses for acceleration, students can also test out of areas of strength and only focus on areas in which the data show the student needs extra assistance ("Web-based Program," 2015). Students enrolled in the web-based program are scheduled in class periods during the day but also have access to the program before school, during lunch, and after school. Students may also access the program from home to engage in

lessons and study sessions. All assessments must be administered by the web-based program lab teacher and taken in the lab on campus. Students must pass all sections of a course to obtain credit. A student's final grades only appear as pass/fail and do not impact a students' GPA on their official transcript.

According to the student management system Focus, in the fall of 2015, 2,480 high school students were enrolled in the web-based program in an attempt to gain missing credits for 6,328 semester courses. As of December 11, 2015, of the 6,328 courses students attempted, they completed only 1,198 semester courses with each semester course being worth .5 credits. Therefore, students earned a total of 599 credits out of a possible 3,179 credits. These values suggest the semester course completion rate is only 19%.

As seen in the Focus data presented above, after the ninth and 10th grades, the percent of eighth-grade students who are overage is 23%, representing the next highest population of students who are overage at the secondary grade level. Although the web-based program is implemented with high school students district-wide, the intervention's 19% semester course completion rate does not indicate that high school students gain required credits for graduation at an adequate level. Though early intervention is critical for high school students who are overage and at risk dropping out of high school, the school district in this study currently lacks a districtwide or campus-based program to accelerate overage middle school students who are behind their peers. The data from this school district reveal the need to implement a program to reduce the likelihood of dropout for middle school students who are over age and likely to be more than 1-year over age for their enrolled grade.

Sociopolitical Context

Almeida, Steinberg, Santos, and Le (2010) offered six pillars for preventing high school dropout and recovering students who might have dropped out of high school. These pillars were adopted by the Obama administration as policy, and Texas is among three states identified as operationalizing the six pillars (Almeida et al., 2010). The first pillar involves reinforcing the right to public education by raising the free public compulsory education age to at least 18 and offering programs that encourage students to return to high school for completing missing credits through the age of 21.

The second pillar requires counting and accounting for dropouts (Almeida et al., 2010). States should set goals for reducing dropout rates and should start reporting graduation rates by cohorts beginning with each Grade 9 cohort annually. The third pillar involves using graduation rates and tracking to intervene with "transformative reform" (Almeida et al., 2010, p. 12). By tracking students for early intervention, programs can be used to prevent them from dropping out even though they are at risk for dropout (Almeida et al., 2010).

The fourth pillar expects states to establish and maintain new models for keeping students on track; however, this pillar expects states to generate funding and attain grants for such programs (Almeida et al., 2010). The fifth pillar expects students who are off-track to be purposefully included in strategies for accelerating students toward graduation. Students should receive opportunities to earn lost high school credit and to obtain postsecondary credits while in high school (Almeida et al., 2010). The final and sixth pillar requires funding the development of stable, systemic reforms at statewide levels to reduce dropout levels (Almeida et al., 2010). Examples of interventions were highlighted with these six pillars in mind.

The nation's graduation rate in 2001 was 72% and rose to 81% by 2013 (Isensee, 2015). Texas' 2013 graduation rate of 88% was higher than the nation's 2013 graduation rate of 81% (Isensee, 2015). Understanding what interventions further reducing the burden of dropouts on the state was critical. Some interventions were identified as useful for improving graduation rates. As a result of this model, the following represented the outcomes that may emerge from investigating the first research question guiding the study:

1. Attendance for overage students in the intervention will improve.
2. Grades in core classes for students in the intervention versus non-intervention students' core class grades will reach equivalent passing levels.
3. State assessments for overage students in the intervention versus non-intervention students' core class grades will reach equivalent passing levels

Research Questions

The purpose of the study was met by answering the following questions:

1. What impact on student attendance and academic performance will the intervention have on participating overage middle school students compared to overage middle school students not receiving the interventions?
2. What are the central office and school-based stakeholder's perceptions of the overall effectiveness of the system-wide intervention program?

Significance of the Study

The study may provide critical information to guide school districts in implementing and effectively monitoring programs for decreasing the dropout rate. The research may guide educators to seek curriculum that scaffolds and bridge the gaps of learners who are off track for a timely graduation. The study may provide insight to improve districts' efforts to meet state

accountability requirements and improve schools' ratings. The findings of this study may assure school districts of ways to identify and systemically produce effective programs that decrease dropout rates.

Assumptions

District's data management system was accurate. Participants were honest and forthcoming. All students who enrolled in the school districts system were enrolled and withdrawn by district personnel according to district policies and procedures so that numbers could be tracked. Even though the mobility rate was constantly changing, student paperwork was consistent with the mobility rate, and it was assumed the documentation was accurate and for the duration of data collection students did not move in or out of the targeted middle schools.

Limitations

All data were restricted to two middle schools in a single metropolitan, or urban, school district. The results might not apply to school districts located in suburban or rural areas. The data might not generalize to other school districts in the state or nation.

Definition of Terms

Cohort. A group of students who begin Grade 9 together and complete Grade 12 during the expected 4-year progression through graduation (McMillion et al., 2015).

Credit recovery. "A structured means to earn missed credit in order to graduate" (CPE, 2012, para. 3).

Dropout. Any student who leaves school for any reason before graduation or completion of a program of studies without transferring to another elementary or secondary school.

Dropout rate. Annual dropout rate measures what happens in a school district or state during 1 school year and can be considered a measure of annual performance (McMillion et al., 2015).

Graduation rate. Percent of students who graduate within a 4-year time frame (McMillion et al., 2015).

Middle school. Schools that serve students Grades 6 through 8 in the case study school district.

Age appropriate. The Texas Education Code (1995) defines age appropriate as the following:

> A person who, on the first day of September of any school year, is at least 5 years of age and under 21 years of age, or is at least 21 years of age and under 26 years of age, and is admitted by a school district to complete the requirements for a high school diploma is entitled to the benefits of the available school fund for that year.

Overage student. Middle school grades include Grades 6 through 8. For the 2015-2016 school year, middle school students are considered age appropriate at the following grade levels: 11 years at the beginning of Grade 6, 12 years old at the beginning of Grade 7, and 13 years old at the beginning of Grade 8.

Response to intervention. Known as RTI in practice, this term involves the change in students' behavior or performance as a function of some level of intervention that may fall into one of three tiers (Sansosti, Telzrow, & Noltemeyer, 2010). The first tier is the least intensive intervention and may be used with all students regardless of intervention need. The second tier is more intensive and involves pulling the students in need into special tutoring programs that may happen in school, before or after school, or on Saturdays. The third tier is the most

intensive and involves placing students in special classes designed specifically for their needs, such as special education or limited English proficient classrooms (Sansosti et al., 2010).

Retention. The practice of keeping students at the same grade level for an additional year, usually because of poor academic performance or emotional immaturity (Xia & Kirby, 2009, p. 1).

Social Promotion. The practice of "promoting students with their class or completion group whether or not they have obtained the requisite skills for the next grade" (Xia & Kirby, 2009, p. 1).

Summary

The problem of overage middle school students involves them having the highest risk for dropping out of school. Districts' attempts to develop programs meant to remediate and accelerate students toward graduation have been problematic due to a lack of consistency in systemic implementation and monitoring. The study examined the effectiveness and identify policies, frameworks, and structures of the middle school intervention in a large urban Title I school district in North Texas enrolling over 87,000 students. The study provided information to guide school districts in implementing and effectively monitoring programs, meet state accountability and raise school ratings and identify and track at-risk students in effective programs that decrease the dropout rates.

Chapter 2
The Review of the Literature

The No Child Left Behind Act of 2001 and its deliberate focus on test scores was designed to hold school districts accountable for ensuring all students attained at least minimal standards to graduate. The accountability movement affected students' test scores, graduation and dropout rates, and ratings for schools and districts. However, districts' attempts to develop programs meant to remediate and accelerate students toward graduation have been problematic due to lack of consistency in systemic implementation and monitoring. Therefore, students finishing high school but not being eligible to graduate with a diploma leads to repercussions for schools, local economies, communities, and more importantly, the lives of students. Ultimately, the problem found in the literature centers around the failure to graduate students at appropriate ages, leading to dropouts and a potential flood of former high school students who finished high school coursework without meeting state testing requirements. The study examined the effectiveness and identify policies, frameworks, and structures of the middle school intervention in a large urban Title I school district in North Texas enrolling over 87,000 students.

Grade Retention, Over-age, Social Promotion, and Test-Based Promotion

Grade retention, also termed as being retained, flunking, repeating a grade, or being held back, is the practice of keeping students at the same grade level for an additional year, usually because of poor academic performance or emotional immaturity (Xia & Kirby, 2009, p. 1). The assumption behind the use of grade retention is that struggling students will catch up on skills needed to succeed in the next grade level if they retake the grade's curriculum. Critics of grade retention have argued that children lose self-esteem and the practice leads to behavioral problems often associated with being overage for the grade, has a strong correlation with dropping out of school, and

incurs significant financial costs to school districts when children repeat grades (Xia & Kirby, 2009, p. 1).

In contrast, social promotion is "the practice of promoting students with their class or completion group whether or not they have obtained the requisite skills for the next grade" (Xia & Kirby, 2009, p.1). The justification for social promotion involves arguing that failing to promote the child alongside peers causes extreme psychological and emotional damage, such as low self-esteem or low self-worth. Opponents of social promotion voiced that students become frustrated at the next grade level because they are not prepared for the work in the promoted grade. Additional, it is argued that social promotion sends a message to students that they do not have to do the work to get through school. In addition, social promotion forces teachers to deal with underprepared students while teaching prepared students, gives parents a false belief that their children are learning in each grade, "leads employers to conclude that diplomas are meaningless, and dumps poorly educated students into a society in which they are not prepared to perform" (Xia & Kirby, 2009, p. 2).

The term overage student refers children who are older than the traditional school age for their grade level (Grant, Villena, Mourtos, Cabrera, & Part, 2014). Rath, Rock, and Laferriere (2012) called education overage, under-credited and leading to youth becoming at risk for dropping out. Rath et al. stated that over-age, under-credited describes the population of youth at the heart of the nation's dropout crisis. These overage students do not have the appropriate number of credits for their age and intended grade (Grant et al., 2014). For example, an overage, under-credited student may be enrolled in Grade 11 for the second time as 1-year overage or may be 17 years old, or 2-years overage, as a high school sophomore. These same students have likely spent years being unsuccessful academically but have been socially promoted, causing them to ultimately fall behind in credits and become likely candidates to drop out of high school.

Thus by definition, high school dropouts are usually over-age and lack credit needed to graduate (Rath et al., 2012).

When students as over-age in a grade, grade retention represents a contributing factor. David (2008) estimated that the number of students retained at least once in their school career range from 10% to 20% of all students. Black students are more than twice as likely to be held back as White students, and boys twice as likely to experience grade retention as girls (David, 2008). David stated that before the era of state-mandated assessments and accountability, teachers' judgments were used as the primary means of determining whether a student would be promoted or retained. The impact of grade retention and accountability has been a growing concern since NCLB placed passing standards on state assessments that prohibit students from being promoted to designated grades until they master the grade level state assessment. A test-based promotion policy is different from the traditional form of teacher-initiated retention decisions (Xia & Kirby, 2009, p. 2).

With the emergence of state accountability testing, urban school districts and entire states started formalizing and tightening requirements for promotion, many times using a single test score as a determining factor for promotion. With state assessments bearing the weight of promotion, the impact of teacher discretion and input to promote struggling students is limited. Such testing tactics to use test scores to motivate students to work harder to pass state assessments and avoid being retained lead policymakers to "believe that stricter requirements for promotion will increase the proportion of students likely to meet standards at higher grade levels" (David, 2008, p. 83). As a result, state and federal policies mandate that identified grade level state assessments be tied to promotion such as Grades 5 and 8 in Texas. The state allows students multiple opportunities to retest to achieve the state mandated passing standard. In

between required retest dates students who have been unsuccessful participate in interventions that remediate skills failed on the state assessment.

The premise of such test-based policies is that the threat of retention plus intervention programs, will both motivate and help students meet accountability-based passing standards. Supporters have argued that the threat of retention "will provide incentives for students to work harder, for parents to monitor their child's progress, and for teachers to focus on the development of basic skills among low-achieving students, all of which should increase student achievement" (Xia & Kirby, 2009, p. 2). Critics of test-based promotion policies have said that standardized test promotes teachers teaching to the test and limit the other equally important concepts that children should be learning. They tend to contend that such a narrow focus on a single score does not accurately define students' overall achievement in any subject area and fails to describe academic progress or the nature of learning adequately. Such assessments cannot account for true ability-given factors (i.e., anxiety, testing environment, etc.) that impact student performance based on one specific testing day (Xia & Kirby, 2009, p. 2).

According to David (2008), "if the goal of retention is to provide an opportunity for students to catch up, the quality and appropriateness of their academic experiences is likely to be the determining factor" (p. 84). For most students struggling to keep up, neither retention nor promotion offers a satisfactory solution. Juxtaposing the two as if these options as the only solutions casts the debate of how to reduce the overage problem into inadequacy. The challenge is to find ways to help failing, overage students to successfully catch up to peers in their age groups. Without early diagnosis, before high school, and targeted intervention, struggling students, are unlikely to catch up with their age appropriate peers, whether they are promoted or retained (David, 2008).

Over-age Middle School Students

In 2008, New York public schools noticed an alarming number of 16 and 17-year-olds in New York's seventh- and eighth-grade middle schools (Advocates for Children of New York [ACNY], 2008). ACNY (2008) found that resources were lacking to support overage middle school students and their educational system was out of touch with the social and academic needs these students. The NYC Coalition for Educational Justice (2007) documented that Black and Latino students in middle school faced failure because "twice as many White and Asian eight-graders" met state English language arts standards as "African American and Latino students" (p. 5). ACNY (2008) said that research demonstrated the strong connection between middle-grade achievement and graduation from high school. ACNY also revealed a common theme leading to students becoming overage in New York's Middle Schools:

- A student's schooling is interrupted. Factors such as domestic violence, foster care placement, or frequent relocation cause a student to fail to meet requirements for promotion
- Appropriate academic supports are not provided. Students who need special education services, counseling, or intensive supports fall further and further behind if these supports are not provided competently and consistently.
- A student who needs to change schools cannot find an alternative placement. Students who need to change schools for reasons related to safety, discipline, or family circumstances sometimes find themselves discharged from their old school with nowhere else to go (p. ii)

ACNY (2008) suggested that middle school students are not a homogenous population and it is important that a one-size-fits-all approach to addressing their needs not be utilized. Schools should not create obstacles. ACNY added data of overage middle school students must be made

available to educators often because of the lack of a tracking system so that teachers know the retention history of overage students. Development of early warning systems to identify students likely to become overage may promote education stability at points of transition and facilitate implementation of innovative programs and flexible options that encourage overage middle school students to stay in school (ACNY, 2008).

Dropout, Completion, and Graduation Rates

The definition of a dropout and the methods used to calculate dropout rates vary from state to state. Implications of high dropout rates not only affect school districts but can have political ramifications for policymakers. According to Rabinowitz, Zimmerman, and Sherman (2007), many states report a within cohort annual dropout rate of approximately 4%. A cohort of students is a group of students representing a specific starting point and followed over a well-defined finite number of years. In any given school year approximately four out of 100 students in a single secondary grade drop out of high school annually. Therefore, by the time a cohort of freshmen reaches graduation, 16% of their cohort will have dropped out of school (Robinowitz et al., 2007). Graduation rates are impacted by drop out. Students who obtain a graduate equivalency degree (GED) or who continue enrollment after their fourth year of high school are not calculated into school districts' graduation rates, leaving a gap in the records.

State and federal statutes require the Texas Education Agency (TEA) to use the 2015 National Center for Education Statistics' (NCES) dropout definition for both state and federal accountability. In Texas, the 2003 Texas Legislature adopted the NCES definition of dropout for computing the dropout rate as follows:

> A student who was enrolled in a Texas public school in Grades 7-12, does not return to the public school the following fall within the school-start window (i.e., by the last Friday

> in September), was not expelled, [and] did not graduate, receive a GED, continue school outside the public school system, begin college, or die. (Texas Association of School Boards, n.d., p. 1)

Also, students may choose to drop out at any time during the calendar year. Therefore, a summer dropout is a student who completed the school year but failed to return to school in the following fall semester. Summer dropouts are attributed to the school year just completed for state accountability purposes (Texas Association of School Boards, n.d.).

To calculate graduation rates, an understanding of what constitutes a high school dropout, completer, and graduate is necessary. The dropout rate represents the percentage of students who drop out of school during 1 school year. For purposes of state accountability, the annual dropout rate is calculated as the number of students who dropped out during the school year divided by the number of students enrolled at any time during that same year (Texas Association of School Boards, n.d., p. 1). A completer is a student who either graduates or continues in high school after his or her anticipated graduation date. The completion rate is the percentage of students from a class of beginning ninth graders who graduate or continue in high school (Texas Association of School Boards, n.d.). The completion rate is calculated as the number of graduates plus continuers divided by the sum of the number of graduates, continuers, GED recipients, and dropouts (Texas Association of School Boards, n.d., p. 2). A student is classified as a graduate in the year in which he or she receives a high school diploma. However, school districts do not report the data to the TEA until the fall after the anticipated spring graduation date (Texas Association of School Boards, n.d.).

From 1990 through 2013, NCES reported a reduction in the national high school dropout rate. In 1990, the dropout rate was 12%, but by 2013, it was 7%. The bulk of the dropout rate's

reduction occurred since NCLB's inception. Hispanics showed the steepest decline of 20%, from a 32% to a 12% dropout rate from 1990 to 2013. Black and White dropout rates showed no difference in the rate of decline or dropout rate frequency. By 2013, the White dropout rate was 5%, and the Black dropout rate was 7%. Additionally, the nation's graduation rate in 2001 was 72% and rose to 81% by 2013 (Isensee, 2015). Texas attained a 2013 graduation rate of 88%, 7% higher than the nation's 2013 graduation rate (Isensee, 2015).

In Texas, the 2009-2010 ninth grade public school cohort began the year with 360,673 students (TEA, 2014). During the following three academic years, 22,963 students entered the Texas public school system and joined the 2009-2010 Grade 9 cohort. However, "50,113 students left the Texas public school system for reasons other than graduating, receiving GED certificates, or dropping out" (TEA, 2014, p. xi). By the 2012-2013 graduation year for the cohort, 328,584 students had received a final status of graduate, continuer, GED certificate recipient, or drop out. Students with a final status of graduate composed the graduating class of 2013. In sum, 21,634 students from the class of 2013 Grade 9 public school cohort ultimately dropped out, and 71.2% of this cohort's students dropped out before the 11th or 12th grade. "Of students who dropped out in the fourth year (2012-2013), 48.9% did not attain promotion to Grade 12" (TEA, 2014, p. xii). The graduation and dropout rates by student ethnicity and other statuses for Texas' class of 2013 are provided in Table 3. Overall in 2013, the graduation rate in Texas was 88%, which was 2% higher than the previous 2-years' rates (McMillion et al., 2014).

Table 3

Class of 2013 Status Summaries in Percentages According to the TEA in 2014 (p. xii)

Group	Graduated	Continued	Received GED[a]	Dropped out
African American	84.1	5.3	0.7	9.9
American Indian	85.8	4.4	1.3	8.5
Asian	93.8	3.0	0.2	3.0
Hispanic	85.1	5.9	0.8	8.2
Pacific Islander	89.5	4.7	0.5	5.3
White	93.0	2.6	0.9	3.5
Multiracial	91.7	3.1	0.9	4.4
Economically disadvantaged	85.2	5.4	0.9	8.5
ELL in 9-12[b]	71.3	13.4	0.4	14.9
Special education	77.8	10.7	0.5	11.1
State	88.0	4.6	0.8	6.6

Note. Parts may not add to 100 percent because of rounding. Racial groups (African American, American Indian, Asian, Pacific Islander, White, and multiracial) do not include students of Hispanic ethnicity. Students may be counted in more than one of the following categories: economically disadvantaged, ELL in 9-12, and special education.

[a]General Educational Development certificate. [b]Students identified as English language learners (ELLs) at any time while attending Grades 9-12 in Texas public school.

Influence of Accountability

The impact of accountability ratings on school districts shifted during the transition from Texas Assessments of Knowledge and Skills (TAKS) exit exam system to the State of Texas Assessments of Academic Readiness (STAAR) end-of-course (EOC) exam system and in turn may impact graduation and dropout rates (TEA, 2009). The TAKS tests were administered to students from the 2003-2004 school year to the 2008-2009 school year. TAKS was designed by legislative mandate to be more comprehensive for Grades 3 through Grade 12 than its predecessor assessments and to measure more of the state-mandated Texas Essential Knowledge and Skills (TEKS) curriculum. "Students for whom TAKS was the graduation testing requirement had to pass the exit-level tests in the four content areas of English language arts,

mathematics, science, and social studies to graduate from a Texas public high school" (TEA, 2009, p. 2).

In June 2009, the 81st Texas Legislature enacted House Bill (HB) 3 requiring the Texas Education Agency to develop assessments for measuring performance across grades and culminating in college readiness performance standards in Algebra II and English III (TEA, 2012). These performance measures were a part of the new State of Texas Assessments of Academic Readiness (STAAR) program encompassing the high school level end-of-course (EOC) assessments mandated by Senate Bill (SB) 1031 and the new Grades 3 through 8 subject assessments mandated by HB 3 (TEA, 2012). HB 3 specified the five indicators for determining accountability ratings beginning in 2013 or 2014 be students' STAAR performance in Grades 3 through 8, high school level EOC assessments, dropout rates for Grades 9 through 12, completion rates, and graduation rates for high school students (TEA, 2012). Also, optional features for accountability at the school level included schools performing better over the prior year in addition to the required measure of average performance of the last 3 years (TEA, 2012). The state's education commissioner has the power to determine methods for applying the provision for meeting the 85% performance across district indicators and how to apply it to the high school graduation indicator, further adding to confusion about the state's accountability requirements (TEA, 2015b).

The 2009-2010 and 2010-2011 school years served as a transition period for schools as the state moved from TAKS to STAAR. The first cohort of STAAR graduates began the ninth grade year in 2011-2012 and graduated in 2014-2015 (TEA, 2015a). However, official graduation rates were not reported to the state until the fall semester after the graduation has

taken place. The official report of the first cohort of STAAR graduates was not reported until the fall of 2015, well after the spring graduation ceremonies occurred (TEA, 2015a).

In 2013, the state legislature adopted HB 5 to address the State Board of Education's authority to determine the high school graduation requirements that replaced the previous graduation plans of Minimal High School Program (MHSP), Recommended High School Program (RHSP), and Distinguished Achievement Program (DAP) with the new Foundation High School Plan (TEA, 2015a). Beginning with the 2014-2015 school year and under the new Foundation High School Plan, students must choose an endorsement path to support a college or career readiness pathway. With the implementation of the Foundation High School Plan endorsements, students may choose from Science Technology Engineering and Math (STEM), Public Service, Business and Industry, Arts and Humanities, and Multidisciplinary Studies (TEA, 2015a). A student may earn a Distinguished Level of Achievement by completing a fourth year in each of the core subjects as well as complete one endorsement (TEA, 2012).

Due to the concerns about the final phase in of the EOC program, the Texas legislature passed SB 149 in May of 2015 to enable about 28,000 seniors to graduate at the end of the 2014-2015 school year. The bill was necessary because the current accountability measures at the time left these students unable to graduate as planned because they failed at least one of the five required EOCs that included content from the courses titled Algebra I, English I and II, U.S. History, and Biology. The new law enabled students to graduate by passing three out of five EOC exams rather than passing all five EOCs. Governor Greg Abbot reported that the Texas government "must protect Texas students from being penalized because of evolving testing standards [and] . . . from undue penalization, and guarantees that students who meet specified requirements are able to graduate" (Hope, 2015, para. 3).

SB 149 establishes the right for school districts to form graduation committees composed of principals, teachers, counselors, and parents to determine on a case by case basis students' graduation suitability if they finished all required coursework, including one of the foundation programs required by HB 5 but only passed three of the state's five mandated EOC STAAR assessments (Hope, 2015). The committees have the power to evaluate a student's performance using attendance records, grades, and college entrance exam results. Over time, the state may further modify the accountability ratings due to the repercussions of passing SB 149 and probably impacting district's accountability ratings as well as graduation and completion rates (Hope, 2015).

Response to Intervention and Overage Students

Response to intervention is defined as a change in the behavior of performance as a function of an intervention (Sansosti et al., 2010). More specifically, RTI is an intervention approach that incorporates (a) high-quality instruction/intervention matched to student needs using a tiered model of support enabling universal, targeted, and intensive intercessions with students, (b) frequent monitoring of student progress, and (c) data-based decision making within a problem-solving model to inform educational practices. RTI currently stands out as a promising alternative educational service delivery model (Sansosti et al., 2010). Sansosti et al. (2010) supported the use of RTI approaches to prevent academic failure and improve outcomes for all students.

When considering the implementation of RTI, school leaders face several challenges. The lack of studies examining effective system-levels that may have a positive impact in implementing RTI at the secondary levels adds to schools' challenges for using RTI. Sansosti et al. (2010) found administrators struggle to define and identify valid intervention and prevention

models that address all academic and behavioral needs instead of just specific core components such as Reading. They also noted that determining what measurable criteria could be used to make valid and responsive educational decisions that ensure high-quality instruction and interventions across all grade levels can be challenging. Finally, the nature of any difference in the application of RTI at the secondary level versus the elementary level stymies administrators. Sansosti et al. suggested that application of RTI at the elementary levels is more systemic and sustainable than at the secondary level. At the secondary level, RTI is "hit or miss" and less likely to cause a change in educational practices (Sansosti et al., 2010, p. 2).

Sansosti et al. (2010) formed these conclusions after interviewing secondary school psychologists to find common themes about RTI. The psychologists stated that many teachers are uncertain about which interventions are appropriate for students at the secondary level, and teachers fail to document the success or failure of interventions that have been implemented. The psychologists reported teachers felt a lack of ownership for students' problems and chose not to commit time and resources to address individual students' needs. Teachers, counselors, and building administrators had indicated to the psychologists that participation was too time-consuming, and lack of understanding of the process led to special education placements instead of classroom inclusive interventions and support. Sansoti et al. concluded teachers' different values within the educational system led them to view their role as weeding out students in need and chose not to implement interventions within the general educational setting because they thought students would receive unfair advantages (Sansosti et al., 2010, p. 4).

As an educational change initiative requiring extensive changes, Sansosti et al. (2010) emphasized that the stakeholders' perceptions of change, the complexity of change, and the practicality of change drive whether an intervention like RTI can be successful. These beliefs

are all impacted by all stakeholders' beliefs and knowledge, the board of education decisions, districts' internal and external factors, as well as legislative decisions and funding sources (Sansosti et al., 2010, p. 3). However, Sansosti et al. found evidence that two instructional components of RTI can be successfully implemented at the secondary level if the following six components were activated: (a) staff selection, (b) preservice and in-service training, (c) ongoing consultation and coaching, (d) staff and program evaluation, (e) facilitative administrative support, and (f) systems interventions.

Vaughn and Fletcher (2010) stated that empirical evidence from multiple intervention studies as well as their clinical experiences indicated that secondary students with low reading achievement could be assigned to less or more intensive interventions based on students current reading achievement scores rather than moving students from less intensive to more intensive interventions. Vaughn and Fletcher reported that they could identify more and less impaired learners to be group by reading and comprehension ability and could assign those students to less or more intensive interventions. Thus students with the lowest reading score can be placed in the most intensive interventions early without having to successively pass through less intensive interventions to document what they already know; they have significant reading problems (Vaughn & Fletcher, 2010). As the barriers and facilitators of RTI are centered on four major themes in system- implementation (Sansosti et al., 2010), those themes of systems characteristics, systems structures, evidenced-based practices, and professional development needs and delivery systems are addressed in the remainder of this RTI discussion.

Systems Characteristics

These involve the actions that inhibit rather than facilitate RTI implementation (Sansosti et al., 2010). Unlike elementary teachers where students have one teacher, secondary students

have multiple teachers. At the secondary level if reading is a problem, teachers do not work as teams but instead, focus on their specific content. Teachers lack time for collaborating on interventions and innovation to address reading across content areas with secondary students. Also, systems characteristics offer unique problems in serving secondary students. It is not only difficult to use multi-tiered interventions specifically by grade when students are in Grades 9 through 12. Furthermore, the system forms a barrier within schools to serving students with behavioral and emotional crises at home that impede academic performance.

Another barrier is secondary teachers' likelihoods for viewing their students as adults and expecting students to use more adult-like behavior (Sansosti et al., 2010). Teachers expect students to be responsible for themselves and do not incorporate practices for monitoring students' academic behavior, such as reviewing notebooks or assisting students with organizing materials. Secondary teachers feel tasks such as these should have been mastered at the elementary or middle school grade levels (Sansosti et al., 2010).

Sanger (2012) found that often a power struggle emerges between the general educator and the special education teacher as to who should lead and be in charge of RTI during class. Compounding implementation is the lack of understanding between professionals and their roles which result in regular education teachers not supporting RTI (Sanger, 2012). Though unintentional, secondary administrators fail to identify RTI as a priority. Often RTI implementation competes with administrators' time and with the infrastructure of other initiatives within the system. Administrators delegate to assistants or counselors eliminating their role in the decision-making process. This lack of systemic support for RTI can be the difference in fidelity of implementation in the RTI process.

Systems Structures

These consist of both human and procedural structures that act as barriers to RTI implementation (Sansosti et al., 2010). Administrator's intentional leadership and focus are necessary for RTI to be successful. Principals have to lead and share ideas of the best practices of RTI and ensure that the process is inclusive of input from all key stakeholders. Procedural systems incorporate practices such as academic screening by content, standards-based assessments, progress monitoring, and school-based problem-solving teams. Sansosti et al. (2010) noted that with the inclusion of web-based approaches, secondary schools have begun to progress monitor, seek out reliable and valid methods to collect data, and determine the effectiveness RTI program implementation. With the structure of secondary schools, with many class periods, requirements for graduation and scheduling variations, RTI implementation is challenging to administrators. RTI applications and interventions result in schedule changes and students to have fewer opportunities to acquire the necessary credits for graduation (Sansosti et al., 2010). As mentioned before, teachers' schedules at the elementary levels are more fluid, allow for flexibility and collaboration compared to teacher schedules at the secondary levels. Thus scheduling structures are a barrier to RTI implementation at the secondary school level.

Evidence-based Practices

RTI practices include universal screening, progress monitoring, effective interventions, and supports with fidelity, but also these elements have emerged as barriers at the secondary level. Teachers, intervention specialists, and administrators are uncertain about which interventions should be used at the secondary level. Additionally, secondary teachers fail to document the progress of students during interventions by using reliable and valid data systems which may not be the same as employed in elementary schools (Sansosti et al., 2010, p. 13).

Professional Development

This need has emerged as the fourth barrier to RTI implementation. Most educators at the secondary level tend to be unfamiliar with the concept of RTI and its core features consisting of collaborative problem-solving teams, tiered levels of intervention, and support (Sansosti et al., 2010). Educators consider these interventions as an additional hurdle or reason to make a determination for special education. In many cases, the actual RTI process is not enacted unless as an identifier for special education services. Delivery methods for professional development vary from the trainer of trainers with coaching and modeling to training a team member from each core content. All of these professional development methods could be used to empower teachers to use RTI and to help fellow teachers understand the need for RTI (Sansosti et al., 2010).

Predictors or Early Indicators of Drop Out

School districts should use early indicators to identify students at risk of dropping out and provide resources for interventions. Grade retention, low academic achievement, receiving failing grades in one or more courses, and being behind in credits by the end of Grade 9 year are currently among the top predictors of dropout. Additionally, the school factors of climate issues, school size, attitudes of teachers, other students and administrators, and inflexibility in meeting the diverse cultural and learning styles of students impact the likelihood of dropout (National Association of Social Workers, 2005). Family socioeconomic status has been attributed to high school dropout rate (McKeon, 2006). A combination of all of these indicators can usually be identified before Grade 9 and include a greater than 20% absence rate in Grade 8 (Burke, 2015). Bowers (2010) observed that these indicators are present in all school districts, but most have no system in place to bring these predictors into view for data-based decision making and

management. The indicators are merely addressed after students are well on their way to dropping out if they have not already left school (Bowers, 2010).

Although grade retention is "ineffective, unproductive, and costly, it persists as one of the frequently employed methods of remediation" in public schools (Xia & Glennie, 2005, p. 3). Depending on school resources as well as students' socioeconomic, demographic, and educational backgrounds, grade retention more often than not leads to dropout for White, Black, and Latino students (Stearns et al., 2007, p. 228). Xia and Glennie (2005) argued the amount of resources provided to students at-risk of dropping out impacts the students' likelihoods of graduating high school. Stearns et al. (2007) reiterated that grade retention encourages students to drop out of high school over all variables including race. Xia and Glennie concluded that when students are engaged in school, and socioeconomic background is addressed, students are more likely to experience academic success and less likely to drop out.

Socioeconomic Status and Dropout

Dropout rates for students from lower income households are over twice the national average of all students and over three times as high when compared to students of middle-income status (NCES, 2000). Dropouts are more likely to earn less money over their lifetimes and to have a higher likelihood of raising children who also drop out of high school (Tyler & Lofstrom, 2009). In addition to lower income levels, dropouts are 72% more likely to be unemployed members of society or to collect welfare payments (McKeon, 2006). Doll (2010) stated that the earning gap between high school dropouts and high school graduates is growing. In the United States, high school graduates are 68% less likely to be on welfare than high school dropouts, dropouts are more than twice as likely to live in public housing and receive food

stamps and were 1.5 times more likely to reapply for welfare benefits instead of finding work (Doll, 2010).

The effect of students dropping out of high school creates a financial burden on communities and taxpayers. States lose approximately $36 billion annually from each cohort of students dropping out of high school (Tyler & Lofstrom, 2009). Texas is impacted each year by the 45,000 to 50,000 students who drop out of public high schools and reduce the state's gross production by a total of $11.4 billion (Combs, 2004). In 10 years, dropouts in the state of Texas cost taxpayers $114 billion in lost economic output, and in 20 years, the annual cost by a single cohort of dropouts leads to $228 billion loss in gross state product (Doll, 2010). Adding to the burden on the economy is the likelihood of young female high school dropouts being nine times more likely to become single mothers than young women earning college degrees (Sum, Khatiwada, McLaughlin, & Palma, 2009). As a result, the number of young women who have children and are not married has increased in some communities due to the corresponding number of unemployed male high school dropouts (Sum et al., 2009). Since these young men do not work, the young women do not view them as capable of supporting a family and choose not to marry them in order to more easily retain access to state benefits for their children (Sum et al., 2009).

Preventing students from dropping out of high school benefits taxpayers and the economy (Levin & Rousjan, 2012). Levin and Rousjan (2012) argued for the importance of investing in resources geared specifically to educational interventions for preventing high school students from dropping out. For every student high school graduate, a net return on $1 of investment in that student is $1.45 to $3.55 (Levin & Rousjan, 2012). Each new high school graduate offers a net benefit to taxpayers of about $127,000 over the high school graduate's lifetime. The

National Center for Education Statistics (NCES, 2015) depicts the disparities in employment by educational attainment in Figure 2. While the average employment rate for both age groups is between the bottom two tiers of educational attainment and the top two tiers of educational attainment, people lacking high school diplomas have the lowest employment rates among all categories (NCES, 2015). Adults who are 20 to 24 years of age and lacking a high school diploma are less than 50% likely to be employed while those in the same age group with a high school diploma are almost 64% employed. The difference in employability between less than high school and graduated from high school is nearly 25%. In fact, 20 to 24-year-olds with a bachelor's degree are at least 88% likely to be employed. The disparity in employability between less than high school and college degree attainment is double, a staggering figure (NCES, 2015).

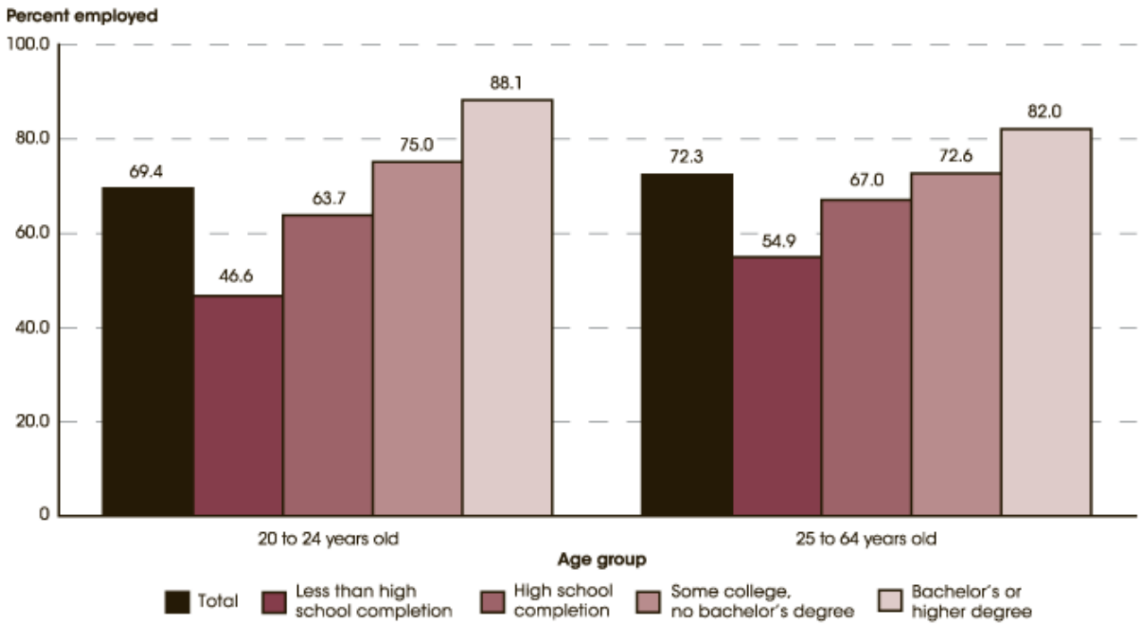

Figure 2. NCES (2015) employment by population ratios, by age group and educational attainment for 2014 (para. 3).

Legal Implications of High School Dropout

Across the country, 68% of prison inmates lack a high school diploma. Christeson et al. (2008) reported high school dropouts are 3.5 times more likely to be arrested than high school graduates and more than eight times as likely to be incarcerated. According to Sum et al. (2009), daily in the US, about 10% of all young male high school dropouts are in jail or juvenile detention while less than 3% of young male high school graduates are incarcerated. By race and dropout status, about 25% of young Black male dropouts are jailed compared to 7% young male White, Asian, and Hispanic dropouts combined (Sum et al., 2009). Dillon (2009) highlighted the impact of dropping out in the 2000s versus in the 1970s. In the 1970s, a young man could drop out of high school his senior year and get a low skill factory job at a steel mill or an auto assembly line. In the 2000s, the demand for skilled workers with some postsecondary training is increasing quarterly, leaving many dropouts without employment options and in some cases leading them toward an alternate path of crime (Dillon, 2009).

Increasing the high school graduation rate by 1% could reduce penal system costs by $2,100 per each male high school graduate per year, and a 1-year increase in average education levels could lead to an 11% reduction in the number of arrests (National Association of Social Workers, 2005). Christeson et al. (2008) suggested a 10% increase in graduation rates would reduce murder and assault rates by approximately 20% based on historical data.

Intervene Early

Pre-kindergarten

One method that has proven to be successful in reducing dropout rates is making sure children receive a high-quality pre-kindergarten education (Sum et al., 2009). Christeson et al. (2008) concluded based on "evidence from two long-term evaluations of the effects of pre-

kindergarten programs . . . Participating in high-quality pre-kindergarten increases high school graduation rates by as much as 44%" (p. 2). NCES (2015) noted that nationwide increases in both the enrollment rate of 3- and 4-year-old children (from 39% in 1985 to 54% in 2012) and the number of children in this age group from 7.1 million to 8.1 million within the nation's population. For example, Oklahoma has been increasing enrollment of the state's 4-year-olds in voluntary, high-quality pre-kindergarten programs since 2002, and by 2011, 74% of the state's 4-year-olds were participating in pre-kindergarten (National Institute for Early Education Research, n.d.), but the effects of this program have yet to be felt at the high school level.

As of 2012-2013, Oregon has the nation's second-worst graduation rate of 69%. However, the state has instituted the research-based intervention of enrolling low-income students into high-quality preschool programs (Isensee, 2015). Students who attend Pre-K graduate high school 77% of the time, compared with 60% of those who do not attend preschool (Schweinhart et al., 2005). Additionally, the return on investment is seven-fold for children who have completed pre-kindergarten programs, because they graduate from high school (Schweinhart, 1994).

Early Intervention and Tracking with High Risk Students

Heppens and Therriault (2008) stated one important element of the prevention effort involves identifying students at highest risk for dropping out and then targeting of resources to keep them in school. An early warning system using indicators based on readily accessible data can predict, during the students' first year in high school, whether the students are on the right path toward eventual graduation. Early intervention is more effective than grade retention.

Dockery (2012) recommended that states, schools, and school districts develop and maintain local data systems to assist in identifying potential dropouts. These data formed a

tracking system full of local data and house a large number of factors to reveal trends regarding the prediction of dropout. Dockery even suggested including geographic and demographic factors when tracking students to meet students' needs better as interventions are implemented. Tracking systems should include student attendance, grade retention, academic achievement and student disengagement as early as elementary school (Dockery, 2012). These systems provide automated alerts to schools about students experiencing challenges to provide interventions for guiding students toward graduating (Dockery, 2012). Almeida et al. (2010) highlighted intensive summer enrollment programs and programs that support college and career readiness offered in tandem with traditional core courses as demonstrating effectiveness.

Coaching

Providing high school students with graduation coaches is another method of early intervention (Georgia Department of Education, 2008). A coach is assigned to each ninth-grade student at the beginning of the year. The coaches work with and mentor their students throughout the next 4 years of high school. The coach's sole purpose is to ensure that students remain on track to graduate. The coach acts as a liaison, mentor, and mediator between students, teachers, parents, and stakeholders. For students lacking an advocating parent and for students with chronic discipline problems, the coach as an advocate can intervene with teachers and administrators to help the student receive fair treatment and earn high school credits. It is this part of the job description that sets the graduation coach apart from traditional counselors (Georgia Department of Education, 2008). Traditional counselors have been inundated with school-wide operations and procedures that prohibit them from providing in-depth, personalized attention to students at risk of dropping out.

Georgia implemented the graduation coach program in 2006 (Georgia Department of Education, 2008). Hunter (2011) evaluated the effectiveness of the graduation coach program as it was reported by the Georgia Department of Education (2008) to have increased graduation rates. Hunter examined graduation rates from 2004 through 2010 and used a longitudinal analysis. Hunter found that the at-risk students with coaches did have statistically significantly higher graduation rates than students who were not participating in the program. National Public Radio (2015) reported that after 2010, Georgia defunded the program

Meeting Basic Needs

In 2013, approximately 10.9 million school-age children 5 to 17 years old were in families living in poverty (Kena et al., 2015). Washington, DC, has both a high number of children living in poverty and the nation's worst graduation rate at 62% (NCES, 2015). The needs of students in poverty overshadow the focus that should be on education (Kena et al., 2015). Living in poverty during early childhood is associated with lower than average academic performance that begins in kindergarten and extends throughout elementary and high school (Kena et al., 2015).

Basic needs, such as physical and mental health, impact student attendance, academic performance, and behavior. As a result of these issues, Ketcham Elementary in Washington DC provides mental health services, free bus and train pass, and food pantry programs for its children's and their families' basic survival (Cardoza, 2015). Free lunch at school alone may not be enough to enable children's cognition to develop and flourish in school (Wilder, Allgood, & Rothstein, 2008). A lack of these necessities creates barriers preventing students and parents from focusing on academics (Kena et al., 2015). Ketcham Elementary is one among many schools serving children living in poverty by adding social workers, community liaisons, and

community resources to support the physical, socioemotional, and academic needs of today's children already at-risk for dropping out of high school (Cardoza, 2015).

Moving away from Traditional School Setting

Between 2010 and 2013 Alabama had one of the nation's steepest climbs in graduation rates of 8% (Carsen, 2015). Superintendent Tommy Bice attributed the rise in graduation numbers to "a new level of flexibility" led by locally tailored programs offering students flexible schedules, so students needing to support their families and themselves could collect credits and graduate (Carsen, 2015). In fact, Alabama was recognized for increasing its graduation rate by 7% from 2002 to 2008 ("Case Study," 2011). Two factors that attributed to the rate increase were the implementation of an early warning system and the incorporation of the Diploma Now program. Diploma Now was designed as a school turnaround program model that provided community-based support services and interventions for students who had gotten off track for graduation by middle school and during high school ("Case Study," 2011). In Birmingham, the Dropout Recovery Program has been credited for generating part of the increase in the state's graduation rate (Carsen, 2015). At Birmingham's three Alternative Learning Centers, students use computers to work efficiently for 80% of the time on task and receive face-to-face instruction from teachers for 20% of their time on task. The program has graduated about 700 at-risk students since 2010 (Carsen, 2015).

The Alabama Department of Education also implemented the Everybody Graduates Campaign to lower its dropout rates by receiving sponsorship from several foundational partnerships (Leech, 2011). According to State Superintendent Joe Morton, this program integrates multiple programs to support the various needs of the state's differing student populations (Leech, 2011). Leech (2011) reported program incorporates Credit Recovery to

allow students to retake only the failed portions of a course. Academic Flexibility provides students with the following three benefits: (a) "in-school and out-of-school educational opportunities to make up lost classroom time" (para. 8); (b) graduation coaches operating out of the state's high schools to innovatively mentor and advise at-risk students to complete coursework and address behavioral, social, and emotional issues; and (c) the U.S. military supported the use of a tutoring website throughout the state. Morton reported that the only way to increase graduation rates was to incorporate many programs together as part of intervening with at-risk students (Leech, 2011).

Credit Recovery and Alternate High Schools

In a report by the Center for Public Education (CPE, 2012), credit recovery is cited as a byproduct of the No Child Left Behind Act of 2001. CPE stated that the federal government has failed to provide a real definition for credit recovery other than calling it "a structured means to earn missed credit to graduate" (para. 3). However, credit recovery has become the fastest growing response to dropout prevention and has been cited in programs such as those occurring in Alabama (Leech, 2011). Credit recovery classes are offered in some formats including 100% online courses, blended online and in-person instruction, or strictly in-person, or face-to-face, instruction. Credit recovery offers many benefits by allowing students to direct their learning, to skip content that they have already mastered, and to work at their pace (CPE, 2012).

The problems with credit recovery raise concerns because little data about the rigor and effectiveness of the programs are available. Lack of evidence exists about these programs providing a direct relationship to student learning or pushing them to graduation without learning. Certification and content knowledge of instructional personnel vary from district to district and from state to state (CPE, 2012). Lack of teacher certification for those who facilitate

credit recovery efforts leaves students vulnerable when they need one-on-one instruction or are unable to pass local and state exit exams needed for graduation after completing recovery courses (CPE, 2012). Finally, because the credit recovery idea has so many variations in implementation, credit recovery leads to far more questions than available answers.

In short, distinguishing between credit recovery and alternative high school courses can be difficult (CPE, 2012). Students may take one or more classes at an alternative high school and still graduate with a diploma from their normally assigned high school. The alternative high school can support students completing either the GED exam or earning a high school diploma. Alternative high schools offer nontraditional settings, but credit recovery programs typically only support students working toward a high school diploma from their assigned home high school (CPE, 2012).

Additionally, a fundamental problem with engaging alternative options for credit recovery and completion involves for-profit companies and accreditation (CPE, 2012). The pedagogy of for-profit schools varies and credits that apply to high school graduation may not be accepted by college and universities due to lack of accreditation (CPE, 2012). Torres (2012) reported that academies offering online alternative education in Florida misrepresented themselves to thousands of students who thought they were earning high school diplomas from an accredited school licensed by the state board of education. "The U.S. higher education community at large only recognizes a handful of accrediting organizations as legitimate" (para. 14). Torres cautioned readers that receiving "a high school diploma from an organization not widely recognized by colleges and postsecondary schools" (para. 14) creates new problems for adults attempted to attend an accredited public community college or university, let alone a private university or college.

With this caution in mind, for-profit credit recovery programs with 100% online core courses have become the most popular means of credit recovery since 2008 (CPE, 2012). Data from the for-profit companies offering credit recovery do not display disaggregated numbers for credit recovery students because these programs provide the same online classes to all students for many reasons beyond credit recovery alone (CPE, 2012). The CPE (2012) argued against the lack of oversight of for-profit credit recovery programs and reported that although this alternative route to graduation has increased, state and federal governments have conducted no comprehensive or longitudinal cost-benefit analysis.

CPE (2012) acknowledged a lack of equal access for students living in rural communities or lower socioeconomic areas. CPE called for addressing concerns about connectivity and availability of technology and equipment as well as the compatibility of such programs for those students' areas. Finally, when students leave public high schools to attend for-profit online high school programs, districts lose funding. However, school districts can also save money allocated for teaching positions by moving students to online programs that are more cost effective than hiring certified teachers (CPE, 2012). For school districts purchasing on-line programs, the cost ranges between $135 and $1,200 per student per credit, which can be thousands of dollars cheaper than hiring additional personnel and finding additional space to house credit recovery programs (CPE, 2012).

Gaming the System by Removing Dropouts from the Books

In both 2012 and 2013, Texas was tied with a few other states with the second-highest graduation rate in the country with 88% (Nadworny, 2015), but this figure is not completely accurate. Even though in the fall of 2009, Texas counted 360,373 ninth graders, 289,298 students labeled as members of that cohort received diplomas (Witt, 2015), translating roughly to

an 80% graduation rate, not the 88% rate the state reported. It appears that more than 50,000 students have been excluded in the most recent 4-year cohort (Witt, 2015). Nadworny (2015) noted that schools simply use the leaver codes (discussed earlier in this paper) that identify students as getting a GED, returned to Mexico, being home schooled, or leaving the district to attend another school, also known as "pushing students out," to avoid allowing those departing students from negatively impacting a school districts' graduation rate. Witt (2015) specifically questioned the NPR's report on states' and school districts' attempts to improve high school graduation rates via early intervention and alternative routes to a diploma as "gaming the system by moving likely dropouts off the books" (para. 5), raising questions about whether graduation rates are accurate.

In reference to gaming the system, Nadworny (2015) reported on the increased graduation rates for Chicago's public schools and found that at least 2,200 students from 25 of Chicago's high schools were coded as out of district transfers between 2011 and 2014. Even though these students did not finish high school, their departures were not calculated into the school district's dropout rate. In essence, the system enabled administrators to use leaver codes for pushing students out (Witt, 2015). Upon being confronted with this practice, a representative of Chicago Public Schools vowed to address this practice but acknowledged no plan is in place to recalculate the 2,200 students into the district's dropout rate (Witt, 2015). Witt did find the NPR report by Nadworny to offer a valid report about Alabama's tracking system and Alternative Learning Centers as well as about Georgia's implementation of graduation coaches as strong components in decreasing dropout rates.

Witt found evidence that the system to calculate graduation allow for games to be played with leaver codes to boost graduation rates and lower dropout rates, leaving one to question the

accuracy with which states report graduation rates. Again, Texas came under fire for accuracy because of former Governor Rick Perry's boasts about its 88% graduation rate (Lee, 2015). In fact, Lee (2015) pointed out that the National Center for Education Statistics and the National Governors Association's Graduation Counts Compact use different measures for reporting graduation and dropout rates, suggesting the system is one of gaming. The need to find an accurate, standardized metric appears to exist.

Conclusion

As noted in the review of the literature, states, national and private agencies, and school districts continue to use different methods for obtaining graduation and dropout rates (Lee, 2015; Witt, 2015). Federal regulations adopted in 2008 required states to use more accurate methods when reporting dropout rates and clarified school districts' roles in being accountable for results (Almeida et al., 2010, p. v). With the addition of HB 5 in Texas and the Obama administration's policies, school districts in Texas are responsible for preparing students to be college and career ready. Mileaf, Paul, Rukobo, and Zyko (2013) identified how credit recovery programs should address student deficiencies and maintain rigorous instructional delivery to allow students to re-engage with coursework or enter postsecondary education. While the six pillars and highlighted programs are envisioned as legitimate solutions for the dropout problem, the implementation of such programs varies widely in both effectiveness and content delivery from state to state, district to district, or even school to school (Mileaf et al., 2013).

Even with efforts to remove graduation discrepancies between states and schools, the problem remains that leaving school early can result in adults who live life in poverty, lack the skills needed for meaningful employment, and have higher incidents of criminal activity than people who graduate high school (Hunter, 2011). Though there are various programs to support

students getting back on track to graduate, many are not monitored for effectiveness and do not provide programs that scaffold curriculum to address students' educational gaps. According to the CPE (2012), programs may not be staffed with the certified personnel able to provide the one-on-one support needed by students who show educational gaps. Also, programs for addressing dropout rates do not eliminate roadblocks or stop the pushing out of students so that they do not count against school districts' accountability ratings (Witt, 2015). Ultimately, the problem centers around the failure to graduate students at appropriate ages which lead to fewer graduates, more dropouts, and potentially a flood of former high school students who finished high school coursework without meeting state testing requirements.

Therefore, the recommended study's purpose was to conduct a case study of the effectiveness of, while identifying policies, frameworks, and structures of, the middle school intervention in a large urban Title I school district in North Texas enrolling over 87,000 students. In place for ameliorating the dropout rate. The study utilized data from a large urban Title I school district in North Texas enrolling over 86,000 students in 83 elementary schools, 29 middle schools and Grade 6 centers, 18 high schools, and 16 other campuses. Specifically, this district serves 21,373 high school students and 18,146 middle school students, many of whom are at risk for high school dropout.

The case study data were collected by mixed methods with ex-post facto district data and primary data interviews with central administrators to develop a grounded framework for combating the problem of accountability measures impacting graduation rates. Almeida et al.'s (2010) six pillars of effective dropout prevention and recovery was used as a conceptual framework from which to understand the data since the model was closely tied to federal support of state and local level programs. The extant data were provided by this case study school

district via the district's public educational information management system and credit recovery system. Interviews were used to collect perceptions of the effectiveness and weaknesses of the district's dropout and retention programs from the district's central administrators, campus administrators, campus teachers, and credit recovery lab operators.

Chapter 3
Methodology and Procedures

This chapter describes the design of the study and its methodology. Included within this chapter are the purpose of the study, research design, methodology, and the research questions the study is intended to answer.

Purpose of Study

This case study examined the effectiveness of a system-wide middle school intervention program that addresses the educational needs of struggling students. It identified school instructional policies and procedures, curriculum frameworks, ongoing assessments, and planning and decision-making structures aimed to accelerate the academic performance of overage students. This case study was conducted in two middle schools within a large urban Title I school district in North Texas enrolling over 87,000 students. Almeida et al.'s (2010) six pillars of effective dropout prevention and recovery were used as a conceptual framework from which to understand the data since the model is closely tied to federal support of state and local level programs. Data from the interviews with teachers, school administrators, lab technicians, and central office personnel as well as from the district's data about the program's outcomes were analyzed.

Research Questions

The purpose of the study was met by answering the following questions:

1. What impact on student attendance and academic performance will the intervention have on participating overage middle school students compared to overage middle school students not receiving the interventions?

2. What are the central office and school based stakeholder's perceptions of the overall effectiveness of the system-wide intervention program?

Research Design

The investigation was conducted using the mixed method case study design. This case study yielded an understanding of the complex issue related to reducing middle school students' likelihoods for dropping out of school. Case studies emphasize detailed contextual analysis of a limited number of events or conditions and their relationships. Researchers have used case study research method for many years across a variety of disciplines (Yin, 2013).

Population and Sample

With key personnel and a systemic means to monitor student progress the pilot school and its participants were exposed to clear boundaries, structure and consistency reduced recidivism and assist middle school and high school campuses in meeting Index 4. Mixed methods research involves collecting, analyzing, and integrating (or mixing) quantitative and qualitative data into a single body of inquiry (Creswell & Clark, 2010; Yin, 2013). The purpose of this form of research is that both qualitative and quantitative research in combination, provide a better understanding of a research problem or issue than either research approach alone (Creswell & Clark, 2010). In this study, qualitative data taken from interviews provided insight from participants in the study as well as quantitative data take from the district data management system provided data by demographics, grades, and attendance. Mixed methods allowed for gaining personal perspectives and systemic demographic data collection.

To meet the needs of students 2 or more years behind their cohorts and had not been successful in a traditional classroom setting, this case study focused on two middle schools. Two schools contain Grades 7 and 8. Seventy-one students participated in the pilot at the campuses

housing Grades 7 and 8. The 71 students represented the population of overage students targeted for this Tier II and III intervention. Quantitative data were drawn from the two middle school campuses and the district's student management system. However, the qualitative data were collected from the professional educators responsible for the intervention on each of the two campuses.

To identify what tier of intervention the students involved in the intervention at each school fall into, the following criteria were used:

Tier III Student has a reading Lexile level of 500 or below and has been retained 2 or more years. The student may be identified as special education (SPED), limited English proficient (LEP), or both. The student may have failing grades in three or more core subjects, five or more discipline referrals, and seven to eight unexcused absences in a semester.

Tier II Student has a Reading Lexile level or score of 650 or below and has been retained at least 1 year and may be identified as SPED, LEP, or both. The student may have three to five discipline referrals and three to five unexcused absences in a semester.

Tier I Student has a reading Lexile level of at least 800 or above and has been retained only 1 year. The student may be identified as SPED, LEP, or both. Student's discipline referrals are few at two or less, and the student has less than three unexcused absences in a semester.

Campus A

The first campus, Campus A, was a seventh- and eighth-grade campus. Campus A had an enrollment of 860 students. It was 58% Hispanic, 31% African American, .24% White, and

81.2% economically disadvantaged. There were 426 seventh graders and 434 eighth graders. Of the 860 students, 215 (25%) were overage according to the districts 2015-2016 overage chart. At total of 193 (22.4%) were overage by 1 year with 33 (3.8%) overage by 2 years and five (0.6%) overage by 3 years. There were 114 (26.8%) seventh-grade students who were overage with 105 (24.6%) overage by 1 year with 9 (2.1%) students overage by 2 years and 5 (2.1%) students overage by 3 years as seen in Table 4.

Table 4

Overage Information for Campus A

Campus A	Overage *N*	Total *N*	% Overage	1 Year *N*	1 Year %	2+ Years *N*	2+ Years %	*N* Retained	% Retained
Total	215	860	25.0	193	22.4	33	3.8	5	0.6
7th	114	426	26.8	105	24.6	9	2.1	5	1.2
8th	101	434	23.3	88	20.3	13	3.0	0	0.0

Campus A consisted of 503 Hispanic students, of which 120 (23.9%) were overage; 268 African American students, of which 83 (31%) were overage; 63 Asian students, of which 3 (4%) were overage; and 21 White students, of which 7 (33%) were overage as seen in Table 5. Of the 71 SPED students, 36 (50.7%) were overage, and of the 299 LEP students, 74 (24.7%) were overage. A total of 699 students were economically disadvantaged with 178 (25.5%) overage. Campus A's intervention program was comprised of data from 33 students.

Table 5

Overage Student Demographics for Campus A

Student Group	*N* Overage	Total *N*	% Overage
Race/Ethnicity			
African American	83	268	31.0
Asian	3	63	4.8
Hispanic or Latino	120	503	23.9
Pacific Islander	0	1	0.0
Two or More	2	4	50.0
White	7	21	33.3
Other Classifications			
Special Education	36	71	50.7
Limited English Proficiency	74	299	24.7
Economic Disadvantage	178	699	25.5

Campus B

The second campus was a seventh- and eighth-grade campus. Campus B had an enrollment of 884. It was 51% Hispanic, 35% African American, 10% White, and 74% economically disadvantaged, as seen in Table 6. There were 437 seventh graders and 447 eighth graders. Of the 884 students, 208 (25%) were overage according to the district's 2015-2016 overage chart, with 191 (22.1%) overage by 1 year, 13 (1.5%) overage by 2 years, and 2 (0.2%) overage by 3 years. There were 97 (22.2%) seventh-grade students who were overage. Also, 88 students (20.1%) were overage by 1 year, 9 (2.1%) students were over age by 2 years, and 2 (0.5%) students were overage by 3 years.

Table 6

Overage Information for Campus B

Campus A	Overage *N*	Total *N*	% Overage	1 Year *N*	1 Year %	2+ Years *N*	2+ Years %	*N* Retained	% Retained
Total	208	884	23.5	195	22.1	13	1.5	2	0.2
7th	97	437	22.2	88	20.1	9	2.1	2	0.5
8th	111	447	24.8	107	23.9	4	0.9		0.0

Campus B consisted of 451 Hispanic students of which 101 (22.4%) were overage, 311 African American students of which 81 (26%) were overage, 91 White students of which 16 (17.6%) were overage, and 14 Asian students of which 3 (21.4%) were overage, as seen in Table 7. Of the 82 SPED students 46 (56.1%) were overage, and of the 119 LEP students, 31 (26.1%) were overage. A total of 654 students were economically disadvantaged with 155 (23.7%) overage. Campus B's intervention group was comprised of data from 20 students.

Table 7

Overage Student Demographics for Campus B

Student Group	Number Overage	Total Enrolled	Percent Overage	Percent Enrolled
African American	81	311	26.0%	9.2%
*Asian	3	14	21.4%	0.3%
Hispanic or Latino	101	451	22.4%	11.4%
*American Indian	1	3	33.3%	0.1%
*Two or More	6	14	42.9%	0.7%
White	16	91	17.6%	1.8%
SPED	46	82	56.1%	5.2%
LEP	31	119	26.1%	3.5%
Economic Disadv	155	654	23.7%	17.5%

Professional Educator Pool

The educator pool consisted of three middle school principals, three web-based lab teachers who implement the web-based curricula, the SOS team from the feeder high school and the district's curriculum writers. The principals implemented and monitored the components of the pilot on their campuses. The Texas certified web-based lab teachers supported a blended learning format and monitored student performance of students in each pilot. Core certified classroom teachers taught in traditional classroom settings as well as supported student learning via the web-based learning application. The SOS team from the feeder high school was composed of a student coach who tracked each student's daily work and attendance, a counselor who worked with at-risk and overage students, and the web-based lab tutor who supported those students at Campus A and enrolled in the program's math and science courses. The district curriculum departments wrote curriculum for the four core courses and worked with aligning the web-based program classes to the district pacing guide. The personnel in these roles were approached for participating in interviews.

Intervention Characteristics and Procedures

The two schools offered a modified schedule to allow students to take current grade level classes and the next grade level classes within the same school year. The students in the intervention program had an extended year ending in August of 2016. Current grade level classes occurred via the traditional classroom setting. The next grade level classes occurred via the web-based program. Current Grade 8 students had the opportunity to take high school courses allowing credits to accelerate students towards their sophomore year. Campus A's eighth-grade students had the opportunity to earn one credit in Science, one credit in Social Studies, and two elective credits for Health and Speech. Campus B only offered eighth-grade

students the course of Health as a high school credit. All students took the state assessments for the current grade level in which they are enrolled. The schedule and classes are represented in Table 8.

Table 8

Pilot Program Schedule for All Participating Middle Schools

Grade & Age	Spring 2016	Spring Semester Extended Through August	STAAR Assessments
Grade 8 Age 14–15 or older	Enrolled in Traditional Grade 8 Classes	Enrolled in Web Period Grade 8 Core Classes: 0.5 Health 0.5 Speech 1.0 World Geography 1.0 Integrated Physics & Chemistry	Grade 8 STAAR

Note. *Students in Grades 6 to 8 are required to pass 3 of the 4 core courses.

Personnel operating within the middle school intervention were presented by campus. For Campus A, the staffing follows:

- The campus principal implemented and monitored the middle school program by conducting interviews, implementing the parent/student/school contract, working with feeder high school principal to provide resources to mentor middle school students set to attend the high school the following school year, and ensuring that all components of the intervention are implemented.
- Certified web-based program lab teacher set instructional protocol, worked with district personnel to align district curriculum with the web-based program so that instruction was aligned with the district instructional calendar, monitored student progress, provided weekly feedback to the students and parents, assessed students in the web-based program to obtain credits, and ensured that students stayed on track to complete programs by August 2016.

- District instructional support approved high school courses implemented in the middle school master program, aligned the web-based program to the district instructional framework and calendar, and updated the Grade 8 students' transcripts upon completion of each high school credit.
- The web-based program tutor worked 19 hours per week during school hours to support students during the web-based class period.
- Each feeder high school SOS team consisted of the high school counselor, student mentor, and core teachers and provided mentors to the Grade 8 students.

For Campus B, the campus principal implemented and monitored the middle school program by conducting interviews, implementing the parent/student/school contract, working with the feeder high school principal to provide resources to mentor eighth-grade middle school students set to attend the high school the following school year, and ensuring that all components of the intervention are implemented.

The expectations for students in the middle school intervention program were the following:

- Parents and students signed a contract listing all expectations
- Students were enrolled in the program from Spring 2016 through Summer 2016
- Students obtained no more than five absences per session. Any missed day of work was made up upon return in the extended day session
- Intermittent Parent/Student progress check sessions occurred
- Students were not suspended *(unless a mandatory violation is committed)*
- Students were automatically enrolled in web-based programs their freshman year of high school

The school district's curriculum frameworks and the web-based program of classes were used in conjunction with each other. The web-based program utilized online and blended learning opportunities as well as small groups for student led and teacher facilitated learning. For eighth graders, the principals worked with the feeder high school staff members to support learning in Grade 9 courses. The program allowed for re-teaching and preparation for assessments and daily monitoring of student progress. Also, students underwent daily monitoring of progress checks, small group instruction, and assessment mastery.

Instruments

The district student management database was used to collect quantitative data such as attendance, credits earned, student demographics, and grades as part of answering the first research question. District policy related documents and other artifacts were used to assess the curriculum and systems in place for intervening with the middle school students who were overage.

For the second research question about the central office and school based stakeholder's perceptions of the overall effectiveness of the system-wide intervention program, the following interview questions were asked:

1. What are your perceptions about any professional development have you received for helping students who have been retained?
2. How does your campus implement instruction differently for students who have been retained and repeating the same grade level?
3. What discipline problems do students who are overage and at risk of dropping create on your campus and/or in your classroom?

4. How do you see the web-based program aligning with district curriculum and state standards for learning?
5. What are your perceptions about the web-based program in general and its effectiveness?
6. How are student mentors or coaches impactful in ameliorating drop out? If they are not, why not?
7. What are your perceptions about students repeating the same material and grade if they have been unsuccessful in passing the grade and the state assessments?
8. What do you think about how student discipline, attendance, and grade data are used for tracking and helping students at risk of dropping out?
9. Should administrators socially promote students who are 2 or more years behind grade level? Why or why not?
10. What communication system recommendations between the middle and high school levels do you have that would benefit overage students being promoted to Grade 9?
11. What data could the district use for making better decisions about retaining and promoting students?
12. What do you think about assigning overage students to a different campus with students who have similar at risk characteristics?
13. What recommendations do you have that the district can use to ameliorate the problem of overage students attending middle school?
14. What other recommendations do you have that we may not have touched on?

Procedures

Driscoll et al. (2007) discussed concurrent mixed method data collection as a way to easily evaluate and triangulate qualitative and quantitative data. The concurrent data collection

activities for this study included examining the new program's curriculum and course offerings and other artifacts regarding master schedules, individual student schedules, and teacher professional development.

Interviews were conducted with stakeholders which include: teachers, web-based instruction lab managers, administrators and central office personnel. Interviews were conducted both individually and in small groups. Approximately 15 professionals involved in the middle school intervention were interviewed after being approached by emails with an introduction to the study and completing the informed consent form.

Emails were sent to the educator pool to inform them of interview times and dates. Reviews of artifacts regarding instructional implementation and monitoring of student work and assessments as well as professional development were conducted. Follow up interviews were conducted as needed to clarify qualitative data collection. This exchange of such information happened during the enrollment period at in the spring semester of the school year and throughout the study.

When appropriate to ensure accurate data collection and protect confidentiality of program participants and providers, technological devices such as video and audio recorders were used to record program activities and group discussions. All activities were kept in a journal to maintain a confidential record of events. Since the research included interviews conducted with adults, confidentiality was abided by as stated in the IRB. The Institutional Review Board or IRB provides a policy that protects the rights of participants in research studies; therefore, all participants' and the district's names were masked with pseudonyms. The data were securely stored behind password protected file systems. After the conclusion of the study, the data were destroyed in accordance with the IRB's rules.

Data Analysis

Differences in attendance as well as grades and credits earned during the intervention period for the overage middle school students when compared to overage middle school students in traditional settings were tested. The independent *t* test for proportions between the intervention versus non-intervention students. The *t* tests were conducted based on the predicted outcomes seen in Chapter 1's sociopolitical context section. The outcomes that were expected due to investigating the first research question follow:

1. Attendance for seventh-grade students in the intervention improved.
2. Grades in core classes for seventh-grade students in the intervention versus non-intervention seventh-grade students' core class grades reached equivalent passing levels.
3. Attendance for eighth-grade students in the intervention improved.
4. Grades in core classes for eighth-grade students in the intervention versus non-intervention eighth-grade students' core class grades reached equivalent passing levels.

The second research question required analyzing qualitative data. All interviews were coded, and themes were sought using NVivo 11. Triangulation of quantitative, qualitative, and interviews was engaged.

Chapter 4
Findings

The primary purpose of this study was to examine the effectiveness of a system-wide middle school intervention program that addressed the educational needs of struggling students. An additional purpose was to identify school instructional policies and procedures, curriculum frameworks, ongoing assessments, and planning and decision-making structures aimed to accelerate the academic performance of overage students. The research questions that guided this study were:

1. What impact on student attendance and academic performance will the intervention have on participating overage middle school students compared to overage middle school students not receiving the interventions?
2. What are the central office and school based stakeholder's perceptions of the overall effectiveness of the system-wide intervention program?

Quantitative data from the district's student management database were used collected to describe student demographics, student attendance, student grades and high school credits earned to answer the first research question.

Quantitative Data

To meet the needs of students who are 2 or more years behind their cohort and had not been successful in a traditional classroom setting, this case study focused on two middle schools. Students in the study were identified as overage based on the FWID 2015-2016 grade and age eligibility chart.

Campus A Results

In this case study, an overage student was defined by the district's 2015-2016 grade and age eligibility chart in which overage was two or more years behind their peers. Sixteen overage students were enrolled in the pilot for Campus A. A total of 187 students met the overage grade and age criteria and were utilized as the control group.

Five of sixteen students completed the program and made up the pilot group. There were three female students and two male students. One (33%) female student was African American. Two (67%) female students were Hispanic. One (50%) student was an African American male, and one (50%) student was a Hispanic male.

The control group consisted of 76 females and 111 males. Twenty-six (34%) were African American females, and 47 (42%) were African American males. Forty-nine (64%) were Hispanic females, and 62 (56%) were Hispanic males. There was 1 (1%) White female and 1(1%) White male.

The control group contained 187 students, and all were economically disadvantaged. One student in the control group received special education services. The control group contained 94 students who were Limited English Proficient or LEP. In the pilot group, two students were LEP, and five students were economically disadvantaged. No students in the pilot group received special education services. See the Table 9 for the two groups' student demographics by ethnicity and gender and student special populations at Campus A.

Table 9

Characteristics of the Control and Pilot Groups on Campus A

Distribution by Ethnicity and Gender	Control (Total - 187)				Pilot (Total - 5)				Total	
	Female		Male		Female		Male			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
African American	26	34%	47	42%	1	33%	1	50%	75	39%
Hispanic or Latino	49	64%	62	56%	2	67%	1	50%	114	59%
Two or More	-	-	1	1%	-	-	-	-	1	1%
White	1	1%	1	1%	-	-	-	-	2	2%
Total	**76**		**111**		**3**		**2**		**192**	
Student Group	**Number**		**Percent**		**Number**		**Percent**		**Total**	
SPED	1		1%		0		0%		1	
LEP	94		50%		2		40%		96	
Economic Disadvan.	187		100%		5		100%		192	

Attendance and discipline incidents. Quantitative data from the district's student management database were collected to describe demographics in student attendance and discipline for answering the first research question. The *t* test showed no statistically significant differences in attendance between the control and target groups because t (4) = 2.8, p = 1.0, n = 5. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, attendance did not differ between the control and target groups. Table 10 demonstrates the data and results for testing differences between attendances in the two groups.

Table 10

Attendance Data for Control and Pilot Groups on Campus A

Attendance *(2016-17 in progress)*	Control				Pilot			
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
Mean	93.88	92.84	90.69	93.84	90.60	87.40	90.60	90.75
Standard Error	0.41	0.56	0.66	0.63	4.92	7.08	3.70	5.34
Median	95	95	94	97	95	95	93	93.5
Mode	97	98	94	100	-	-	-	-
Standard Deviation	5.38	7.48	9.02	8.51	10.99	15.84	8.26	10.69
Sample Variance	28.91	56.00	81.32	72.38	120.80	250.80	68.30	114.25
Kurtosis	3.33	8.52	11.16	11.92	3.03	1.11	-2.32	0.85
Skewness	-1.62	-2.56	-2.67	-2.90	-1.68	-1.35	-0.45	-1.19
Range	32	47	69	59	28	38	19	24
Minimum	68	53	31	41	72	62	80	76
Maximum	100	100	100	100	100	100	99	100
Sum	15,771	16,711	16,959	17,361	453	437	453	363
Count	168	180	187	185	5	5	5	4

t-Test: Two-Sample Assuming Unequal Variances		
	2015	*2015*
Mean	90.7	90.6
Variance	81.3	68.3
Observations	187.0	5.0
Hypothesized Mean Difference	0.0	
df	4.0	
t Stat	0.0	
P(T<=t) one-tail	0.5	
t Critical one-tail	2.1	
P(T<=t) two-tail	1.0	
t Critical two-tail	2.8	

For discipline incidences, the *t* test showed no statistically significant differences in the numbers of discipline incidents between the control and target groups because t (2) = 4.3, p = 0.3, n = 3. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, discipline incident data did not differ between the control and target groups. Table 11 demonstrates the data and results for testing the differences between the numbers of discipline incidents in the two groups.

Table 11

Disciplinary Data for Control and Pilot Groups on Campus A

Discipline (2016-17 in progress)	Control			Pilot			t-Test: Two-Sample Assuming Unequal Variances		
	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16			
Mean	4.22	5.49	5.87	15.00	8.00	3.67			
Standard Error	0.63	0.74	0.53	14.00	6.51	1.67		*2015*	*2015*
Median	2	3	4	15	2	2	Mean	5.9	3.7
Mode	1	1	1	-	-	2	Variance	29.9	8.3
Standard Deviation	5.50	7.07	5.47	19.80	11.27	2.89	Observations	106.0	3.0
Sample Variance	30.28	50.03	29.93	392.00	127.00	8.33	Hypothesized Mean Difference	0.0	
Kurtosis	7.06	16.21	1.39	-	-	-	df	2.0	
Skewness	2.66	3.40	1.35	-	1.72	1.73	t Stat	1.3	
Range	26	48	23	28	20	5	P(T<=t) one-tail	0.2	
Minimum	1	1	1	1	1	2	t Critical one-tail	2.9	
Maximum	27	49	24	29	21	7	P(T<=t) two-tail	0.3	
Sum	321	500	622	30	24	11	t Critical two-tail	4.3	
Count	76	91	106	2	3	3			

English language arts (ELA), math, and STAAR. Student grades and state assessment (STAAR) data were collected to answer the first research question. The *t* test showed no statistically significant differences in ELA grades between the control and target groups because t (4) = 2.8, p = 0.2, n = 5. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, ELA grades did not differ between the control and target groups. Table 12 demonstrates the data and result of testing differences between ELA grades in the two groups.

Table 12

ELA Grade Data for Control and Pilot Groups on Campus A

ELA Grades (2016-17 in progress)	Control				Pilot			
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
Mean	79.96	79.21	75.94	81.03	79.00	79.80	82.40	80.00
Standard Error	0.61	0.56	0.94	1.47	5.64	7.33	4.50	14.25
Median	80	79	78	88	82	85	84	91
Mode	80	80	80	100				
Standard Deviation	7.92	7.47	12.79	20.00	12.61	16.39	10.06	28.51
Sample Variance	62.80	55.85	163.57	399.87	159.00	268.70	101.30	812.67
Kurtosis	0.02	0.31	1.78	4.93	1.45	3.01	-0.96	3.28
Skewness	0.17	0.28	-0.94	-2.03	-1.13	-1.71	-0.66	-1.79
Range	39	42	74	101	33	40	24	62
Minimum	61	58	26	-1	59	52	68	38
Maximum	100	100	100	100	92	92	92	100
Sum	13,353	13,862	14,201	14,991	395	399	412	320
Count	167	175	187	185	5	5	5	4

t-Test: Two-Sample Assuming Unequal Variances		
	2015	*2015*
Mean	75.9	82.4
Variance	163.6	101.3
Observations	187.0	5.0
Hypothesized Mean Difference	0.0	
df	4.0	
t Stat	-1.4	
P(T<=t) one-tail	0.1	
t Critical one-tail	2.1	
P(T<=t) two-tail	0.2	
t Critical two-tail	2.8	

For math grades, the *t* test showed no statistically significant differences in math grades between the control and target groups because $t\,(4) = 2.8$, $p = 0.1$, $n = 5$. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, math grades did not differ between the control and target groups. Table 13 demonstrates the data and result of testing for differences between math grades in the two groups.

Table 13

Math Grade Data for Control and Pilot Groups on Campus A

Math Grades (2016-17 in progress)	Control				Pilot			
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
Mean	75.42	76.32	75.50	73.34	72.00	79.60	85.00	64.25
Standard Error	0.67	0.66	0.96	1.60	12.90	3.17	4.79	19.13
Median	75	77	78	77	78	80	89	77
Mode	73	77	77	94		80	91	
Standard Deviation	8.64	8.74	13.12	21.44	28.84	7.09	10.70	38.26
Sample Variance	74.65	76.45	172.05	459.84	832.00	50.30	114.50	1,463.58
Kurtosis	1.23	1.90	4.14	1.36	3.15	2.49	4.70	2.51
Skewness	-0.41	-0.76	-1.60	-1.18	-1.71	-1.30	-2.15	-1.59
Range	56	59	89	100	72	19	25	85
Minimum	43	40	9	0	23	68	66	9
Maximum	99	99	98	100	95	87	91	94
Sum	12,595	13,279	14,119	13,202	360	398	425	257
Count	167	174	187	180	5	5	5	4

t-Test: Two-Sample Assuming Unequal Variances		
	2015	*2015*
Mean	75.5	85.0
Variance	172.0	114.5
Observations	187.0	5.0
Hypothesized Mean Difference	0.0	
df	4.0	
t Stat	-1.9	
P(T<=t) one-tail	0.1	
t Critical one-tail	2.1	
P(T<=t) two-tail	0.1	
t Critical two-tail	2.8	

The STAAR state assessment that impacts campus and district state accountability ratings, and all students in the study took these assessments. To strengthen the likelihood that overage students passed state mandated assessments, students from Campus A were "double

dipped" and enrolled simultaneously with the classroom teacher and the web-based program in Reading, Math, Writing, Science, and Social Studies in the first semester of the program. Additionally, the students had an opportunity to receive high school credit because the principal added the science courses of Integrated Physics and Chemistry for the second semester of the program. Furthermore, the career and technology education course of Communication Application was added to the students' spring schedules.

To increase the likelihood of passing state assessments, students in the pilot group on Campus A were "double dipped" or took core courses in the classroom and the web-based program simultaneously. The pilot group was enrolled in English Language Arts, Math, Writing, Science, and Social Studies the first semester, and the students were offered courses for high school credit the second semester.

In ELA, 50% of the students in the pilot passed the state assessment compared to 35% in the control group. In Math, 33% passed the state assessment in the pilot group compared to 22% in the control group. No students in the pilot group met the standard in Writing. 60% of the students in the pilot group passed the Science assessment while 33% passed in the control group. 40% of the pilot group passed the Social Studies assessment while 15% passed the assessment in the control group. Do to the size of the sample of the pilot group the percentages comparisons were not significant.

Sixteen students began the pilot on campus A. Five students were still enrolled in the program at the end of the 2015-2016 school year. Zero of the five students in the pilot on Campus A completed and passed a core course in English, Math, Science or Social Studies in the web-based program. Zero of the five students received high school credit Semester 2. Overall,

students in the pilot outperformed students in the control group on all state assessments except Writing.

Table 14

2015-2016 STAAR Assessment Data for Control and Pilot Groups on Campus A

Subject	Groups	*n* Met	% Met	*N* Final	% Final	Total
ELA	Control	69	35	15	8%	198
	Pilot	3	50	1	17%	6
Math	Control	44	22	5	3%	196
	Pilot	2	33	0	0%	6
Writing	Control	99	24	12	3%	418
	Pilot	0	0	0	0%	1
Science	Control	97	33	23	8	297
	Pilot	3	60	1	20	5
Social Studies	Control	14	15	1	1	91
	Pilot	2	40	0	0	5

Campus B Results

The control group consisted of 48 females and 106 males and included 15 (31%) who were African American females and 41 (39%) who were African-American males. Another 27 (56%) were Hispanic females, and 52 (49%) were Hispanic males. There were 5 (10%) White females and 7(7%) White males.

In the target group, there were eight female students and nine male students. Two (25%) female students were African American. Four (50%) female students were Hispanic. One (13%) female student was categorized as two or more races, and one (13%) female student was White. Four (44%) students were African American males, and four (44%) students were Hispanic males. One (11%) male student was categorized as two or more races.

In the control group, 55 (36%) of the students in the control group were Limited English Proficient or LEP. A total of 154 (100%) students were Economically Disadvantaged. Another 40 (26%) students received special educations services, and eight (47%) students in the target group were Limited English Proficient. There were 17 (100%) Economically Disadvantaged students, and two (12%) students in the pilot group received services from the special education department. See the Table 15 for the two groups' student demographics by ethnicity and gender and student special populations at Campus B.

Table 15

Characteristics of the Control and Pilot Groups on Campus B

Distribution by Ethnicity and Gender	**Control** (Total - 154)				**Pilot** (Total - 17)				**Total**	
	Female		**Male**		**Female**		**Male**			
	Number	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Asian	-	-	3	3%	-	-	-	-	3	2%
African American	15	31%	41	39%	2	25%	4	44%	62	36%
Hispanic or Latino	27	56%	52	49%	4	50%	4	44%	87	51%
Two or More	1	2%	3	3%	1	13%	1	11%	6	4%
White	5	10%	7	7%	1	13%	-	-	13	8%
Total	**48**		**106**		**8**		**9**		**171**	
Student Group	**Number**		**Percent**		**Number**		**Percent**		**Total**	
SPED	40		26%		2		12%		42	
LEP	55		36%		8		47%		63	
Economic Disadv	154		100%		17		100%		171	

Attendance and discipline. The *t* test showed no statistically significant differences in attendance between the control and target groups because $t\ (21) = 2.1$, $p = 0.5$, $n = 69$. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, attendance did not differ between the control and target groups. Table 16 demonstrates the result of testing differences between attendances in the two groups.

Table 16

Attendance Data for the Control and Pilot Groups at Campus B

Attendance (2016-17 in progress)	Control				Pilot			
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
Mean	93.26	92.98	90.24	93.59	94.14	94.50	91.53	93.75
Standard Error	0.69	0.50	0.71	0.82	1.27	1.26	1.81	2.47
Median	95	94	93	97	96	95	93	97
Mode	97	98	99	100	97	99	95	100
Standard Deviation	7.97	5.94	8.79	9.91	4.74	4.72	7.46	9.88
Sample Variance	63.57	35.32	77.24	98.13	22.44	22.27	55.64	97.67
Kurtosis	54.28	1.72	2.47	9.46	-0.73	2.84	4.45	4.37
Skewness	-6.17	-1.38	-1.50	-2.70	-0.61	-1.38	-1.82	-2.11
Range	80	28	47	58	15	18	31	35
Minimum	20	72	53	42	85	82	69	65
Maximum	100	100	100	100	100	100	100	100
Sum	12,310	13,110	13,897	13,664	1,318	1,323	1,556	1,500
Count	132	141	154	146	14	14	17	16

t-Test: Two-Sample Assuming Unequal Variances		
	2015	*2015*
Mean	90.2	91.5
Variance	77.2	55.6
Observations	154.0	17.0
Hypothesized Mean Difference	0.0	
df	21.0	
t Stat	-0.7	
P(T<=t) one-tail	0.3	
t Critical one-tail	1.7	
P(T<=t) two-tail	0.5	
t Critical two-tail	2.1	

The *t* test showed no statistically significant differences in discipline incidents between the control and target groups because $t\ (17) = 2.1$, $p = 0.73$, $n = 13$. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, discipline incident data did not differ between the control and target groups. Table 17 demonstrates the result of testing differences between the numbers of discipline incidents in the two groups.

Table 17

Disciplinary Data for the Control and Pilot Groups at Campus B

Discipline (2016-17 in progress)	Control			Pilot		
	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16
Mean	4.39	6.44	9.62	3.67	5.25	8.54
Standard Error	0.67	0.74	0.92	2.05	2.51	2.14
Median	2	4	5	2	1.5	7
Mode	1	1	1	1	1	1
Standard Deviation	5.05	6.60	9.31	6.16	7.11	7.72
Sample Variance	25.46	43.58	86.69	38.00	50.50	59.60
Kurtosis	2.10	1.11	1.02	8.67	3.63	2.46
Skewness	1.77	1.39	1.22	2.93	1.95	1.40
Range	18	26	41	19	20	27
Minimum	1	1	1	1	1	1
Maximum	19	27	42	20	21	28
Sum	250	509	981	33	42	111
Count	57	79	102	9	8	13

t-Test: Two-Sample Assuming Unequal Variances		
	2015	*2015*
Mean	9.6	8.5
Variance	86.7	59.6
Observations	102.0	13.0
Hypothesized Mean Difference	0.0	
df	17.0	
t Stat	0.5	
P(T<=t) one-tail	0.3	
t Critical one-tail	1.7	
P(T<=t) two-tail	0.6	
t Critical two-tail	2.1	

ELA, math, and STAAR. The *t* test showed no statistically significant differences in ELA grades between the control and target groups because t (17) = 2.1, p = 0.7, n = 16. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, ELA grades did not differ between the control and target groups. Table 18 demonstrates the result of testing differences between ELA grades in the two groups.

Table 18

ELA Grade Data for the Control and Pilot Groups at Campus B

ELA Grades (2016-17 in progress)	Control				Pilot			
	2013-14	2014-15	2015-16	2016-17	2013-14	2014-15	2015-16	2016-17
Mean	80.80	80.83	78.61	83.08	83.00	76.00	80.06	77.63
Standard Error	0.64	0.85	0.88	1.25	1.54	2.12	3.55	5.93
Median	80	84	77.5	84	84	75	79	85.5
Mode	78	84	73	100	88	75	75	89
Standard Deviation	7.10	9.87	10.65	14.91	5.57	7.66	14.19	23.73
Sample Variance	50.47	97.50	113.38	222.29	31.00	58.67	201.40	563.32
Kurtosis	-0.29	0.74	-0.40	2.09	-1.42	-0.78	0.89	7.93
Skewness	-0.08	-0.80	-0.09	-1.28	-0.51	0.19	-0.86	-2.58
Range	34	49	51	74	15	25	52	100
Minimum	61	50	48	26	74	64	45	0
Maximum	95	99	99	100	89	89	97	100
Sum	10,100	10,993	11,635	11,798	1,079	988	1,281	1,242
Count	125	136	148	142	13	13	16	16

t-Test: Two-Sample Assuming Unequal Variances		
	2015	*2015*
Mean	78.6	80.1
Variance	113.4	201.4
Observations	148.0	16.0
Hypothesized Mean Difference	0.0	
df	17.0	
t Stat	-0.4	
P(T<=t) one-tail	0.3	
t Critical one-tail	1.7	
P(T<=t) two-tail	0.7	
t Critical two-tail	2.1	

The *t* test showed no statistically significant differences in math grades between the control and target groups because t (19) = 2.1, p = 0.3, n = 16. The two groups were unequal sizes which might have affected the reliability of the result. However, based on the data, math grades did not differ between the control and target groups. Table 19 demonstrates the result of testing differences between math grades in the two groups.

Table 19

Math Grade Data for the Control and Pilot Groups at Campus B

Math Grades (2016-17 in progress)	Control			Pilot		
	2013-14	2014-15	2015-16	2013-14	2014-15	2015-16
Mean	77.16	76.59	75.26	79.38	73.69	78.06
Standard Error	0.73	0.62	0.92	1.64	2.32	2.54
Median	78	77	77	82	72	77
Mode	75	79	80	84	72	77
Standard Deviation	8.14	7.17	11.14	5.90	8.36	10.14
Sample Variance	66.23	51.38	124.14	34.76	69.90	102.86
Kurtosis	-0.23	0.02	1.76	-1.49	2.20	1.07
Skewness	-0.41	-0.12	-0.97	-0.46	-1.13	-0.65
Range	37	35	65	17	32	40
Minimum	56	58	30	70	53	54
Maximum	93	93	95	87	85	94
Sum	9,645	10,340	11,138	1032	958	1249
Count	125	135	148	13	13	16

t-Test: Two-Sample Assuming Unequal Variances		
	2015	*2015*
Mean	75.3	78.1
Variance	124.1	102.9
Observations	148.0	16.0
Hypothesized Mean Difference	0.0	
df	19.0	
t Stat	-1.0	
P(T<=t) one-tail	0.2	
t Critical one-tail	1.7	
P(T<=t) two-tail	0.3	
t Critical two-tail	2.1	

Unlike the overage students in the pilot on Campus A who were double dipped in core courses, students in the control group on Campus B took were enrolled in the web-based program to in high school credit courses only. Students were offered Health, Speech and the career and technical course Money Matters. Students in the pilot were still mandated to take state assessments. In ELA 67% of the students in the pilot passed the state assessment compared to 40% in the control group. In Math, 33% passed the state assessment in the target group compared to 22% in the control group. No students in the pilot group passed Writing, but 33% of the students in the pilot group passed the Science assessment and 25% passed in the control group. Also, 33% of the target group passed the Social Studies assessment, but only 19% passed the assessment in the control group. Do to the size of the sample of the Target group, the percentage comparisons were not significant. Overall, students in the pilot outperformed students in the control group on all state assessments except Writing, as seen in Table 20.

Table 20

2015-2016 STAAR Assessment Data for the Control and Pilot Groups at Campus B

Subject	Groups	*n* Met	% Met	*N* Final	% Final	Total
ELA	Control	65	40	9	6	162
	Pilot	16	67	4	17	24
Math	Control	37	22	3	2	165
	Pilot	8	33	1	4	24
Writing	Control	24	27	10	11	90
	Pilot	-	-	-	-	-
Science	Control	18	25	1	1	71
	Pilot	8	33	1	4	24
Social Studies	Control	14	19	2	3	74
	Pilot	8	33	0	0	24

Fourteen of the 25 students who began the pilot on Campus B completed the pilot, and 12 students in the target group received high school credit toward acceleration. Eleven students received high school credit in Health, and two students received high school credit in the Career Technical Education course Money Matters. Two students received two high school credits in both Health and Money Matters respectively. See Table 21.

Table 21

2015-2016 Completion Report for Campus B

Student	Score	Course Name	Total Assignments	Assignments Completed	Course Completed %
A.	70.40	Health 5001T (2015)	91	91	100
B.	71.76	Health 5001T (2015)	91	91	100
C.	76.12	Health 5001T (2015)	90	90	100
D.	73.76	Health 5001T (2015)	91	91	100
E.	70.90	Health 5001T (2015)	89	89	100
F.	77.58	Health 5001T (2015)	91	91	100
G.	70.62	Money Matters FN16201T (2015)	76	76	100
H.	72.28	Health 5001T (2015)	91	91	100
J.	70.50	Health 5001T (2015)	91	91	100
K.	75.76	Health 5001T (2015)	89	89	100
L.	70.38	Money Matters FN16201T (2015)	76	76	100
M.	70.08	Health 5001T (2015)	91	91	100
N.	70.36	Health 5001T (2015)	91	91	100

Qualitative Data

Qualitative data were obtained through face to face interviews with teachers, counselors, school administrators, lab technicians, and central office personnel. Data were used to analyze Research Question 2: What are the central office and school-based stakeholder's perceptions of the overall effectiveness of the system-wide intervention program?

To ensure trustworthiness of the data, upon completion of each interview, the researcher debriefed participants and allowed them to ask clarifying questions. The researcher also bracketed personal bias before conducting the study, not allowing for personal experience or influence to enter the interview or data transcription or analysis process. At the conclusion of the

interviews, the researcher compared the transcripts to the recorded sessions to clarify any misinterpretations heard in the audio recordings. The researcher used NVivo for coding and analysis.

Research Participants

The study was conducted with 13 participants serving as school administrators, teachers, counselors, web-based lab teachers, and central office personnel who responded to a voluntary survey after school hours. Eleven individual interviews were completed, and one focus group interview was completed totaling 12 interviews. The same questions were used in all interviews including the focus group. Each participant responded to 16 questions regarding the effectiveness of the web-based program, the alignment of the program to district and state standards and professional development provided to employees regarding teaching overage students. Participants also responded to questions regarding student retention, social promotion, and classroom disruptions. Finally, the survey asked for recommendations for the district.

Participants consisted of two female principals, one male principal, and four central office personnel employees who were two females and two males. Six campus staff were interviewed. Four were males, and two were females. Twelve of the participants held certifications from the Texas Education Agency. Participants were categorized by campus staff members (S), principals (P), and central office (C) personnel.

Staff members included one high school counselor (S1), web-based teacher (S2), middle school counselor (S3), two eighth teachers (S4, S6) and the web-based teacher assistant (S5). Three principals (P1, P2, P3) were interviewed. Central office staff interviewed included the web-based program model (C1), the school leadership director (C2), the director of the academic advisory (C3), and the chief of schools (C4).

The one-on-one interviews included participants at all levels as seen in Table 22. The web-based teacher, the web-based teacher assistant, high school counselor, two female principals, and all central office personnel participated in face to face interviews. The focus group included one principal, two teachers, and one counselor.

Table 22

Interview Participants' Attributes

Participant	Gender	Years of Experience	Interview Mode	Position
S1	Female	3-5	Face to Face	HS Counselor
S2	Male	3-5	Face to Face	Web-based teacher
S3	Female	3-5	Focus	MS Counselor
S4	Male	0-3	Focus	Grade 8 Teacher
S5	Male	0-3	Face to Face	Web-based TA
S6	Male	0-3	Focus	Grade 8 Teacher
P1	Male	5-10	Focus	Principal
P2	Female	5-10	Face to Face	Principal
P3	Female	3-5	Face to Face	Principal
C1	Male	5-10	Face to Face	Dir. School Completion
C2	Male	10-15	Face to Face	Dir. School Leadership
C3	Female	10-15	Face to Face	Dir. Academic Advisement
C4	Female	10-15	Face to Face	Chief of Schools

Findings: Four Emergent Themes

Four themes emerged from the collection of the survey data. The themes were a Need for A Differentiated Program Model, the Perception of The Web-based Curriculum Program as Effective, the Need for A Systemic Process to Identify and Track Overage Students, and the Need for Early Intervention to address overage students

Table 23 depicts the four themes and the code within each them as well as the total number of responses. The Need for A Differentiated Program Model received the highest number of responses at 95. The Need for Early Intervention received 73 codes, Perception of The Web-based Program Curriculum as Effective was coded 70 times followed by the Need for A Systemic Process to track overage students with 49 codes.

Table 23

Themes, Codes, and Total References for Themes' Codes for the 13 Participants

Theme	Codes		Total Codes
Need for a differentiated program model	Targeted comprehensive professional development Teachers Ability to Teach Overage Tiered Campus interventions Overage cause disruptions Overage Students Give Up	Scheduling Overage Students Need for Mentors District Use of Mentors Mentor Effectiveness	95
Need for early intervention with overage students	Perceptions about retention Perceptions about social promotion Perceptions about repeating Curriculum Need for a plan to retain or social promote	Need for early intervention Need for overage students in alternative school setting Need for overage students in a different school	73
Perception of the web-based curriculum program as effective	Communication of program Acceleration Motivation Web-base district aligned	Web-base state aligned Curriculum bridges the gap Web-base not aligned	70
Need for a systemic process to identify and track overage students	Need to track overage students early Need for a campus process to track overage Understand the campus process to track overage	Vertical Articulation of the process to track Not addressed in early grades	49

Central office personnel were the furthest removed from students and provided the least amount of responses to the four emerging themes with an average of 29.8%. Principal responses on average fell between central office personnel and campus staff with the exception of the

theme need for a systemic process to track overage students. Principal's average was Campus 32.6%. Campus staff provided the highest average of responses to the four themes at 37.6%.

Campus staff who worked more closely than the other participants provided the following number of codes per themes: Need for Differentiated Program model 36, Need for Early Intervention 28, and the Perception of The Web-based Program as Effective 29. The theme, Need for a Systemic Process to Track Overage Students received the fewest codes, 16 from campus staff.

Principal responses noted 31 codes in the Need for a Differentiated Program Model. The Need for Early Intervention and The Perception of the Web-based Program as Effective received an equal amount of codes at 24. A Systemic Process to Track Overage Students received 15 codes and the fewest responses within the four themes. Figure 3 illustrates participant codes by themes.

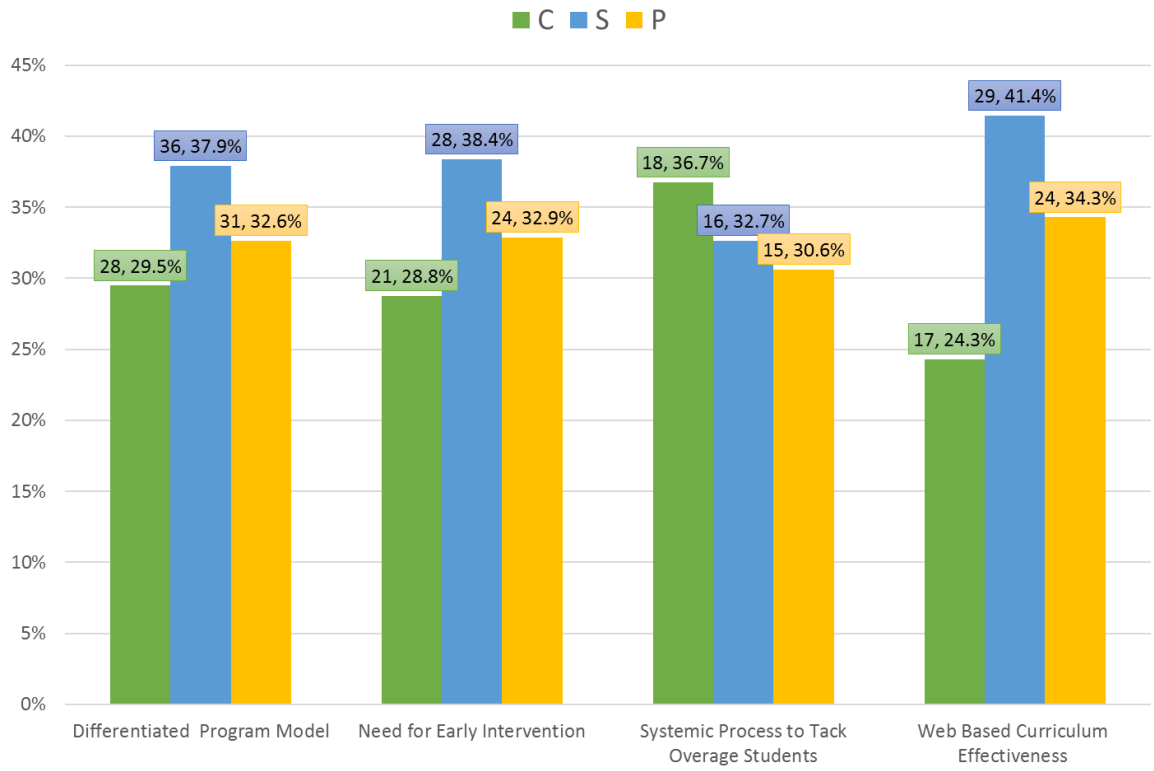

Figure 3. Percentages of responses for themes by central office (C), staff (S), and principal (P).

Need for Differentiated Program Model. The theme Need for a Differentiated Program model received 95 codes. Data suggested possible components or subcodes within the model included a change in instructional practices so that overage students feel included in the classroom setting, professional development for teachers that teach overage students and perhaps cultural training for all stakeholders. Figure 4 illustrates the codes for the theme of differentiated program models.

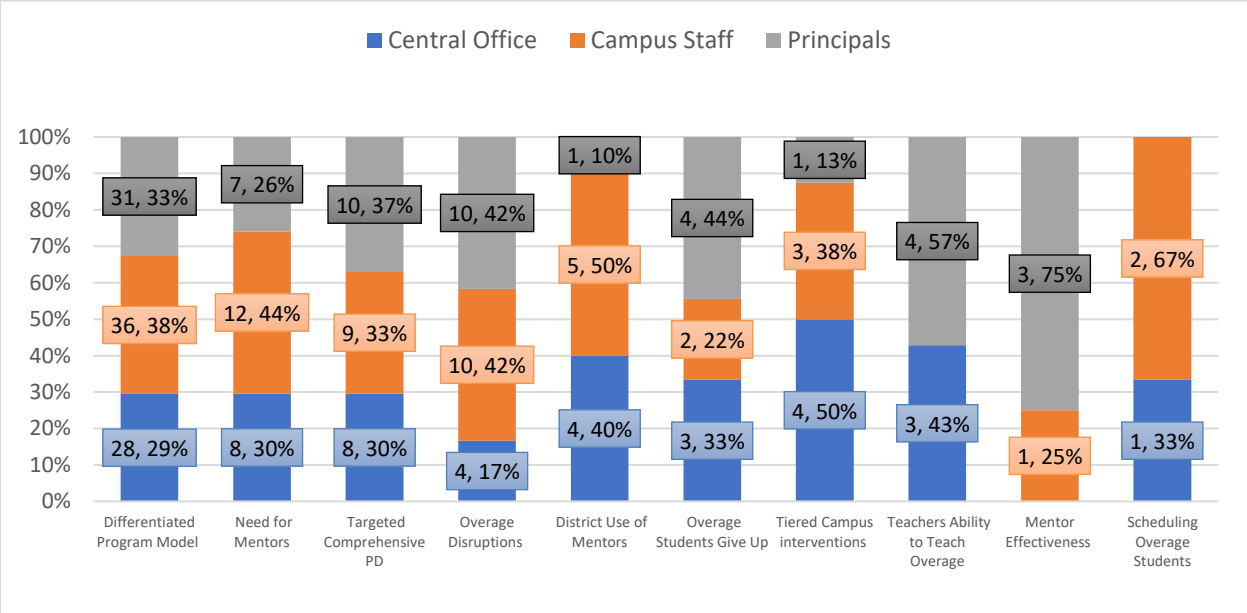

Figure 4. Codes for the theme addressing differentiated program models.

Student schedules unique to the needs of overage students was suggested as a modification so that students have a chance to acceleration courses. The use of mentors to motivate students to stay on track and guide decision on behavior, classwork and social-emotional needs emerged as codes within the theme.

Central office personnel, principals and campus staff all at almost equal percentages, 30%, 33%, and 37%, noted the need for targeted professional development for teachers. However, only central office personnel at 43% and campus principals at 57% reference that the cause of failure among overage students was impacted by the teacher's ability to teach overage

students. Zero percent of campus staff noted the teacher's ability to teach overage students as code within the theme. This leads to the assumption that campus staff believed the deficiency in teacher capacity to teach overage students is limited to the need for professional development but not teacher capacity. While participants in the study felt that they have been provided with professional development, they did not feel that it was targeted to support overage students who had been retained. S4, who was a new teacher with less than 3 years' experience stated, "I don't know that well. This was my first time ever being in this situation, so I didn't really know much about overage students ... and nobody ever talked to me about it except the principal at my school."

Central office personnel are more removed from the students and often time spoke from a balcony view. In regard to teacher capacity and professional development district wide, C4 provided the response below:

> I don't feel like we have had any targeted PD that addresses students that have been retained. All of our professional development has always been centered more on Tier I instruction, with maybe some reteach or interventions, how to differentiate? ... Nothing has been targeted to reach students who have been retained.

S6 added that in viewing the make-up of the teaching staff compared to the make-up of the student population, there is a need to understand cultural differences. He states that cultural differences should be considered as a component of professional development offered to teachers:

> I think cultural professional development is important. This is my second year in the district, so it may be something in place that I just don't know about, but after 2 years, I haven't seen anything that just hits culture and attacks the different stigma we have

between teachers of cultures of different cultures and students of an inner-city culture. I feel like if we get some professional development, where these teachers and students, we can collaborate on how to address each other, I think that would go a long ways as far as preventing retention and raising morale.

Collectively campus staff and principals responded at 84% that classroom disruptions were more likely to be caused by overage students. Principals, who were more likely to see and speak with students who had been removed from the classroom due to discipline issues, coded overage students as "giving up" at 44%. P2 reference their experience with working with overage students:

> They don't see that there's a way to get themselves in high school and get caught up. It's just like: "I've been a failure all this time, why even try to go even further." They typically have more of the disruptive behaviors, acting out in class because they're lacking in academic areas. These are the students that tend to have our attention more than our students that are on grade level or age, appropriate age for grade level.

Tiered interventions that include the need for flexible scheduling and program implementation emerged as a code within differentiated program needs. According to C1, flexibility in the program allowed students to work at their own pace and retake and redo assignments as well as work on their devices at home, outside of the traditional school day. C1 stated, "If students were struggling, they have the ability to pace themselves in such a way that they can go back and review the instruction which you can't readily do in a classroom. They can continue with their coursework without having to slow down and wait for the next day or the class to catch back up."

The need for overage students to be paired with teachers that build relationships and incorporates schedules that allow for acceleration was identified. In a study about grade retention and school completion, Penna (2001) captured the perceptions of students who were overage and at risk of being retained. Overage students did not believe they were a part of their classrooms' learning environments. They described the instruction that they endured as fast paced, impersonal, poorly explained, teacher centered, and lecture based. Students reported preferring more student-centered instruction, individualized attention, variation in teaching methods and more meaningful lessons (Penna, 2001). In the current findings, Participant C4 mentioned scheduling as a critical asset for effectively implemented tier-based interventions:

> I would say, depending on how the master schedule is set up, they may have to do a repeat class or intervention class in reading or math. If they've been retained, of course, if they've also failed science or social studies, we don't have anything available. It all depends on how that master schedule is set up. We encourage them to also staff them with the right teacher, and schedule them in with a teacher that's strong, verses a new teacher, or a teacher who doesn't have a relationship with that student. But, system wide, we do not have procedures in place on how to assign or differentiate for those students

Finally, the need for coaches and mentors became clear during the data analysis. Campus staff coded the need for district mentors and the district use of mentors at 44% and 50% respectively. Participants may have had a different understanding of mentors. Campus teachers S4 and S6 referred to the mentors as the athletic coaches but not necessarily trained mentors skilled in motivating and coaching overage students. S4 stated, "I think that all some of these

kids have as far as support and someone in their corner believing in them are the coaches in extracurricular events, even the web-based teacher is a mentor."

Principals appeared to have the best understanding of the training needed to be an effective mentor. They acknowledge that a vetted mentor must be able to build relationships and skilled enough to serve in the role of a mentor. P1 stated:

> I believe that mentors are directly correlated to help the motivation of students, because a lot of student that we have, especially inter-city students that don't get that support at the house, they're actually helping students not only catch up but they're talking them through some of the issues. That person needs to be selected very carefully, so they can be a mentor.

Need for Early Intervention with Overage Students. Perceptions of student retention, social promotion, curriculum, interventions and alternative placement for student who are overage emerged as codes within the theme, "Need for early intervention with overage students." Principals responded overwhelmingly with 64% of their coded responses against retaining overage students P2:

> I think that we really need to identify those kids who are falling behind and do everything we can to get them reading on grade level because I think as a district, we need to do a better job of looking at how we retain kids in our elementary because I think two or more times is just too many times to retain kids in elementary.

Principals referenced repeating curriculum in 75% of their responses acknowledging that grade level curriculum is not differentiated for repeaters but instead retained students are subjected to the same curriculum already failed. P3 states, "If we're talking about students that

are unmotivated, and that are causing discipline problems, why do we think that doing the same thing is going to motivate them again."

Campus staff and central office staff code in favor of retaining students and therefore their response to whether students should be retained was at 21% and 14% respectively compared to 64% from campus principals. Campus staff felt strongly that retained students need to know the curriculum. This is evident in that 0% of their codes acknowledged that overage students repeating the same grade level curriculum was a concern.

Participants were asked about their perceptions of social promotion, placing individuals in their age appropriate grade despite the student's academic ability. All participants were against social promotion. S1 makes this reference to social promotion:

> I don't think so. It's very hard for those students just seeing the high school students. They know they haven't been successful, so after that first year of high school, they don't think they even need to attain any credits, that they will get promoted anyway. It just creates that pattern of thinking for that child and the parent. That's been hard for us, to get the parents to understand and the student to understand that you must be successful in order to move on.

All central office staff were amenable to social promotion only if students were provided with a plan. C4 refers to the fact that the system has failed students and therefore educators must take ownership of this failure and do something different to address the needs overage students. C4 states:

> Sadly, the majority of the students have been failed by us educators, it's not necessarily their fault. So, is it right to just socially, you know, promote them? Maybe not. But, it's also our fault...That's our job, so obviously, we did not do our job. So, all you're doing is,

you're putting them in an environment where they're not going to be successful, they aren't confident. So, it shouldn't even matter about the promotion to a grade. What matters is the environment we're putting them in for them to be successful?

Participants were asked whether overage students should be placed in a different classroom setting on campus and whether overage students should be placed on a different campus with other overage students. Campus staff coded the need for overage students in a different classroom at 41% and a different campus at 48% which supports earlier data report that campus staff were the least prepared to teach overage students. See Figure 5.

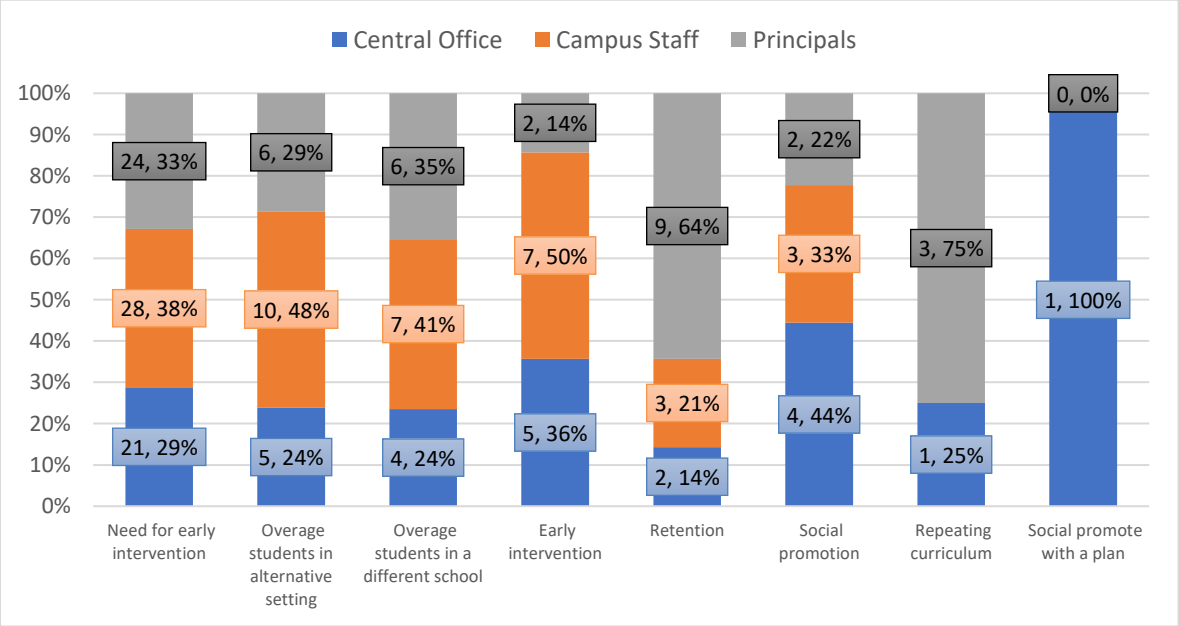

Figure 5. Codes related to the Need for Early Intervention.

The Perception of the Web-based Curriculum Program as Effective. Participants were asked about their perceptions of the web-based program as effective. Codes that emerged as effectiveness were communication of the program, the programs ability to accelerate students, its alignment to district and state student standards and how well the curriculum in the program bridged the gaps in mastering curriculum of the overage students. Finally, participants' belief

that being enrolled in the web-based program motivated overage students was coded as seen in Figure 6.

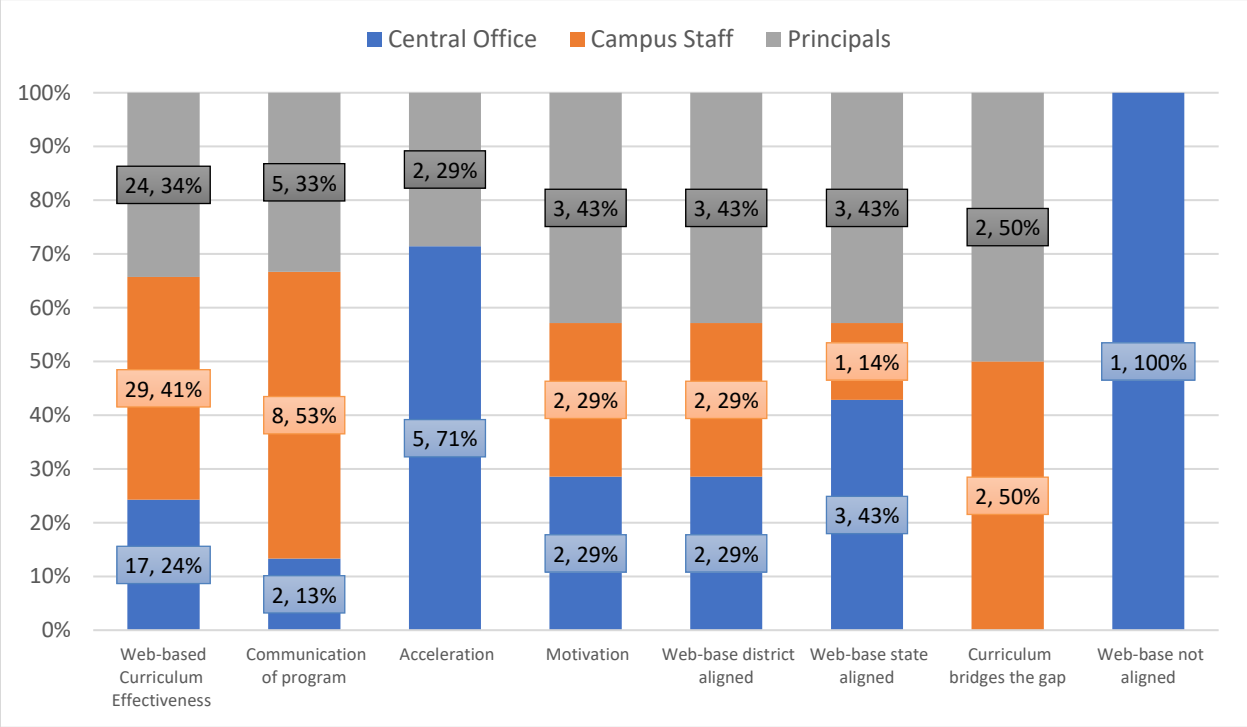

Figure 6. District and campus participants' perceptions of the web-based programs as effective.

Nearly half, or 41%, of the codes from campus staff addressed web-based program effectiveness. Also, 34% of campus principals and 24% of central office staff believed in the effectiveness of the web-based program. Principals coded communication of the program to stakeholders at 33% and central office staff coded communication at 13%. Principals who are responsible for all students and supervise the master schedule had the best understanding of how the web-based program. The data suggested that not all stakeholders were aware of the program and how it works. S2 generated 53% of the codes for communication. S2 served as the web-based teacher and worked the closest with the overage students as well as these students' teachers, counselors, and the feeder high school's personnel. S2 stated:

> I think the communication between the pyramids is extremely important, because we can find out about how to prepare the student to move on to the next levels. We discuss those things. Also, for instance, our students who need to be scheduled a certain way, it helps the counselors to be able to communicate with the high school counselors.

The web-based programs alignment to district and state standards was coded at 43% by principals. Principals understood the need for overage students to have to pass state mandated assessments as well as the need for acceleration so that they are not left behind. The principal was most responsible for alignment of the program and the ability of the program to bridge instructional gaps if students were to be successful. P1 stated the following:

> We reach out to the Math, to the Science department, to the language department ... Every one of the departments at CTE, the whole group, and make sure that they take a look at it and that what we're doing is not only aligned with the state TEKS, but it's also aligned with the scope and sequence of what we teach in the district.

Principals and campus staff both coded the importance of the web-based curriculums ability to bridge the instructional gaps of students at 50%. This finding supports quantitative data from campuses A and B where students who participated in the pilot performed better on state assessments than students who did not participate in the pilot.

Next, 71% of the codes from central office staff referenced the need for students to obtain high school credits and graduate compared to 29% of principals and 0% campus staff. Principals may have been more focused on state accountability whereas central office may have focused on the graduation rate of the district. C4 commented that while the program may not completely be aligned to promote mastery, it is however effective in that it provides an avenue for overage students to receive high school credit. 43% of principals referenced the ability to receive high

school credit and get back on track for graduation was as a motivating factor in controlling discipline and prevented students from giving up. C2 shared the following:

> They have an opportunity to receive two or more credits in high school. For a kid that's overage and if you can start at ninth grade knowing that, "Wow, I'm actually almost a tenth grader." I think that's extremely beneficial to kids and their self-esteem.

Need for a Systemic Process to Identify and Track Overage Students. Central office staff, campus staff, and principals referenced the need for systemic process to identify and track overage students at 37%, 33%, and 31%. When asked about how overage students were identified and tracked, the following codes were identified within the theme: There was a need to intervene in the early grades. Not all participants could state the process in place to track overage students at the campus or at the district levels. If a process was mentioned it looked different at the campus and district levels. The process was not articulated vertically.

The tracking of overage students in early grades represented 67% of codes for principals, while the same code represented 33% of the data provided by central office for this theme. They contended that students at risk for becoming overage can be identified as early as elementary based on third and fifth grade retentions and student academic performance indicators such as low reading skills and low test scores. C4 stated that the district "must be proactive and not reactive" and elaborated as follows:

> I think that you have to track these kids and try to do prevention instead of intervention. I think we wait too late to intervene, so if we can come up with preventive measures for when we keep track of the discipline, attendance, and academic grade data, it could be a lot more useful for these students so they won't drop out.

Participant S6 recited that there was a campus process to track overage students but could not clearly state the process. The response to the question of how does your campus track overage students was, "by using a progress monitoring tool. But, I don't know if we necessarily have anything in place? Even our counselors don't talk from middle school to high school."

Figure 7 displays the codes within the theme Systemic Process to Track Overage Students. Additionally, 50% of the codes from central office staff reference vertical articulation of the plan to address overage students. The Student Success Initiative is a state mandated process in which middle school students who fail state mandated assessments must have a plan of success created by campus grade placement committee and shared with the feeder high. Educators from both campuses must meet with the parent to discuss the plan (Texas Education Agency [TEA], 2017b, p.17).

Participant C4 referenced this process as compliant and the plan not truly monitored by the schools:

> Our administrators don't drill down to student to student. We have a process in place where we're supposed to have SSI for eighth grade where you have a meeting. But, that usually doesn't even have an administrator present and it's just a form to complete, it is compliance piece.

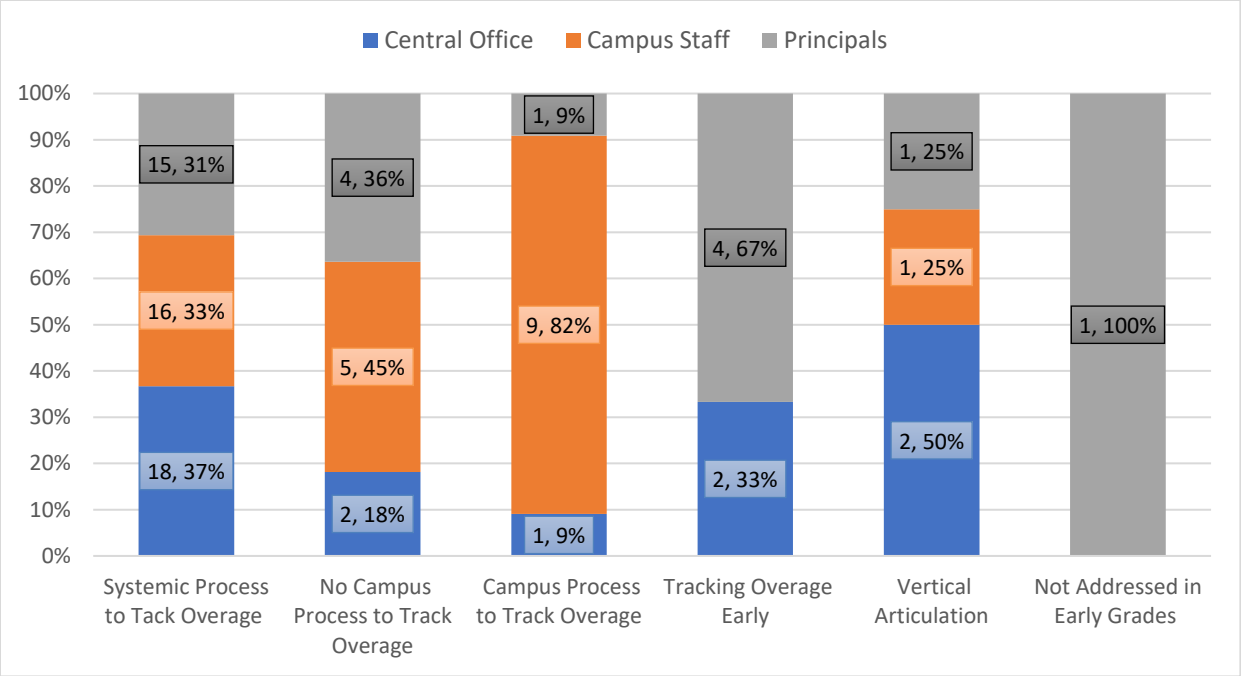

Figure 7. Percentages for codes within the theme Systemic Process to Track Overage Students.

Summary

Chapter 4 examined quantitative data from the district's student management database. Data from student demographics, student attendance, student grades and high school credits earned were collected to answer Research Question 1. Qualitative data from survey questions were analyzed to answer Research Question 2. The four themes that emerged in response to the data were The Need for A Differentiated Program Model, The Perception of The Web-based Curriculum Program as Effective, The Need for A Systemic Process to Identify and Track Overage Students, and the Need for Early Intervention. Chapter 5 provides a discussion of the findings, implications, and recommendations for further study.

Chapter 5

Findings, Implications, and Recommendations

The study was conducted to identify school instructional policies and procedures, curriculum frameworks, ongoing assessments, and planning and decision-making structures aimed to accelerate the academic performance of overage students. This case study was conducted in two middle schools within a large urban Title I school district in North Texas enrolling over 87,000 students. Chapter 4 presented the findings from this mixed methods case study via quantitative data from the district's student management database and qualitative survey data from interviews with 13 district school employees. Chapter 5 includes a summary of the study and the findings, followed by implications for school districts to address the needs of overage middle school students. Finally, recommendations for future studies are presented.

Summary of the Study

In 2008, the U.S. Department of Education required states to establish goals for graduation and targets to intervene if a subgroup of students fell short ("ESEA Waivers," 2013). Struggling students, who are age appropriate for their grades, by law, must be enrolled in school, might have failed courses and state mandated assessments, and are scheduled in web-based classes within the school day. Such classes are meant to remediate failed areas of the state assessments, recover failed classes and accelerate students back on track to graduate. Districts' attempts to develop programs meant to remediate and accelerate students toward graduation have been problematic due to a lack of consistency in systemic implementation and monitoring (Schwartz, 1995). Few programs exist for intervening with students at risk for dropping out when they are in middle school and even fewer are offered to overage middle school students.

Therefore, the problem investigated was for meeting the educational needs of overage middle school students who have the highest risk for dropping out of school.

Statement of the Purpose

As state accountability becomes increasingly focused on college and career readiness, the need to ensure that students are track for graduation is a mandated outcome for all students. The case study examined the effectiveness of a system wide middle school intervention program that addressed the educational needs of struggling students. It identified school instructional policies and procedures, curriculum, assessments, and planning and decision making structures aimed to accelerate the academic performance of overage students.

Design and Methods

This mixed method case study design analyzed a collection of quantitative and qualitative data from two urban middle schools where students defined as overage according to the districts 2015-2016 age grade level were identified as likely to drop out of school. This research methodology gathered complementary yet different data on the same topic to be integrated for analysis and interpretation. It provided the researcher with a greater scope to investigate educational issues using both words and numbers to benefit educational establishments (Almalki, 2016). Quantitative data were gathered from districts student management system that included student attendance, discipline incidents, grades and state assessments. Qualitative data were from survey questions from 13 participants who were employed by the school district and served in the capacity as teachers, counselors, principals, and central office personnel responded to survey 16 questions. The case study yielded an understanding of the complex issue related to reducing overage middle school students' likelihoods for dropping out of school.

Data Analysis

Quantitative data were collected via the district's student management system and analyzed utilizing the independent *t* test for proportions between the intervention versus non-intervention students for Target Campus A and Target Campus B. The independent *t* test were applied in the following areas: attendance, discipline incidents, grades, and state assessments for a control group and target group for the two campuses. The quantitative data from the two pilot middle schools were analyzed and compared to determine the differences in program implementation between the target groups and control group for both campuses.

Qualitative data were analyzed via structured interviews. Each interview participant responded to 14 questions that were electronically recorded and then transcribed. Journaling and coding via the software NVivo allowed themes to emerge. NVivo coding refers to coding with a word or short phrase from the actual language found in the qualitative data record (Patel, 2015). To validate coding the research reviewed transcripts and video recordings. The researcher validated emerging themes with participants during the interviews. Repeating ideas emerged into codes which in turn were grouped into larger codes or themes. Four overall themes emerged from the qualitative data.

Limitations

The case study was conducted on two campuses in a large urban school district with no systemic process to address accelerating overage students at the middle school level. Each campus was run by principals whose focus for implementation and resource allocations differed. Therefore, leadership styles and focus may have impacted results and could make the program difficult to replicate. The principal from Campus A was in improvement required status for state accountability so students were enrolled in core courses the first semester to impact passing

percentages on assessments for accountability purposes. Students were enrolled in high school courses for credit for acceleration semester two. Students from Campus B were enrolled in high school credit courses for acceleration for the first and second semesters. Students in the intervention on both campuses could earn three high school credits. No students on Campus A earned high school credit, but most of the students on Campus B only earned one high school credit. Time, teacher certification and student expectations might have impacted the results.

District-wide demographic data were entered into the student manage system by human data clerks. It was recognized as a limitation that human error in logging data such as students' grades, attendance, or mobility information could have caused errors in the final data set. Finally, the number of students in the pilot and the number of students who successfully completed the pilot was low; therefore, another limitation emerged that could have affected the ability to detect statistical significance.

Discussion of the Findings by Research Question

Research Question 1 Findings

The first research question asked: What impact on student attendance and academic performance will the intervention have on participating overage middle school students compared to overage middle school students not receiving the interventions? Quantitative data from the district's student management system were analyzed for students who received the intervention in the pilot group of students and those who did not receive the intervention as part of the control group. Data were collected in the following categories: attendance, discipline incidents, grades in ELA and Math and state assessments. The *t* test identified no statistical differences between the target and control groups on Campus A and Campus B.

The *t* test for both campuses might have revealed no statistical differences due to the size of the pilot groups. However, there were some visual differences when comparing the overage students who participated in the pilot to the control groups of overage students who did not participate in the pilot. Implementation of the pilot by building principals may have impacted results as well.

Attendance for students in the pilot on Campus A was consistent with the attendance of students who are in the control group. Attendance for students in the pilot on Campus B was 1.53% higher than for students not in the pilot on Campus B. Discipline data for the pilot group on Campus A depicted less disciplinary incidences than for students not in the pilot on Campus A. Pilot students' ELA and Math grades on both campuses were observably higher than for students not in the pilot on either campus. Students on both pilot campuses were observed to outperform the students not in the pilot academically, even though the results did not yield statistical significance. Overage students in the pilot program on both campuses outperformed students not in the pilot on the STAAR assessments for ELA, Math, Science, and Social Studies.

Research Question 2 Findings

This research question asked: What are the central office and school based stakeholder's perceptions of the overall effectiveness of the system-wide intervention program? Data retrieved from the 13 school district participants were analyzed, and four themes emerged that provided answers to this research question. The four themes that emerged from the stakeholders' perceptions of the overall all effectiveness of the system wide intervention program were the Need for a Differentiated Program Model, a Need for Early Intervention, Perception of the Web-based Curriculum as Effective, and a Need for A Systemic Process to Identify and Track Overage Students. Table 24 lists the four emerging themes with excerpts of coded transcript data

for each emerging theme. The themes are summarized according to the data analysis presented in Chapter 4. Each is discussed individually in context with the literature in the following four subsections.

Table 24

Four Emerging Themes with Excerpts from Codes Found in Transcribed Data

Emerging Themes	Excerpts from Transcript Data	
Need for a Differentiated Program Model	There is re-teaching of different ways….that's information that is needed. That's an area that we need to work on within our district	The structure has not been in the place to address those students that are 15 in the 8th grade about to turn 16 in the 8th grade
Need for Early Intervention	If a student is failing at first grade, that student's already going to fail middle school. So, what are we doing differently, and why would we be allowing first grade students to fail?	Taking them from their traditional campus….. accelerate them not because they are behavior problems …... We've got to give them something different.
Perception of the Web-based Program Curriculum as Effective	I think it's very aligned to the states standards, it's just a matter that is at a rigor that is different from what is taught on our current campuses	That's what happens with some of my kids. The ones that are getting it, they got a taste of winning in the classroom.
Need for Systemic Process to Identify and Track Overage Students	I think that you have to track these kids ….do prevention instead of intervention. …..track of the discipline, attendance, and academic grade data	We are accelerating them, but also giving them that self-esteem back to make them believe, "I can do this. I'm going to be a successful citizen and successful adult."

Need for a Differentiated Program Model. The Need for a Differentiated Program Model emerged from the coding process as a major theme. Principals expressed the need for professional development for teachers to differentiate instruction and to accommodate the needs of struggling students. Penna (2001) stated that eeffective academic instruction engages students, uses less lecture and incorporate group activities related to the lesson. The study reported that teachers that reduce failure hold high expectations and provide positive and encouraging feedback (Penna, 2001, p. 74). Survey data from principals overwhelmingly showed the need for professional development for staff to address the needs of overage students

and concern. However, campus staff sited curriculum that did not bridge the gaps of struggling learners as the missing component critical to support learning for overage students.

Participants shared that overage students tended to cause more class disruptions and that because of this student behavior, teachers could often identify those students who were overage and had been retained. Principals, who handle discipline incidents shared overage students tended to cause classroom disruptions. The quantitative data from the target groups for both Campuses A and B showed fewer discipline incidents for those students who participated in the pilot than those students did not participate in the pilot.

Campus A utilized the web-based program to double-dip or reteach grade level content so that students had a better chance to pass the state mandated assessment as well as to obtain high school credit for overage students. Campus B utilized the web-based program to accelerate students to get high school credit only. Quantitative data from both campuses revealed that when reviewing the state assessments for the 2015-2016 school year, students in the target groups, on both campuses A and B, passed the state assessments at a higher passing rates in ELA, Math, Science and Social Studies, than participants in the control groups on both campuses. Participants in both target groups passed at lower rates in Writing than students in the control groups. The rigor of the web-based program is discussed in a later section; however, it seemed to support preparation for state mandated assessments which in turn will impact graduation rates since students must pass the state assessments for graduation. The web-based program increased the likelihood that students would graduate who had previously failed in traditional classroom settings.

Need for Early Intervention. Early intervention was identified as a theme. Participants stated that students could be identified earlier in Grades 3 and 5 by viewing attendance, grades,

discipline incidents and state assessments to capture students at risk of dropping out. C4 stated that educational employees should take ownership of student failures as early as first grade. C4 said, "If a student is failing at first grade, that student's already going to fail middle school. So, what are we doing differently, and why would we be allowing first grade students to fail?"

Sneathen (2011) studied the effects of grade level retention as a means for remediating struggling students and found teachers did not believe retention had any psychological impact on retained students. The majority of the staff believed that retention was necessary for students to meet standards. Though the participants in this case study worked directly with middle school students who were currently overage in their middle schools, the campus staff supported retention and were not in favor of social promotion when asked about their perceptions on student retention and social promotion. The two campuses' staff felt that students should know the material in order to meet standard. Since students in the pilot were overage and had obviously been retained in earlier grades it was unexpected that the middle school would support retention which would perpetuate the students they were currently serving in becoming further behind and off track for graduation.

Principals and central office staff were less in favor of retention. They were in favor of social promotion but only if with students were promoted with a plan. When asked about overage middle school students in a traditional setting, all participants felt that overage middle school students would be better in an alternative setting where they could be with peers in a similar situation. Participants did stress the importance of providing supports that addressed the social emotional needs of students as well as mentors to motivate students not to give up.

Perception of the Web-based Curriculum Program as Effective. The themes Perception of the Web-based Program as Effective and the Need for a Differentiated Program

model had an overlapping component, the rigor of the web-based program. Participants were asked about if the web-based program was aligned to district and state standards. Participants felt that the program was aligned. Sneathen (2011) referred to NCLB as the cause of school districts being deemed "in need of improvement" due to students not passing state-mandated assessments which impact graduation rates. This effect has trickled down into the classroom where teachers feel more and more pressure not to promote. She states these retention delays allow schools more time to address deficiencies. However, this process perpetuates students to become overage.

The principal from Campus A utilized the web-based program to double dip or remediate students in the target group in core tested courses in the first semester and allowed students to take courses to gain high school credit in the second semester. The principals from Campus B did not double dip students in the target but allowed students to take high school credit courses in both semesters. Quantitative data from both campuses revealed that when reviewing the state assessments for the 2015-2016 school year, students in the target groups, on both Campuses A and B, passed the state assessments at a higher passing rates in ELA, Math, Science and Social Studies, than participants in the control groups on both campuses. Participants in both target groups passed at lower rates in Writing than students in the control groups. Writing is usually offered in the seventh grade so very few students took the writing assessment. The data appeared to confirm that the web-based program was effective since the number of students passing state assessments was higher in both control groups. However, students from Campus A obtained no high school credit whereas 11 students from Campus B obtained 11 high school credits and 2 students obtained two high school credits.

Need for A Systemic Process to Identify and Track Overage Students. When asked how overage students were identified and tracked at the campus and district levels, responses varied. Central office staff, campus staff and principals agreed that there is a need for a district wide process to identify and track overage students. Campus staff indicated that there was a process at the campus level however when asked what the process was they were not able to clearly articulate the process. Participant C2 who was over academic advisement was able to describe the entire district process to address the needs of overage students within the district. However, she admitted the process was only in place at the high school level. No other participant was aware of the district wide process to identify and track overage students.

Participants indicated that campuses may or may not have processes in place to address and track overage students. Participants were inconsistent in reporting what data they thought should be utilized to identify and track students. Participants shared that if a process was in place, it was not shared not vertically within pyramids of schools so that student supports could be used to meet the needs of these students.

Significance of the Study

The Obama administration mandated HB 5 to hold school districts responsible for preparing students to become college and career ready. Mileaf et al. (2013) confirmed that credit recovery programs should address student deficiencies and maintain rigorous instructional delivery to allow students to re-engage with coursework or enter postsecondary education. Such programs were targeted to support overage students in high school and at risk of dropping out. Few programs focused on accelerating overage middle school students.

The district in which the case study was conducted revealed that in grades six, seven and eight, 23% of the students were overage at each grade level district-wide. This percentage was

equivalent to the percentage of students who were overage and at risk of dropping out in the in 12th grade alone. In spite of the data, acceleration programs within the district only focused on high school students specifically at the 11th and 12th grades. No early intervention programs were in place to accelerate students back on track for graduation at the middle school level.

Students in the case study were enrolled in an intervention that utilized a web-based program aimed at accelerating overage middle school students back on track for graduation. The study examined the impact the system-wide intervention had on two middle schools whose overage students participated in the intervention. Additionally, the study examined school- and district-level stakeholders' perceptions of the overall effectiveness of the system-wide intervention program.

Quantitative data revealed that participants in the pilots on both middle school campuses benefited from the intervention. School attendance increased, grades in Math and ELA increased and participants outperformed overage students not receiving the intervention on state mandated test in ELA, Math, Science and Social Studies. However, only the middle students who participated in the pilot on Campus B obtained high school credit for acceleration.

Texas was praised for closely modeling Almeida et al.'s (2010) six pillars of effective dropout prevention that state should: (a) provide the right to public education by raising the free public compulsory education age to at least 18, and complete missing credits through age 21, (b) count and account for dropouts, (c) use graduation rates and tracking to intervene with "transformative reform," (d) establish and maintain new models for keeping students on track, (e) purposefully include strategies for accelerating students toward graduation, and (f) require funding to develop stable, systemic reform statewide. However, the degree to which each pillar

was implemented and was effective across the state and within districts varied widely (Mileaf et al., 2013).

Implications for Practice

The four themes that emerged from the case study support Mileaf et al.'s (2013) statement referencing the effectiveness and consistency of dropout prevention reform and systemic implementation. The themes revealed a Need for a Differentiated Program Model, a Need for Early Intervention, Perception of the Web-based Curriculum as Effective, and a Need for A Systemic Process to Identify and Track Overage Students. The themes informed decision making processes and procedures for the district and described variations in how the practices were applied to the two pilot campuses. Differences in the implementation of the practices between the two pilots included the following: Leadership focus on accountability versus acceleration, program expectations for student work, scheduling and structure of the programs, teacher certification and student incentives.

Leadership Focus on Accountability versus Acceleration

Leadership focus and the purpose of implementation of the web-based program differed between the two pilot campuses. Depending on the campus status in state accountability, principals had to choose between making sure overage students met accountability standards and whether to focus on acceleration. Campus A was in its second year of Improvement Required (IR) status for state accountability. In order to address the campus accountability rating the principal of Campus A "double dipped," or simultaneously enrolled, students with a classroom teacher and the web-based program in the core subjects ELA, Math, Science and Social Studies for semester one. Students were enrolled in courses for high school credit for semester two. This tactic was employed in hopes of increasing overage student's likelihood of passing the

STAAR or the state assessment and thus positively impacting the campus accountability rating. Campus B was in good standing for state accountability and only enrolled overage students in courses for high school credit both semesters in order to accelerate students back on track with peers.

No students included in the sample at Campus A met state accountability for a third year. The campus entered its third year of failing to meet state accountability standards. Also, no students completed core courses or received high school credit. However, 11 students on Campus B obtained high school credits with two students receive two high school credits.

Scheduling and Structure of Implementation

Overage middle school students in both pilots had access to a campus lab. However, students in the pilot program on Campus A were not scheduled within the school day. Instead, students were allowed to use their own personal devices and could access the web-based program at home or on campus. If students were struggling, the web-based teacher was available to assist students before school, during lunch and after school. Students in the web-based program on Campus B were scheduled into a class period during the day. They were provided blended support via the program and through small group instruction provided by the web-based teacher. Students in the pilot on Campus B were able to access the web-based program outside of the school day as well.

Teacher Certification and Student Supports

The web-based teacher for Campus A was certified in career and technology. However, the teacher was not certified in the core courses of ELA, Math, Science or Social Studies which were the courses in which the overage students were in for semester one. Students were enrolled in Health and Money Matters semester two, however the web-based teacher's certification was

not at the high school level. When struggling, students in the pilot on Campus A had to rely on tutorial sessions with core teachers offered before or after school.

The web-based teacher on Campus B was certified in Biology, which complemented students when they took Health for a high school credit. Because students on Campus B were scheduled into the web-based program during a class period within the school day, the teacher had opportunities to provide support to students who were struggling. Two students obtained credit in Money Matters even though the instructor was not certified in Math. Both web-based instructors were trained on the program and felt adequately prepared to assist students with the software.

Program Expectations for Student Work

Expectations for students' work differed between the two pilot campuses. Parents and overage students from Campus A signed a contract at the beginning of the year stating they would follow all expectations for student work and assignments. However, there was not a structured mandatory meeting time to hold students accountable for instructional processes and procedures or to assist them with test when they fail on campus A. The principal of Campus A admitted that student work and reports were not regularly monitored. The principal admitted that feedback was not provided to students or shared with parents or teachers regarding student progress in the pilot.

The principal on Campus B requested weekly reports from the web-based teacher detailing student progress. The principal shared progress reports with all stakeholders and met with students personally to hold them accountable. Interview responses from campus staff revealed that the web-based program was effective and students were motivated after gaining credits from participating in the pilot on Campus B.

Incentives and Motivation

The web-based teacher did not have constant access to the students on Campus A. Therefore, no incentives were in place for completing work in the web-based program. Not one student from Campus A completed a core course or gained high school credit. Contrary to the implementation of the pilot program on Campus A, the web-based instructor on Campus B made home visits to hold students accountable for work and mentored students to motivate them to complete work. The teacher provided incentives for students who remained on track to complete lessons. The teacher shared student progress reports with parents, teachers, counselors and the feeder high school counselors and web-based teachers.

Recommendations for Further Study

As mentioned in the significance of the study, federal mandates called for states to implement systemic change in providing structured reforms to support credit recovery and acceleration programs in order to increase graduation rates and promote college and career readiness. Results varied across the state and districts when implementing such programs. As reflected in the case study, districts and campuses struggled to choose between meeting accountability standards and focusing on accelerating students. In June 2015, House Bill (HB) 1842 in part along with Chapter 12 of the Texas Education Code (TEC) afforded districts the opportunity to create Districts of Innovation (DOI). Districts were eligible to become DOIs if certain performance requirements were met and the district followed specified procedures outlined by the TEA (2017a), or if they were exempted from certain sections of the TEC.

Since overage students were more likely to fail state mandated assessments a recommendation for a future study involves allowing districts to utilize HB 1842 to become DOIs and exempt districts and campuses from having to consider the state assessment results of

overage students. This would in turn lessen the impact of student failures tied to accountability ratings for campuses and districts. Districts could focus solely on providing interventions that accelerate overage middle school students without the repercussions tied to accountability ratings for their campuses.

Measuring student achievement and growth is critical and is especially important for students who are overage and off track for graduation. States should hold districts accountable for student academic for all students. A second study recommendation involves only considering Index 2. According to the 2015 TEA Accountability Manual, Index 2 measures student progress and provides an opportunity for district and campuses to receive credit for improving student performance independent of students' pass/fail performance on STARR. Currently, campuses have to meet all four indexes. Investigating growth and progress of overage students within an intervention cycle would provide validity to the process of accountability. Such an investigation's findings could enable the state to offer a compromise to meet the accountability standard, accelerate overage students tracking toward graduate, and show overage students progressing academically.

A third study recommendation would be to apply the four themes derived from the perceptions of district stakeholders. Districts could specify components based on data and recommendations to be replicated at the middle school level. The program could be implemented on individual campuses, district wide, or on an alternative site so that students could return to their home campuses once they are back on track to graduate with their cohorts.

Finally, Almeida et al. (2010) praised Texas for utilizing its "at risk indicator system" to outline specific tasks for tracking and monitoring students who are overage and at risk for dropping out. However, no evidence that each task has been implemented with fidelity exists. A

future study could investigate how each task is implemented within a school or a district. Additionally, this investigation would address the effectiveness of the system's monitoring processes.

Conclusion

College and career readiness is a firm mandate to hold school districts and campuses accountable for students at risk for dropping out and thus drives the importance of improving graduation rates. The purpose of this study was to examine the effectiveness of a system-wide middle school intervention program that addressed the educational needs of struggling students. An additional purpose was to identify school instructional policies and procedures, curriculum frameworks, ongoing assessments, and planning and decision-making structures aimed to accelerate the academic performance of overage students. Quantitative data from the school districts' data management system were collected to determine if the overage middle school students in the intervention outperformed students not in the intervention. Qualitative data from survey data revealed school stakeholders' perceptions of the overall effectiveness of the intervention and provided insight on district assessments, planning and decisions that impact the effectiveness of the program.

Both research questions were answered. Although quantitative data from the students' district management system revealed that students in the pilot outperformed students not in the pilot, the results might have been unintentional and might not replicate easily. This was due to factors such as leadership differences in implementation of the program, expectations for student work and structure and implementation of the intervention. Teacher certification and supports yielded a difference in results between the two pilot programs.

Themes from the perceptions of stakeholders outline recommendations for districts to accelerate overage middle school students who could be replicated systemically. However, state accountability requirements created conflicting priorities that could make school district personnel choose between what is right for students and meeting accountability standards. Through HB 1842, policy makers paved the way for districts to be creative in preparing students to become college and career ready by allowing districts to become DOIs. This process provides flexibility to school districts and campuses and relaxes accountability measures to enable educational focus to be about providing students with opportunities to be successful in high school and to graduate with postsecondary readiness.

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