College-Readiness Rates of Students with Special Learning Needs in Texas Public Schools

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Abstract

In this investigation, we examined the college-readiness rates in reading, math, and both subjects for high school graduates in Texas who were (a) economically disadvantaged, (b) Limited English Proficient, or (c) enrolled in special education using archival data from the Texas Education Agency Academic Excellence Indicator System for the 2006-2007, 2007-2008, 2008-2009, 2009-2010, and 2010-2011 school years. For the 5 years of data analyzed, in both reading and math, college-readiness rates of the all-students group were higher than students who were economically disadvantaged, Limited English Proficient students, and special education students. Of the 15 statistical analyses, statistically significant findings were present, revealing 13 large effect sizes and 2 moderate effect sizes. Students who were economically disadvantaged had college-readiness rates higher than Limited English Proficient students and special education students. Students enrolled in special education had higher college-readiness rates in reading than Limited English Proficient students, but lower college-readiness rates in math. Moreover, effect sizes increased over time for math, reading, and both subjects.

On the cover of a recent Forbes magazine (Noer, 2012) was the statement that, "no field operates more inefficiently than education" (cover page). Although Noer (2012) was not specifically focused on college readiness, he did summarize a common perception with the current state of education in the United States and the general lack of preparedness for college.

Callan, Finney, Krist, Usdan, and Venezia (2006) shared these concerns when they proclaimed that the competitive edge of the U.S. workforce was decreasing because of a lack of college readiness.

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Carnevale and Fry (2000) documented that over a 41-year period from 1959 to 2000, the number of U.S. workers that needed at least some college for their jobs increased by 56%. The U.S. Bureau of Labor Statistics (2012) indicated that at least some form of postsecondary education or training would required for over 30% of all new jobs through 2020, and almost 40% would require a high school diploma or equivalent. Carnevale and Desrochers (2003) also noted the increasing need for a postsecondary education as jobs within the U.S. economy shift from the manufacturing sector to more knowledge-based professions. Although the need for postsecondary educations increases, the actuality is that:

The U.S. ranks 25th out of the 34 OECD countries in mathematics, 17th in science and 14th in reading. And, as in so many other areas of American life, those averages obscure a deeper divide: The U.S. is the only developed country to have high proportions of both top and bottom performers. About a fifth of American 15-year-olds do not have basic competence in science; 23% can't use math in daily life. (Noer, 2012, p. 86)

Although the plight of U.S. students competing on international tests is frequently reported in the popular press, substantial interest is present within academic research, political agendas, and legislative initiatives with the goals of investigating and improving the U.S. educational system.

In their 1983 report *A Nation at Risk: The Imperative for Educational Reform (A Nation at Risk)*, the National Commission on Excellence in Education stated, "Mediocrity threatens our very future as a Nation and a people," (p. 8) and made recommendations regarding improving graduation rates and college readiness rates. Although authors of much of the existing literature as well as national and state legislation share this poor opinion of the state of education, other authors (Carson, Huelskamp, & Woodall, 1993) have highlighted the progress in educational attainment. Still, the prevailing opinion of the state of education is rather low. The No Child Left Behind Act (NCLB) was implemented in 2002 and is a policy in which schools were required place a greater emphasis on accountability.

However, the initial sentiment of *A Nation at Risk* was echoed 25 years later when the U.S. Department of Education (2008) issued *A Nation Accountable: Twenty-five Years after A Nation at Risk (A Nation Accountable)* in which the authors reemphasized the poor state of education in America.

This ongoing emphasis on accountability is a result of poor performance by students in K-12 and a lack of preparedness for post-secondary education. Moreover, programs designed to improve college readiness in historically underrepresented groups are often ill designed and do not contain the most important components to be effective (Perna, 2002). Musoba (2005) concurred, stating:

If the majority of the current generation will need some college education, and the bachelor's degree is considered necessary for access to the middle class, then preparing students for college is an appropriate standard against which K-12 education policy should be measured. (p. 12) However, Carnevale and Desrochers (2003) indicated that, based on rates of production of bachelor's degrees, by 2020 the United States would have a shortfall of 14 million college-educated working adults.

Statement of the Problem

Although Dohm and Shniper (2007) indicated that 73% of the fastest growing career options projected between 2006 and 2016 would require some sort of post-high school training, many researchers (e.g., ACT, 2006a, 2006b, 2008, 2009, 2012a; Barnes & Slate, 2010) have documented the lack of college readiness in the majority of today's high school students. Only 25% of the nation's graduating seniors met the college and career readiness benchmarks for English, reading, mathematics, and science (ACT, 2012b). Additionally, a total of 28% of the nation's graduating seniors did not meet any of the college and career readiness benchmarks (ACT, 2012b). A lack of college readiness is not a new phenomenon; it has persisted over an 18-year period from 1994 through 2012 (ACT, 2006b, 2009, 2012b). Barnes and Slate (2011) observed a lack of college readiness trend over a 3-year period (i.e., 2007-2009) in their investigation of college readiness rates for three ethnic groups (i.e., White, Black, and Hispanic) in Texas. The ACT (2012b) emphasized a similar lack of college readiness across the nation for students who were not White or Asian (i.e., Black, Hispanic, American Indian, Pacific Islander).

Although researchers have often analyzed data at the highest level of total graduating seniors, by gender, or by ethnic membership, little research has been conducted regarding other demographic classifications such as students considered as either being economically disadvantaged, Limited English Proficient (LEP), or enrolled in special education.

Theoretical Framework

French sociologist Pierre Bourdieu's capital theory is a common framework referenced when discussing educational attainment. Bourdieu (1986) identified three forms of capital: (a) economic capital, (b) cultural capital, and (c) social capital. The three forms of capital are always unequally distributed among the population and are thus commodities to be traded. Bourdieu (1986) stated:

The transmission of cultural capital is no doubt the best-hidden form of hereditary transmission of capital, and it therefore receives proportionately greater weight in the system of reproduction strategies, as the direct, visible forms of transmission tend to be more strongly censored and controlled. (p. 246)

The relational nature of social capital permits possessors of any form of capital to put those relationships to use to build/reproduce capital.

The application of this concept of cultural reproduction is especially evident when analyzing special populations and their college readiness indicators (Cabrera & La Nasa, 2001; Hossler, Braxton, & Coopersmith, 1989; Manski & Wise, 1983; Rouse, 1994). The acquired properties of cultural capital are increased through a process of cultural reproduction based on factors such as graduating from high school, enrolling in college, and obtaining degrees (Dumais, 2002; Kirsh, Braun, Yamamoto, & Sum, 2007; Lareau & Horvat, 1999; Raines & McAdams, 2006; Sullivan, 2001). Additionally, Tramonte and Willms (2010, p. 202) contended, "Cultural and social resources are the necessary 'passwords' to succeed" and "schools are places where codes form higher socio-economic status groups are recognized and where the possession of cultural capital is rewarded."

Purpose of the Study

The purpose of this study was to examine the college-readiness rates of high school graduates in Texas designated as being (a) economically disadvantaged, (b) Limited English Proficient (LEP), or (c) enrolled in special education using archival data from the Texas Education Agency (TEA) Academic Excellence Indicator System (AEIS).

Data, examined from the 2006-2007, 2007-2008, 2008-2009, 2009-2010, and 2010-2011 school years, were college-ready graduate rates in math, reading, and in both subjects for these groups of students graduating from public high schools in Texas.

Significance of the Study

The U.S. Bureau for Labor Statistics (2012) has asserted that more people must attend college for the United States to stay competitive in a high-tech world. Achieve, Inc. (2012) indicated that:

College and career readiness for all high school graduates is now a national priority. For this national priority to take root in districts and schools and be sustained, states must now focus on the complex challenges of implementation and lay the foundation for success. As remarkable as the effort has been to get to this point, the promise of these reforms will be realized only if [college and career readiness] policies are fully implemented for the benefit of every student, in every classroom, in every state. (p. 6)

However, the groups of students (i.e., economically disadvantaged, LEP, or enrolled in special education) included within this study experience barriers to achieving college readiness.

Nearly one in four children under age 18 are from an immigrant family, representing a substantial and increasing proportion of the U.S. population (Hernandez, Takanishi, & Marotz, 2009). Using the *Integrated Public Use Microdata Series* dataset, De Feyter (2008) reported that approximately 88% of children from immigrant families were U.S. citizens.

Although not conclusive, the number of school-age children speaking a language other than English at home has increased noticeably in recent decades from 3.8 million (9%) in 1979 to 10.9 million (21%) in 2008 (National Center for Education Statistics [NCES], 2010).

Regarding LEP students, a term that is often interchanged with English Language Learners (American Youth Policy Forum, 2009), National Assessment of Education Progress (NAEP) researchers demonstrated a staggering difference in the average scores for mathematics and reading among students in eighth grade across the United States as well as within Texas who are identified as English Language Learners and as non-English Language Learners.

In the United States between 1995 and 2005, the number of English Language Learners increased by 57% (National Center for English Language Acquisition, 2010). Between 1997 and 2007, the number of English Language Learners in the state of Texas grew by 38.4% while the total enrollment in public schools grew by only 17.4% (National Center for English Language Acquisition, 2010). During the 2009-2010 school year, the percentage of English Language Learners (ELL) enrolled in public schools was 9.7% for the nation and 15.0% of all enrolled students for the state of Texas (NCES, 2012). The U.S. Bureau of Labor Statistics (2012) projects that the Hispanic population in the U.S. will grow by 34% between 2010 and 2020.

Similar NAEP data exist for eighth-grade students without disabilities and those students with a disability (without a 504 plan) for mathematics and reading, although only two years of data are available for 2009 and 2011. Although not specifically addressed in these definitions of students with a disability without a 504 plan is whether these students aspire to attend college, the numbers do show a large gap in test scores between students with a disability and students without disabilities. Wilson, Hoffman, and McLaughlin (2009) reported that 69% of 12th grade students with disabilities planned to attend a 2- or 4-year college or university versus 85% of 12th grade students without disabilities. Of these 12th grade students with disabilities, students who planned to attend a 2- or 4-year college or university were more likely to take advanced math coursework in high school than were students with disabilities who did not plan to attend a 2- or 4-year college or university (Wilson et al., 2009).

Currently, Texas is one of only a few states specifying college-readiness standards outside of the Common Core State Standards Initiative (Common Core State Standards Initiative, n.d.). From a regional perspective, insight into the current college-readiness climate of the state of Texas will be provided.

Results of this study are potentially relevant to school officials and policy makers within the state of Texas because the results may provide insight into how each group within the study is performing in relation to college-readiness standards. From a national perspective, insight may be provided through this study in understanding the effectiveness of current legislation such as the NCLB Act (2002). Although the results are not generalizable to the nation, data from one of the nation's largest states will be analyzed and may have implications for the nation as a whole.

Research Questions

The following research questions were addressed in this study. Each question was repeated for each year of data analyzed (i.e., 2006-2007, 2007-2008, 2008-2009, 2009-2010, and 2010-2011): (a) What is the difference in college-ready graduate rates in reading as a function of special needs membership (i.e., students designated as economically disadvantaged, Limited English Proficient, and students enrolled in special education)?; (b) What is the difference in college-ready graduate rates in math, as a function of special needs membership (i.e., students designated as economically disadvantaged, Limited English Proficient, and students enrolled in special education)?; (c) What is the difference in college-ready graduate rates in both subjects, as a function of special needs membership (i.e., students designated as economically disadvantaged, Limited English Proficient, and students enrolled in special education)?; (d) What are the trends from the 2006-2007 through the 2010-2011 school years in college-ready graduate rates in reading as a function of special needs?; (e) What are the trends from the 2006-2007 through the 2010-2011 school years in college-ready graduate rates in math, as a function of special needs membership?; and (f) What are the trends from the 2006-2007 through the 2010-2011 school years in college-ready graduate rates in both subjects, as a function of special needs membership?

Method

Selection of Participants

Data collected by the Texas Education Agency from all public high schools in the state of Texas and stored in the Academic Excellence Indicator System for the 2006-2007, 2007-2008, 2008-2009, 2009-2010, and 2010-2011 school years were analyzed.

The Texas Education Agency makes these data available in aggregate form on their website through the Academic Excellence Indicator System. Because the data are in aggregate form, all students who are identified as economically disadvantaged, LEP, or enrolled in special education were included. In alignment with the TEA definition for college readiness, all participants were in either the 11th or 12th grade.

College Readiness

According to Conley (2007b), "College readiness can be defined as the level of preparation a student needs to enroll and succeed—without remediation—in a credit-bearing general education course at a post-secondary institution that offers a baccalaureate degree or transfer to a baccalaureate program" (p. 5). Within the state of Texas, to be considered college-ready, a graduate must have met or exceeded one or more of the following: (a) the college-ready criteria on the TAKS English/Language Arts (ELA) and math exit-level tests, (b) the SAT critical reading and mathematics tests, or (c) the ACT English and mathematics tests as summarized in Table 1 (TEA, 2011b).

To determine if graduates have met one or more of the criteria established by the state of Texas, three values are calculated. English Language Arts is an indicator that shows the percent of graduates who scored at or above the criterion score on the TAKS, or SAT critical reading, or ACT English test. The formula for calculating the ELA value consists of dividing the number of graduates who scored at or above the college-ready criterion for ELA by the number of graduates (e.g., classes of 2007, 2008, 2009) with ELA results (TEA, 2011b). Mathematics is the college-readiness indicator that shows the percent of graduates who scored at or above the criterion score on the TAKS, SAT, or ACT mathematics tests.

The Mathematics value is calculated by dividing the number of graduates who scored at or above the college-ready criterion for mathematics by the number of graduates (e.g., classes of 2007, 2008, 2009) with mathematics results (TEA, 2011b). The college-readiness indication for both subjects shows the percent of graduates who scored at or above the criterion score on both the TAKS exit-level ELA and mathematics tests, SAT critical reading and mathematics tests, or ACT English and mathematics tests, and this value is calculated by dividing the number of graduates who scored at or above the college-ready criteria on both the ELA and mathematics tests by the number of graduates (e.g., classes of 2007, 2008, 2009) with results in both subjects (TEA, 2011b).

Procedures

Archival, aggregated data were downloaded from the Texas Education Agency's Academic Excellence Indicator System website for the 2006-2007, 2007-2008, 2008-2009, 2009-2010, and 2010-2011 school years. These data files included data for student achievement aggregated by demographic factor (i.e., economically disadvantaged, LEP, special education) and campus. The data files were merged using the school campus identifier as a common key so that all variable of interest are available in a single data file. Data were analyzed using the *Statistical Package for the Social Sciences* (SPSS).

Data Analysis

Data were downloaded for each year of the five years included in this study (i.e., 2006-2007, 2007-2008, 2008-2009, 2009-2010, and 2010-2011). The college-readiness data and campus data were merged permitting the data to be further edited to remove all schools not identified as traditionally configured high schools. This process involved the removal of all charter schools and of all alternative schools. Additionally, variables that had been masked were removed where those masked variables resulted in zero values. Lastly, variables that were masked representing values larger than 99% were also transformed into values of 99%. Data were then coded, split, and recombined in a manner that permitted univariate analyses. The resultant data file for each year contained the dependent variables, which were college readiness rates in reading, math, and both subjects for each school year.

Results

2006-2007 School Year

Prior to conducting statistical analyses, the normality of the college-readiness rates in reading, math, and in both subjects was ascertained. For all three dependent variables, the majority of the standardized skewness and kurtosis coefficients were inside the range of ±3 (Onwuegbuzie & Daniel, 2002). Accordingly, the data were determined to be normally distributed, thus permitting the use of parametric analysis of variance (ANOVAs).

The parametric ANOVA for the 2006-2007 school year revealed a statistically significant difference, $F(3, 2898) = 259.28$, $p < .001$, partial $\eta^2 = .21$, in passing rates on the TEA college-readiness indicators in reading among groups (i.e., all students, economically disadvantaged, LEP, special education). The effect size for this statistically significant difference was large (Cohen, 1998). Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in reading among all special needs groups except between LEP and students who were enrolled in special education. The reading college-readiness rates of the all-students group were 8.81% higher than the reading college-readiness rates of students who were economically disadvantaged. Students enrolled in special education had reading college-readiness rates that were 24.43% lower than the reading college-readiness rates of the all-students group. A difference of 27.76% was present in the reading college-readiness rates of all students and students who were enrolled in special education. Descriptive statistics for college-readiness rates in reading are delineated in Table 2.

With respect to the 2006-2007 school year, a parametric ANOVA revealed a statistically significant difference, $F(3, 3033) = 358.93$, $p < .001$, partial $\eta^2 = .26$, in math college readiness rates as a function of special needs membership. The effect size for this statistically significant difference was large (Cohen, 1998). Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in math among all special needs groups except between LEP and students who were enrolled in special education. Students who were economically disadvantaged had college-readiness rates that were 9.17% lower than the all-students group. The all-students group's college-readiness rates were 24.53% higher than LEP students. The all-students group had college-readiness rates that were 26.48% higher than students who were enrolled in special education

In contrast to the reading results, LEP students had higher college readiness rates than students who were enrolled in special education, if only marginally. Descriptive statistics for college-readiness rates in math are delineated in Table 2.

With respect to college readiness rates in both subject areas for the 2006-2007 school year, the parametric ANOVA revealed a statistically significant difference, $F(3, 2597) = 131.33$, $p < .001$, partial $\eta^2 = .13$, as a function of special needs membership. The effect size for this statistically significant difference was large (Cohen, 1998).

Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in both subjects between all special needs groups except between LEP and students who were enrolled in special education. The group consisting of all students had the highest college-readiness rates in both subjects among all groups, and was followed by students who were economically disadvantaged who were 8.85% lower than the all-students group. Students who were enrolled in special education had college-readiness rates that were 15.64% lower than the all-students group. The all-students group had 16.12% higher college-readiness rates than LEP students. Descriptive statistics for college-readiness rates in both subjects are delineated in Table 2.

2007-2008 School Year

Prior to conducting statistical analyses, the normality of the college-readiness rates in reading, math, and in both subjects was ascertained. For all three dependent variables, the majority of the standardized skewness and kurtosis coefficients were outside the range of ±3 (Onwuegbuzie & Daniel, 2002). Accordingly, the data were determined to be non-normally distributed. Although the majority of the standardized skewness and standardized kurtosis values indicate a lack of normality, a parametric ANOVA analysis was calculated because of its robustness (Field, 2009).The parametric ANOVA for the 2007-2008 school year revealed a statistically significant difference, $F(3, 2897) = 258.55$, $p < .001$, partial $\eta^2 = .20$, large effect size, in college-readiness rates on the TEA college-readiness indicators in reading between groups. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in reading between all special needs groups except between LEP and students who were enrolled in special education. Students who were economically disadvantaged had college-readiness rates that were 7.95% lower than the group consisting of all students.

Students who were enrolled in special education had college-readiness rates that were 23.84% lower than the all-students group. Concerning LEP students, the all-students group had college-readiness rates that were 27.98% higher. Descriptive statistics for this analysis are revealed in Table 3.

With respect to college-readiness rates in math, a parametric ANOVA revealed a statistically significant difference, $F(3, 3051) = 249.42$, $p < .001$, partial $\eta^2 = .28$, large effect size, as a function of special needs membership. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in math between all special needs groups. The group consisting of all students had the highest college-readiness rates in math of all groups. Students who were economically disadvantaged had college-readiness rates that were 8.55% lower than the all-students group. The all-students group had college-readiness rates that were 23.13% higher than the college-readiness rates for LEP students. Between the all-students group and students who were enrolled in special education, a mean difference of 30.49% was present. In contrast to the reading results, LEP students had higher college-readiness rates than students who were enrolled in special education. Descriptive statistics for this analysis are revealed in Table 3.

With respect to college readiness rates in both subject areas, a statistically significant difference was present, $F(3, 2630) = 193.77$, $p < .001$, partial $\eta^2 = .13$, moderate/large effect size, as a function of special needs membership. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in both subjects between all groups except LEP and students who were enrolled in special education. The group consisting of all students had the highest passing rates in both subjects followed by students who were economically disadvantaged. Students enrolled in special education had the next highest passing rates that were 16.81% lower than the all-students group. A difference of 16.92% existed between the all-students group and LEP students with the all-students group having the highest college-readiness rates. Descriptive statistics for this analysis are revealed in Table 3.

2008-2009 School Year

Regarding the 2008-2009 school year, descriptive statistics for college-readiness rates are presented in Table 4 for each demographic group (i.e., all students, economically disadvantaged, LEP, special education).

This school year is the first year within the study in which a majority of students in the group consisting of all students met college readiness standards in both reading (53.98%) and math (54.18%) independently.

Readers should note that these percentages reflect that slightly more than half of these students were deemed to be college-ready in reading and in math.

Prior to conducting statistical analyses, the normality of the college-readiness rates in reading, math, and in both subjects was ascertained. For all three dependent variables, the majority of the standardized skewness and kurtosis coefficients were outside the range of ±3 (Onwuegbuzie & Daniel, 2002). Accordingly, the data were determined to be non-normally distributed. Although the majority of the standardized skewness and standardized kurtosis values indicate a lack of normality, a parametric ANOVA analysis was calculated because of its robustness (Field, 2009). The parametric ANOVA revealed a statistically significant difference, $F(3, 3058) = 240.67$, $p < .001$, partial $\eta^2 = .36$, large effect size, in passing rates on the TEA college-readiness indicators in reading between groups. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in reading between all special needs groups. The group consisting of all students had the highest college-readiness rates followed by students who were economically disadvantaged with a difference of 8.77%. The all-students group had college-readiness rates that were 32.95% higher than for students who were enrolled in special education. The reading college-readiness rates of LEP students was 40.00% lower than the all-students group. Descriptive statistics for this analysis are revealed in Table 4.

Regarding college-readiness rates in math, a statistically significant difference was present, $F(3, 3121) = 257.72$, $p < .001$, partial $\eta^2 = .30$, large effect size, as a function of special needs membership. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in math between all special needs groups. The group consisting of all students had the highest college-readiness rates in math followed by students who were economically disadvantaged with college-readiness rates that were 7.98% lower than the all-students group. The college-readiness rates of LEP students were 26.02% lower than the all-students group. Students who were enrolled in special education had lower rates, 31.44% lower, than the all-students group. Descriptive statistics for this analysis are revealed in Table 4.

With respect to college readiness rates in both subject areas, the parametric ANOVA revealed a statistically significant difference, $F(3, 2794) = 226.02$, $p < .001$, partial $\eta^2 = .19$, large effect size, as a function of special needs membership.

Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in both subjects among all groups except for the difference between LEP students and students enrolled in special education. The group consisting of all students had the highest college-readiness rates in both subjects followed by students who were economically disadvantaged. The all-students group had college-readiness rates that were 23.07% higher than students enrolled in special education. The all-students group had higher college-readiness rates that were higher than the college-readiness rates of LEP students by 26.60%. Descriptive statistics for this analysis are revealed in Table 4.

2009-2010 School Year

With respect to the 2009-2010 school year, descriptive statistics for college-readiness rates are presented in Table 5 for each demographic group. Prior to conducting statistical analyses, the normality of the college-readiness rates in reading, math, and in both subjects was ascertained. For all three dependent variables, the majority of the standardized skewness and kurtosis coefficients were outside the range of ± 3 (Onwuegbuzie & Daniel, 2002). Accordingly, the data were determined to be non-normally distributed. Although the majority of the standardized skewness and standardized kurtosis values indicate a lack of normality, a parametric ANOVA analysis was calculated because of its robustness (Field, 2009). The parametric ANOVA revealed a statistically significant difference, $F(3, 3238) = 220.45$, $p < .001$, partial $\eta^2 = .49$, large effect size, in passing rates on the TEA college-readiness indicators in reading among groups. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in reading between all special needs groups. The group consisting of all students had college-readiness rates that were 9.20% higher than students who were economically disadvantaged. Students who were enrolled in special education had college-readiness rates that were 39.06% lower than the all-students group. Limited English Proficient students had college-readiness rates that were 44.11% lower than the rates of the all-students group. Descriptive statistics for this analysis are revealed in Table 5.

Concerning college-readiness rates in math, a statistically significant difference was revealed, $F(3, 3295) = 241.40$, $p < .001$, partial $\eta^2 = .43$, large effect size, as a function of special needs membership. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in math among all special needs groups.

The group consisting of all students had the highest passing rates in math compared with the other groups. Students who were economically disadvantaged had college-readiness rates that were 8.07% lower than the all-students group The college-readiness rates of LEP students were 29.59% lower than the all-students group. Students who were enrolled in special education followed the all-students group with college-readiness rates that were 38.75% lower. Descriptive statistics for this analysis are revealed in Table 5.

With respect to college-readiness rates in both subject areas, the parametric ANOVA revealed a statistically significant difference, $F(3, 2909) = 221.63$, $p < .001$, partial $\eta^2 = .28$, large effect size, as a function of special needs membership. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in both subjects among all groups except between LEP students and students enrolled in special education. The group consisting of all students had college-readiness rates in both subjects that were 9.37% higher than students who were economically disadvantaged. Students enrolled in special education had college-readiness rates that were 29.21% lower than the all-students group. College-readiness rates in both subjects for LEP students were lower than the all-students group by 31.18%. Descriptive statistics for this analysis are revealed in Table 5.

2010-2011 School Year

Concerning the 2010-2011 school year, descriptive statistics for college-readiness rates are presented in Table 6 for each demographic group. The all-students group had a college-readiness rate of 62.42% in reading, an increase of 4.29% over the prior school year. The group consisting of all students had a college-readiness rate of 60.03% in math, and a college-readiness rate in both subjects of 47.62%. Prior to conducting statistical analyses, the normality of the college-readiness rates in reading, math, and in both subjects was ascertained. For all three dependent variables, the majority of the standardized skewness and kurtosis coefficients were outside the range of ±3 (Onwuegbuzie & Daniel, 2002).

Accordingly, the data were determined to be non-normally distributed. Although the majority of the standardized skewness and standardized kurtosis values indicate a lack of normality, a parametric ANOVA analysis was calculated because of its robustness (Field, 2009). Descriptive statistics for this analysis are revealed in Table 6.

The parametric ANOVA revealed a statistically significant difference, $F(3, 3431) = 239.46$, $p < .001$, partial $\eta^2 = .52$, large effect size, in passing rates on the TEA college-readiness indicators in reading among groups. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in reading among all special needs groups. The group consisting of all students had college-readiness rates that were 7.91% higher than for students who were economically disadvantaged. Students who were enrolled in special education had lower college-readiness rates than the all-students group by 40.96%. The all-students group had college-readiness rates that were 47.25% higher than LEP students. Descriptive statistics for this analysis are revealed in Table 6.

Regarding college-readiness rates in math, a statistically significant difference was yielded, $F(3, 3442) = 271.52$, $p < .001$, partial $\eta^2 = .41$, large effect size, as a function of special needs membership. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in math between all special needs groups. The group consisting of all students had the highest college-readiness rates in math than the other groups, with a difference of 6.67% between all students and students who were economically disadvantaged. The college-readiness rates of LEP students were lower by 28.35% than the all-students group. The all-students group had college-readiness rates in math that were 39.46% higher than students who were enrolled in special education. Descriptive statistics for this analysis are revealed in Table 6.

With respect to college readiness rates in both subject areas, the parametric ANOVA revealed a statistically significant difference, $F(3, 3094) = 257.70$, $p < .001$, partial $\eta^2 = .31$, large effect size, as a function of special needs membership. Scheffé post hoc procedures revealed that statistically significant differences were present in college-readiness rates in both subjects between all groups except LEP and students who were enrolled in special education. The group consisting of all students had higher college-readiness rates in both subjects by 8.64% than did students who were economically disadvantaged.

The all-students group had college-readiness rates in both subjects that were 32.82% higher than students who were enrolled in special education. The college-readiness rates of LEP students were lower than the all-students group by 34.90%. Descriptive statistics for this analysis are revealed in Table 6.

Trend Analyses

The average reading college readiness rates are displayed in Figure 1 for the 5-year period included within this study. This figure demonstrates an increase in the mean college readiness for the group consisting of all students and the group consisting of students who were economically disadvantaged. In the all-students group, the mean has increased by almost 20 percentage points from the 2006-2007 school year (43.46%) to the 2010-2011 school year (62.42%). For students who were economically disadvantaged, the mean reading college readiness rates also increased by almost 20 percentage points over the 5-year period from 34.65% to 54.52%. However, both groups remained relatively flat from the 2006-2007 to the 2007-2008 school year, before beginning to increase in 2008-2009. Students who were enrolled in special education had only a slight increase of over 2 percentage points over the 5-year period from 19.03% to 21.46%. However, the percentages of LEP students meeting college readiness indicators have stayed relatively flat over the five years with rates beginning at 15.71% and ending at 15.17%.

The average math college-readiness rates are displayed in Figure 2 for the 5-year period included within this study. The groups consisting of all students, students who were economically disadvantaged, and LEP students had increases from the 2006-2007 to the 2010-2011 school year. The percentage of all students who met the college-ready criteria in math steadily increased by 13.15% from 46.88% in the 2006-2007 school year to 60.03% in the 2010-2011 school year. For students who were economically disadvantaged, college-readiness rates in math increased by 15.64% from 37.72% in the 2006-2007 school year to 53.36% in the 2010-2011 school year. Limited English Proficient students also experienced increases from 22.35% in the 2006-2007 school year to 31.68% in the 2010-2011 school year, an increase of 9.33% over the 5-year period. However, students who were enrolled in special education remained relatively flat over the 5-year period with rates of 20.40% in the 2006-2007 school year to 20.57% in the 2010-2011 school year with a high of 22.73% in the 2008-2009 school year and a low of 17.78% in the 2009-2010 school year.

The average college-readiness rates in both subjects are displayed in Figure 3 for the 5-year period included within this study. The group consisting of all students had a 17.14% increase from 30.48% in the 2006-2007 school year to 47.62% in the 2010-2011 school year.

Students who were economically disadvantaged also had an increase of 17.36% from 21.62% in the 2006-2007 school year to 38.98% in the 2010-2011 school year. Students enrolled in special education remained relatively flat with rates of 14.83% in the 2006-2007 school year to 14.80% in the 2010-2011 year, although a slight decrease was present. Similarly, LEP students had a decrease in college-readiness rates of 1.64% from 14.36% in the 2006-2007 school year to 12.72% in the 2010-2011 school year.

Discussion

College-readiness continues to be a topic that is heavily investigated and debated. Much of the debate regarding college-readiness stems from how the term is defined and how it is measured (Barnes et al., 2010; Conley, 2008; Olson, 2006). With no standard definition, many researchers and legislators are defining college-readiness in their own terms (c.f., Barnes & Slate, 2010; Common Core Standards Initiative, n.d.; Conley, 2008, 2010; Perna, 2002). Within the state of Texas, juxtaposition exists between the definition of college-readiness and how it is measured. The state of Texas defines College and Career Readiness Standards as consisting of standards that are "highly aligned with the content requirements of entry-level college courses" (Conley, 2010, p. 228). However, the state of Texas uses only one of seven mandated college-readiness indicators—test scores for the TAKS, ACT, and SAT tests.

Moreover, the TEA (2009) implemented the Texas Projection Measure (TPM), which is a "growth measure that will be used by Texas to determine whether students are meeting annual performance goals," (para. 1) from 2009 to 2011. The TPM was a statistical approach to determining the likelihood that students who did not meet the college-ready criteria in one year would meet the criteria in subsequent years. This projection measure was criticized because the TPM permitted some students to be considered college-ready even if they did not meet college-readiness standards, including the exit-level TAKS test score. As a result of the TPM process, inflated numbers of students met the college-ready standards (Bernier, 2011; Hacker, 2010; Weiss, Hacker, & Stutz, 2010). Regarding the 2009-2010 school year, Hacker (2010) reported, "73 districts and 1,111 campuses saw their ratings rise from recognized to exemplary last year because of the measure.

And 178 districts and 1,077 campuses climbed from acceptable to recognized because of the [TPM] adjustment" (para. 7).

The TEA (2010b) also reported that the TPM had average accuracy ratings across all grades of 90% for the all-students group, 89% for students who were economically disadvantaged, 82% for LEP students, and 82% for students enrolled in special education. For high schools in the state of Texas, Table 10 lists the raw number and percent of demographic group that were over or under projected to achieve college-readiness using the TPM for the demographic groups in this study (TEA, 2010b).

In spite of the inherent limitations of using only test scores to determine college readiness, public disaggregated data consisting of college-readiness rates were analyzed in this investigation to examine the college-readiness rates of high school graduates in Texas designated as being (a) economically disadvantaged, (b) LEP, or (c) enrolled in special education using archival data from the TEA Academic Excellence Indicator System. In this research study, 15 inferential research questions were analyzed pertaining to the college-readiness rates of all students, students who were economically disadvantaged, LEP students, and students who were enrolled in special education in Texas for a 5-year period from the 2006-2007 through the 2010-2011 school years. These rates reflect student performance on either the TAKS, SAT, or ACT.

For each school year, the all-students group had the highest college-readiness rates in both reading and math and in the combined both subjects for the demographic groups in this study. Students who were economically disadvantaged had college-readiness rates that were consistently the second highest in both reading and math. Regarding college-readiness rates in math for each of the 5 years, LEP students had lower passing rates than students who were economically disadvantaged, but higher than students who were enrolled in special education. College-readiness rates in reading varied for LEP students and students enrolled in special education, however, students enrolled in special education generally had higher college-readiness rates than LEP students. Considering the TPM, many of the variations from year to year could be a result of the change in how college-readiness was calculated from the first two school years (i.e., 2006-2007, 2007-2008) to the last three school years (i.e., 2008-2009, 2009-2010, 2010-2011). Additionally, the effect size increased substantially from year to year in reading, math, and both subjects. This increase in effect size could also be a result of the TPM.

However, it may accurately indicate a growing disparity in the college-readiness rates of the all-students groups, students who were economically disadvantaged, LEP students, and students enrolled in special education.

Connections with the Literature

If we are to increase college and career readiness for "every student, in every classroom, in every state," focus must be placed on understanding how to improve college and career readiness in each demographic group (Achieve, Inc., 2012, p. 6). Despite the purposes of the various national and state initiatives, the findings of this study and other research reflect the fact that many students are not achieving college-readiness. Within this study, the all-students group had increases in college-readiness rates in both math and reading. However, even when the college-readiness rates were at their highest for the 5-year period in this study, 37.58% of students were still not considered college-ready in reading, 39.97% of students were not considered college-ready in math, and 52.38% of students were not considered college-ready in both subjects. Barnes (2010) documented that White students had college-readiness rates in both subjects that increased from 41% to 49% from the 2006-2007 school year to the 2008-2009 school year. For special needs students (i.e., students who were economically disadvantaged, LEP students, students enrolled in special education), the outlook is not promising.

Students who were economically disadvantaged had college-readiness rates in both reading and math that were consistently below the all-students group, but higher than LEP students and students enrolled in special education. Viadero and Johnston (2000) indicated that the primary cause of the academic achievement gap among ethnically diverse students is poverty. Similarly, other researchers have identified that growing up in higher socioeconomic environments has a positive impact on academic achievement scores (Balfanz, 2009; Coleman et al., 1966; Levin, 1995; Phillips, Brooks-Gunn, Duncan, Klebanov, & Crane, 1998; Ravitch, 2009; Roderick, Nagaoka, & Coca, 2009; Sirin, 2005). Additionally, because the students who were economically disadvantaged had lower college-readiness rates than the all-students group consisting of middle and high-income families, this study may provide insight into prior findings indicating that students from middle and high-income families were more likely to attend 2- or 4-year college than low-SES (Cabrera, Burkham, & La Nasa, 2003; Choy, Horn, Nunez, & Chen, 2000).

Hispanic and Black students are twice as likely to live in lower socioeconomic households as are White and Asian students (Gray, 2005; Munoz, 2005; Scott, 2007). Although the data used in this study were aggregated in a manner that prevents knowing the ethnicity of the students who were economically disadvantaged, other researchers provide some insight regarding the state of Texas. In a study in which the TAKS test scores of approximately 10,000 students from five school districts in Texas were analyzed, Chow (2008) determined that students who were economically disadvantaged (i.e., students who qualified for free and reduced lunch) typically scored 50-100 points lower than those students who did not qualify for free and reduced lunch. For the 2010-2011 school year when college-readiness rates were the highest for students who were economically disadvantaged over the 5-year period from 2006-2007 to 2010-2011, the college-readiness rates demonstrate that 45.48% of students were not college-ready in reading, 46.64% were not college-ready in math, and 61.02% were not college-ready in both subjects.

In Texas, the LEP student population grew by 41.7% from the 1999-2000 school year to the 2009-2010 school year. In comparison, in the same 10-year period, the total student population grew by only 21.1% (TEA, 2010a). From the 2005-2006 school year to the 2009-2010 school year, LEP students increased from 14.2% of the total student population to 17% of the total school population (Morgan & Vaughn, 2011). Within the state of Texas, approximately 91% of LEP students are identified as Hispanic and 92% speak Spanish as their first language (Morgan & Vaughn, 2011). Additionally, approximately 89% of LEP students in all grades in Texas are identified as economically disadvantaged (Morgan & Vaughn, 2011). Fry and Gonzales (2008) projected that Hispanic students will be the majority population in publicly funded schools in Texas by 2040 and in the nation by 2050 (Murdock, 2007). As the number of Hispanic immigrants continues to rise, the number of LEP students will continue to increase as well. Similar to what was proposed with the Sandia report, shifting demographics will have a dire effect on overall college-readiness rates unless college and career readiness is improved in all demographic groups (Murdock, 2007). More importantly, these shifts will have a negative societal and economic impact on the state of Texas as LEP students leave high school and are not college or career ready, thus resulting in a lack of cultural reproduction and potentially causing severe strain on the social services system.

College-readiness rates for LEP students remained relatively flat for reading and both subjects, but slight fluctuations were observed from school year to school year over the 5-year period and increases were present in college-readiness rates in math. In 2010-2011, LEP students experienced the highest college-readiness rates of the 5-year period; however, 84.29% of these students were not college-ready. In math, although LEP students had the highest college-readiness rates in 2010-2011, 68.32% of LEP students were still not college-ready. The best college-readiness rates for LEP students in both subjects occurred in the 2007-2008 school year, which resulted in 85.20% of students who did not meet the college-ready criteria.

Although the National Center on Secondary Education and Transition (2003) called for "access to and full participation in postsecondary education" (p. 1), students enrolled in special education in the state of Texas from 2006-2007 to 2010-2011 experienced college-readiness rates that were drastically lower than many of their counterparts. As observed by Cameto, Levine, and Wagner (2004), general education students are three times more likely to attend college than are students with a disability. The results of this study indicate that one of the primary reasons students with disabilities may experience greater barriers to attending college and to being successful in college is a lack of college readiness. However, a greater emphasis on preparing students enrolled in special education to be college-ready could result in these students having employment rates and earnings that are consistent with the general U.S. workforce (Madaus, 2006).

College-readiness rates for students enrolled in special education remained relatively flat for reading and both subjects, but slight fluctuations were noted from school year to school year over the 5-year period and increases were observed in college-readiness rates in math. In 2010-2011, students enrolled in special education experienced the highest college-readiness rates of the 5-year period; however, 78.54% of these students did not meet the college-ready criteria. In math, although students enrolled in special education had the highest college-readiness rates in 2010-2011, 77.27% of students enrolled in special education were still not college-ready. The highest college-readiness rates for students enrolled in special education in both subjects occurred in the 2007-2008 school year, which resulted in 83.60% of students who were not college-ready.

Theoretical Framework

In relation to the theoretical framework of this study, Bourdieu's capital theory, the findings of this study are supportive of Bourdieu's ideas. That is, the all-students group had higher college-readiness rates than any of the special needs groups. This group consists of the special needs demographic groups in this study as well as other student groups (e.g., Asians, Whites) that historically have higher college-readiness rates and are of higher socioeconomic status. Tramonte and Willms (2010) indicated that part of this disparity in success in school might be partially attributed to the students' parents who do not have the skills, habits, and knowledge to assist the students in becoming college-ready and growing their capital. Without this support, students might have difficulty in developing a predisposition to attend college, and might never search for or choose an institution to attend (Hossler & Gallagher, 1987; Perna, 2000).

Even if not considered college-ready, students may still decide that they want to attend college; if so, they are likely to encounter obstacles. The obvious obstacle is that students are not regarded as being ready for the demands of a postsecondary education. As such, many postsecondary schools will require that students who are not college-ready enroll in developmental education, which may create a delay in degree attainment and in realizing future earnings. From a cultural reproduction standpoint, approximately 75% of all developmental education students come from homes where parents have a high school diploma or no diploma at all (Berliner, 2006; Gray, 2005). Many researchers (Bettinger & Long, 2004; Conley, 2007a, 2007b; Deil-Amen & Rosenbaum, 2002; Merisotis & Phipps, 2000; NCES, 2010) have indicated that students who take developmental education courses experience higher attrition rates than students who are college-ready.

Implications

Barnes (2010) documented a lack of college-readiness in Black, Hispanic, and White students in the state of Texas. The results of this study indicate a general lack of college readiness in Texas concerning students who were economically disadvantaged, LEP students, and students enrolled in special education.

The primary implication of these results is that, in spite of college and career readiness being considered a national priority (Achieve, Inc., 2012), the current programs designed to prepare students to be college and career ready in Texas are simply not working. The term college-ready underscores the intent that the majority of this preparation should occur before a student reaches postsecondary education. However, as mandated in Texas Education Code [TEC] Sect.51.3062, the THECB has created a department focusing on developmental education and the Texas Success Initiative, a "systematic method of collecting, analyzing, and using information to answer questions about developmental education courses, interventions, and policies, particularly about their effectiveness and cost-efficiency" (a-1). Barnes (2010) noted the dichotomy in the politics of education where "legislators and educators are credited for championing consciousness about cultural and social inequalities when realistically educational legislation and school systems are promoting cultural reproduction of the dominant class" (p. 229).

As Barnes and Slate (2013) have noted, improving college-readiness is not a one-size-fits-all solution. Students who were economically disadvantaged scored significantly higher than other groups (i.e., LEP students, students enrolled in special education), but policy and program changes may be needed to improve college-readiness rates. Concerning LEP students, programs should be evaluated to determine their effectiveness in appropriately preparing students to be college and career ready. Programs designed to serve students enrolled in special education should be reevaluated as well in order to determine their effectiveness in mainstreaming special education students into general education classrooms, and in turn, the effects this process has on college-readiness rates of all student demographic groups.

In all likelihood, 30 years of education mandates by federal and state legislators and policy makers have created complex problems for which solutions are not and will not be readily available (Balfanz, 2009; Barnes & Slate, 2010, 2011, 2013; Barnes et al., 2010; Berliner, 2006; Orfield & Lee, 2007; Roderick et al., 2009). Today, approximately 30 years after the National Commission on Excellence in Education (1983) submitted *A Nation at Risk* to President Reagan warning of shortcomings in American educational systems and demanding that "excellence" policies replace "equity" policies, little has changed for underrepresented and underprepared populations.

To no avail, almost every state has adopted guidelines for more demanding tests, more stringent accountability measures, and more rigorous coursework, especially science and math classes that *A Nation at Risk* recommended (National Commission on Excellence in Education, 1983).

Congress and the last four Presidents have established national goals for upgrading and equalizing education. The best evidence is that both of these efforts have failed, i.e. the Goals 2000 promise of equalizing education for all students by 2000, and the NCLB promise of closing the achievement gap with mandated minimum yearly gains to ensure that all students in all subgroups would be proficient by 2013 (Orfield & Lee, 2007). In similar fashion, President Obama's Race to the Top school funding agenda designed to create diverse avenues for academic preparation, has created little improvement in college- and career-readiness for lower socioeconomic students, students deemed LEP, or students with disabilities (Dixon, 2013).

Meeting the demands of the NCLB Act will require more than simple differentiated instruction or technology-based solutions (Albritten, 2004).Schools must purposefully adopt student-centered curriculum and practices, requiring the systemic redesign of the educational system to ensure that all decisions and resources are focused on research-based, best practices and challenging, successful learning outcomes for every student (Albritten, 2004, Barnes & Slate, 2013, Symonds, Schwartz, & Ferguson, 2011). Both system-wide reforms, which do not reflect NCLB mandates and the one-size-fits-all college-and career-readiness agenda, will be needed to ensure that every student learns at appropriately high and challenging levels, which should relieve much of the burden of leaving students behind (Albritten, 2004; Barnes & Slate, 2013; Rosenbaum, Stephan, & Rosenbaum, 2010; Symonds et al., 2011).

Much emphasis has been placed on and funding devoted to improving college readiness, testing for college readiness, and growing enrollment in higher education. However, in a policy paper for the Center for College Affordability and Productivity, Vedder, Denhart, and Robe (2013) documented concerns regarding the employability of college graduates. Among employed U.S. college graduates, approximately 48% are underemployed in jobs that the Bureau of Labor Statistics proposes requires less than a 4-year college education (Vedder et al., 2013).

Vedder et al. (2013) also projected that the growth in college enrollments and graduates will outpace the growth in high-skilled jobs further exacerbating the underemployment problem. Thus, it is prudent to shift the emphasis from college readiness to college and career readiness.

Although many initiatives documented within this study have used language inclusive of career readiness, the emphasis on increasing college graduates may come at the expense of this expanded emphasis on career readiness and may contribute to the underemployment rate.

Conclusion

The findings in this study highlight an ongoing need for additional research into what policy makers and researchers can do to improve college-readiness rates in all students and in special needs groups. With over 77% of LEP students not meeting college-readiness criteria in each of the 5 school years within this study, special attention should be paid to LEP students in the state of Texas and across the nation as increases in population will create additional challenges in regards to college-readiness. It is evident that college-readiness is not one-size-fits-all (Barnes & Slate, 2013), and that the current educational system is not fulfilling its role in preparing students for postsecondary education.

References

Achieve, Inc. (2012). Closing the expectation gap. Retrieved from
        http://www.achieve.org/publications
ACT. (2004). The role of academic and non-academic factors in improving college retention:
        A policy report. Iowa City, IA: Author. Retrieved from
        http://www.act.org/research/policymakers/pdf/college_retention.pdf
ACT. (2006a). Reading between the lines: What the ACT reveals about college readiness in
        reading. Iowa City, IA: Author. Retrieved from
        http://www.act.org/research/policymakers/reports/reading.html
ACT. (2006b). Ready for college ready for work: Same or different? Iowa City, IA: Author.
        Retrieved from http://www.act.org/research/policymakers/reports/workready.html
ACT. (2007a). Rigor at risk: Reaffirming quality in high school core curriculum. Iowa City, IA:
        Author. Retrieved from
        http://www.act.org/research/policymakers/reports/rigor.html
ACT. (2007b). The ACT technical manual. Iowa City, IA: Author. Retrieved from
        http://www.act.org/qualitycore/pdf/TechnicalManual.pdf

ACT. (2008). ACT's college readiness system: Meeting the challenges of a changing world. Iowa City, IA: Author. Retrieved from
http://www.act.org/research/policymakers/pdf/crs.pdf

ACT. (2009). Measuring college and career readiness: The class of 2009. Iowa City, IA: Author. Retrieved from
http://www.act.org/newsroom/data/2009/pdf/output/ACT_WashingtonDC_Output.pdf

ACT. (2012a). ACT profile report – state: Graduating class 2012 Texas. Retrieved from
http://www.act.org/newsroom/data/2012/pdf/profile/Texas.pdf

ACT. (2012b). The condition of college & career readiness 2012 – National. Retrieved from
http://www.act.org/research-policy/college-career-readiness-report-2012/

Albritten, D. (2004). Will students with disabilities be scapegoats for school failures? Educational Horizons, 82(2), 153-160.

American Youth Policy Forum. (2009). Moving English language learners to college- and career-readiness. Retrieved from
http://www.aypf.org/publications/documents/ELLIssueBrief.PDF

Balfanz, R. (2009). Can the American high school become an avenue of advancement for all? The Future of Children, 19(1), 17-38. doi:10.1353/foc.0.0025

Barnes, W. B. (2010). College-readiness rates of Black, Hispanic, and White high school graduates in Texas (Doctoral dissertation). Retrieved from
https://ezproxy.shsu.edu/login?url=http://search.proquest.com.ezproxy.shsu.edu/docview/851547276?accountid=7065

Barnes, W. B., & Slate, J. R. (2010). College-readiness: The current state of affairs. Academic Leadership: The Online Journal, 8(4). Retrieved from
http://www.academicleadership.org/article/college-readiness-the-current-state-of-affairs

Barnes, W. B., & Slate, J. R. (2011). College-readiness rates in Texas: A statewide, multiyear study of ethnic differences. Education and Urban Society, doi:10.1177/0013124511423775

Barnes, W. B., & Slate, J. R. (2013). College-readiness is not one-size-fits-all. Current Issues in Education, 16(1), 1-11. Retrieved from
http://cie.asu.edu/ojs/index.php/cieatasu/article/view/1070

Barnes, W. B., Slate, J. R., & Rojas-LeBouef, A. (2010). College-readiness and academic preparedness: The same concepts? Current Issues in Education, 13(4). Retrieved from http://cie.asu.edu/

Berliner, D. C. (2006). Our impoverished view of educational research. Teachers College Record, 108(6), 949-995. doi:10.1111/j.1467-9620.2006.00682.x

Bernier, N. (2011). State education boss scraps controversial Texas projection measure. KUT News. Retrieved from
http://kutnews.org/post/state-education-boss-scraps-controversial-texas-projection-measure

Bettinger, E., & Long, B. T. (2004). Shape up or ship out: The effects of remediation on students at four-year colleges (Working Paper Number 10369). Cambridge, MA: National Bureau of Economic Research.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), Handbook of theory and research for the sociology of education (pp. 241-258). New York, NY: Greenwood Press.

Cabrera, A. F., Burkham, K. R., & La Nasa, S. M. (2003). Pathways to a four-year degree: Determinants of degree completion among socioeconomically disadvantaged students. Retrieved from ERIC database. (ED482160)

Cabrera, A. F., & La Nasa, S. M. (2001). On the path to college: Three critical tasks facing America's disadvantaged. Research in Higher Education, 42(2), 119-149.

Callan, P. M., Finney, J. E., Krist, M. W., Usdan, M. D., & Venezia, A. (2006). Claiming common ground: State policymaking for improving college readiness and success (Report Number 06-1). San Jose, CA: The National Center for Public Policy and Higher Education.

Cameto, R., Levine, P., & Wagner, M. (2004). Transition planning for students with disabilities. A special topic report of findings from the National Longitudinal Transition Study-2 (NLTS2). Menlo Park, CA: SRI International. Retrieved from http://www.nlts2.org/reports/2004_11/index.html

Carnevale, A. P., & Desrochers, D. M. (2003). Preparing students for the knowledge economy: What school counselors need to know. Professional School Counseling, 6, 228-236.

Carnevale, A. P., & Fry, R. A. (2000). Crossing the great divide: Can we achieve equity when generation Y goes to college? Princeton, NJ: Educational Testing Service.

Carson, C. C.; Huelskamp, R. M.; Woodall, T. D. (1993). Perspectives on education in America: An annotated briefing. Journal of Educational Research, 86, 259-310. doi:10.1080/00220671.1993.9941211

Chow, P. E. (2008). The effects of socioeconomic status on growth rates in academic achievement. Dissertation Abstracts International: Section A. Humanities and Social Sciences, 69(2-A), 444.

Choy, S. P., Horn, L. J., Nunez, A. M., & Chen, X. (2000). Transition to college: What helps at risk students and students whose parents did not attend college. New Directions for Institutional Research, 45-63.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). Equality of educational opportunity. Washington, DC: U.S. Government Printing Office.

Common Core State Standards Initiative. (n.d.). Frequently asked questions. Retrieved from: http://www.corestandards.org/frequently-asked-questions

Conley, D. T. (2007a). Redefining college readiness (Vol. 3). Eugene, OR: Educational Policy Improvement Center.

Conley, D. T. (2007b). The challenge of college readiness. Educational Leadership, 64(7), 23-39.

Conley, D. T. (2008). Rethinking college readiness. New Directions for Higher Education, 144, 3-13.

Conley, D. T. (2010). College and career ready: Helping all students succeed beyond high school. San Francisco, CA: Jossey-Bass.

De Feyter, J. J. (2008). School readiness, early achievement, and the role of English language proficiency for children in low-income immigrant families. (Doctoral dissertation). Retrieved from https://ezproxy.shsu.edu/login?url=http://search.proquest.com.ezproxy.shsu.edu/docview/886412910?accountid=7065

Deil-Amen, R., & Rosenbaum, J. E. (2002). The unintended consequences of stigma-free remediation, Sociology of Education, 75, 249-268.

Dixon, B. (2013, January). Obama's Race to the Top drives nationwide wave of school closings, teacher firings. Retrieved from https://www.commondreams.org/view/2013/01/16-4

Dohm, A., & Shniper, L. (2007, November). Occupational employment projections to 2016. Bureau of Labor Statistics. Retrieved from http://www.bls.gov/opub/mlr/2007/11/art5full.pdf

Dumais, S. A. (2002). Cultural capital, gender, and school success: The role of habitus. Sociology of Education, 75(1), 44-68. doi:10.2307/3090253

Field, A. (2009). Discovering statistics using SPSS (3rd ed.). London, England: Sage.

Fry, R., & Gonzales, F. (2008). One-in-five and growing fast: A profile of Hispanic public school students. Washington, DC: Pew Hispanic Center.

Gray, L. H. (2005). The Charles H. Thompson Lecture-colloquium presentation: No Child Left Behind: Opportunities and threats. Journal of Negro Education, 74(2), 95-111.

Hacker, H. K. (2010, July 19). Controversial Texas Projection Measure may again boost schools' ratings. The Dallas Morning News. Retrieved from http://www.dallasnews.com/news/education/headlines/20100719-controversial-texas-projection-measure-may-again-boost-schools_ratings.ece

Hernandez, D. J., Takanishi, R., & Marotz, K. G. (2009). Life circumstances and public policies for young children in immigrant families. Early Childhood Research Quarterly, 24, 487-501. doi:10.1016/j.ecresq.2009.09.003

Hossler, D., Braxton, J., & Coopersmith, G. (1989). Understanding student college choice. In J. Smart (Ed.) Higher education: Handbook of theory and research, Vol. V. (pp. 231-288). New York, NY: Agathon Press.

Hossler, D., & Gallagher, K. S. (1987). Studying student college choice. A three phase model and the implications for policy makers. College and University, 2(3), 207-221.

Lareau, A., & Horvat, E. M. (1999). Moments of social inclusion and exclusion race, class, and culture capital in family-school relationships. Sociology of Education, 72, 37-53.

Levin, B. (1995). Educational response to poverty. Canadian Journal of Education, 20, 211-224.

Madaus, J. W. (2006). Employment outcomes of university graduates with learning disabilities. Learning Disabilities Quarterly, 29, 19-31. doi:10.2307/30035529

Manski, C. F., & Wise, D. A. (1983). College choice in America. Cambridge, MA: Harvard University Press.

Merisotis, J. P., & Phipps, R. A. (2000). Remedial education in colleges and universities: What's really going on? The Review of Higher Education, 24(1), 67-85.

Morgan, G., & Vaughn, S. (2011). A review of high school completion rates and dropout prevention for students identified with Limited English Proficiency. Austin, TX: The Meadows Center for Preventing Educational Risk. Retrieved from
     http://www.meadowscenter.org/files/resources/LEPDropoutReport_web.pdf

Munoz, J. S. (2005). The social construction of alternative education: Re-examining the margins of public education for at-risk Chicano students. The High School Journal, 88(2), 3-22. doi:10.1353/hsj.2004.0025

Murdock, S. (2007). The population of Texas: Historical patterns and future trends affecting education. Paper presented at the meeting for academic excellence for educators at Sam Houston State University. Institute for Demographic and Socioeconomic Research. San Antonio, TX.

Musoba, G. D. (2005). The impact of school reform on college preparation: A multilevel analysis of the relationship between state policy and student achievement (Doctoral dissertation). Retrieved from
https://ezproxy.shsu.edu/login?url=http://search.proquest.com.ezproxy.shsu.edu/docview/305195025?accountid=7065

National Center for Education Statistics. (2010). The Condition of Education 2010. Retrieved from http://nces.ed.gov/programs/coe/

National Center for English Language Acquisition. (2010, July). Texas rate of EL growth 1997/1998-2007/2008. Retrieved from
     http://www.ncela.gwu.edu/t3sis/state/texas/

National Center on Secondary Education and Transition. (2003). A national leadership summit on improving results for youth: State priorities and needs for assistance. Retrieved from http://www.ncset.org/summit03/findings.htm

National Commission on Excellence in Education. (1983). A nation at risk: The imperative for educational reform. Washington, DC: U.S. Department of Education.

No Child Left Behind Act of 2001, Pub. L. No. 107-111, 115 Stat. 1425 (2002).

Noer, M. (2012, November 19). One man, one computer, ten million students: How Khan Academy is reinventing education. Forbes, 190(9), 84-100.

Olson, L. (2006). Views differ on defining college prep. Education Week, 25(33), 1-29.

Onwuegbuzie, A. J., & Daniel, L. G. (2002). Uses and misuses of the correlation coefficient. Research in the Schools, 9(1), 73-90.

Orfield, G., & Lee, C. (2007). Historic reversals, accelerating resegregation, and the need for new integration strategies (A Report of the Civil Rights Project). Retrieved from http://civilrightsproject.ucla.edu/research/k-12-education/integration-and-diversity/historic-reversals-accelerating-resegregation-and-the-need-for-new-integration-strategies-1/orfield-historic-reversals-accelerating.pdf

Perna, L. W. (2000). Differences in the decision to attend college among African Americans, Hispanics and Whites. Journal of Higher Education, 71(2), 134-141.

Perna, L. W. (2002). Precollege outreach programs: Characteristics of programs serving historically underrepresented groups of students. Journal of College Student Development, 43, 64-83.

Phillips, M., Brooks-Gunn, J., Duncan, G. J., Klebanov, P., & Crane, J. (1998). Family background, parenting practices, and the Black-White test score gap. In C. Jencks & M. Phillips (Eds.), The Black-White test score gap (pp. 103-146). Washington, DC: Brookings Institute.

Raines, J., & McAdams, J. B. (2006). College and social class: The broken promise of America. Cross Currents, 56(1), 46-57.

Ravitch, D. (2009). Obama's awful education plan. The Huffington Post. Retrieved from http://www.huffingtonpost.com/diane-ravitch/obamas-awful-education-pl_b_266412.html

Roderick, M., Nagaoka, J., & Coca, V. (2009). College readiness for all: The challenge for urban high schools. The Future of Children, 19(1), 185-210. doi:10.1353/foc.0.0024

Rosenbaum, J. E., Stephan, J. L., & Rosenbaum, J. E. (2010). Beyond one-size-fits-all college dreams: Alternative pathways to desirable careers. American Educator, 34(3), 1-12. Retrieved from https://www.aft.org/pdfs/americaneducator/fall2010/Rosenbaum.pdf

Rouse, C. E. (1994). What to do after college: The two-year versus four-year college enrollment decision. In R. Ehrenberg (Ed.), Choices and consequences: Contemporary issues in education policy (pp. 59-88). Ithaca, NY: Cornell University Press.

Scott, R. (2007). No Child Left Behind: The final "Educational Katrina?" The Occidental Quarterly, 7(1), 17-42.

Sirin, S. R. (2005). Socioeconomic status and academic achievement: A meta-analytical review. Review of Educational Research, 75(3), 417-453. doi:10.3102/00346543075003417

Sullivan, A. (2001). Cultural capital and educational attainment. Sociology, 35, 893-912.

Symonds, W. C., Schwartz, R. B., & Ferguson, R. (2011). Pathways to prosperity: Meeting the challenge of preparing young Americans for the 21st century. Boston, MA: Pathways to Prosperity Project and Harvard Graduate School of Education. Retrieved from http://www.gse.harvard.edu/news_events/features/2011/Pathways_to_Prosperity_Feb2011.pdf

Tramonte, L., & Willms, J. (2010). Cultural capital and its effects on education outcomes. Economics of Education Review, 29, 200-213. doi:10.1016/j.econedurev.2009.06.003

U.S. Bureau of Labor Statistics. (2012). Employment projection 2010-20. Retrieved from http://www.bls.gov/emp/

U.S. Department of Education. (2008). A nation accountable: Twenty-five years after A Nation at Risk. Retrieved from http://www.ed.gov/rschstat/research/pubs/accountable/

Vedder, R., Denhart, C., & Robe, J. (2013, January). Why are recent college graduates underemployed? University enrollments and labor-market realities. Washington, DC: Center for College Affordability and Productivity.

Viadero, D., & Johnston, R. C. (2000). Lags in minority achievement defy traditional explanations. The achievement gap. (ERIC Documentation Reproduction Service No. ED458335)

Weiss, J., Hacker, H. K., & Stutz, T. (2010, July 31). Exemptions help more campuses gain top accountability ratings from state. The Dallas Morning News. Retrieved from http://www.dallasnews.com/news/local-news/20100731-Exemptions-help-more-campuses-gain-top-420.ece

Wilson, M. G., Hoffman, A. V., & McLaughlin, M. J. (2009). Preparing youth with disabilities for college: How research can inform transition policy. Focus on Exceptional Children, 41(7), 1-10.

Table 1: Texas Education Agency Criteria for College-Ready Graduates

Subject	Exit-level TAKS		SAT		ACT
English/ Language Arts (ELA)	2200 or higher scale score and 3 or higher essay score	or	500 or higher in critical reading and 1070 or higher composite score	or	19 or higher in English and 23 or higher composite score
Math	2200 or higher scale score	or	500 or higher in math and 1070 or higher composite score	or	19 or higher in Math and 23 or higher composite score

Note. This information was adapted from the TEA (2011b).

Table 2: Descriptive Statistics for the College-Readiness Rates of All Students, Economically Disadvantaged, Limited English Proficient, and Special Education High School Graduates in Texas for the 2006-2007 School Year

College-Ready Graduates	*n* of schools	*M*	*SD*
Reading			
All Students	1,341	43.46	17.38
Economically Disadvantaged	1,146	34.65	16.20
Limited English Proficient	68	15.71	13.10
Special Education	347	19.03	8.72
Math			
All Students	1,343	46.88	16.62
Economically Disadvantaged	1,134	37.72	15.77
Limited English Proficient	186	22.35	15.02
Special Education	374	20.40	12.07
Both Subjects			
All Students	1,304	30.48	15.40
Economically Disadvantaged	1,062	21.62	12.61
Limited English Proficient	42	14.36	10.67
Special Education	193	14.83	11.25

Table 3: Descriptive Statistics for the College-Readiness Rates of All Students, Economically Disadvantaged, Limited English Proficient, and Special Education High School Graduates in Texas for the 2007-2008 School Year

College-Ready Graduates	*n* of schools	*M*	*SD*
Reading			
All Students	1,345	43.41	17.09
Economically Disadvantaged	1,168	35.47	15.83
Limited English Proficient	51	15.43	11.30
Special Education	337	19.57	13.08
Math			
All Students	1,356	50.81	16.55
Economically Disadvantaged	1,184	42.26	15.85
Limited English Proficient	186	27.69	15.46
Special Education	329	20.33	12.17
Both Subjects			
All Students	1,319	31.72	15.61
Economically Disadvantaged	1,100	23.42	12.47
Limited English Proficient	35	14.80	8.27
Special Education	180	14.91	9.30

Table 4 : Descriptive Statistics for the College-Readiness Rates of All Students, Economically Disadvantaged, Limited English Proficient, and Special Education High School Graduates in Texas for the 2008-2009 School Year

College-Ready Graduates	*n* of schools	*M*	*SD*
Reading			
All Students	1,379	53.98	16.17
Economically Disadvantaged	1,219	45.21	15.84
Limited English Proficient	85	13.98	10.46
Special Education	379	21.03	12.72
Math			
All Students	1,379	54.18	16.38
Economically Disadvantaged	1,212	46.19	16.23
Limited English Proficient	200	28.16	17.51
Special Education	85	22.73	12.82
Both Subjects			
All Students	1,358	39.47	16.33
Economically Disadvantaged	1,168	30.28	14.35
Limited English Proficient	62	12.87	10.37
Special Education	210	16.40	10.50

Table 5: Descriptive Statistics for the College-Readiness Rates of All Students, Economically Disadvantaged, Limited English Proficient, and Special Education High School Graduates in Texas for the 2009-2010 School Year

College-Ready Graduates	*n* of schools	*M*	*SD*
Reading			
All Students	1,402	58.13	15.36
Economically Disadvantaged	1,230	48.93	15.52
Limited English Proficient	116	14.02	10.48
Special Education	494	19.07	12.32
Math			
All Students	1,400	56.53	16.17
Economically Disadvantaged	1,219	48.46	15.63
Limited English Proficient	244	26.94	16.85
Special Education	436	17.78	12.07
Both Subjects			
All Students	1,389	42.74	16.40
Economically Disadvantaged	1,192	33.37	14.24
Limited English Proficient	78	11.56	7.80
Special Education	254	13.54	10.09

Table 6: Descriptive Statistics for the College-Readiness Rates of All Students, Economically Disadvantaged, Limited English Proficient, and Special Education High School Graduates in Texas for the 2010-2011 School Year

College-Ready Graduates	*n* of schools	*M*	*SD*
Reading			
All Students	1,418	62.42	15.91
Economically Disadvantaged	1,305	54.52	15.69
Limited English Proficient	141	15.17	12.13
Special Education	571	21.46	14.57
Math			
All Students	1,419	60.03	16.95
Economically Disadvantaged	1,296	53.36	16.69
Limited English Proficient	248	31.69	17.55
Special Education	483	20.57	13.69
Both Subjects			
All Students	1,405	47.62	17.47
Economically Disadvantaged	1,281	38.98	15.92
Limited English Proficient	110	12.72	12.72
Special Education	302	14.78	14.80

Table 7: Summary of Effect Sizes and Interpretations for ANOVA Analyses of College-Readiness Rates in Reading, Math, and Both Subjects for the 2006-2007 Through the 2010-2011 School Years

College Readiness Area by School Year	Effect Size (η^2)	Effect Size Interpretation
Reading		
2006-2007	.21	Large
2007-2008	.20	Large
2008-2009	.36	Large
2009-2010	.49	Large
2010-2011	.52	Large
Math		
2006-2007	.26	Large
2007-2008	.28	Large
2008-2009	.30	Large
2009-2010	.43	Large
2010-2011	.41	Large
Both Subjects		
2006-2007	.13	Moderate
2007-2008	.13	Moderate
2008-2009	.19	Large
2009-2010	.28	Large
2010-2011	.31	Large

Table 8: Texas Projection Measure Over and Under Projection Misclassifications for High School ELA and Math

Subject and Demographic Group	n	Under Projection	Over Projection
ELA			
All Students	246,434	1115 (0.45%)	9514 (3.86%)
Economically Disadvantaged	106,050	755 (0.71%)	6221 (5.87%)
Special Education	10,389	290 (2.79%)	1935 (18.63%)
LEP	11,960	342 (2.86%)	2204 (18.43%)
Math			
All Students	245,023	17392 (7.10%)	6120 (2.50%)
Economically Disadvantaged	105,158	10754 (10.23%)	3598 (3.42%)
Special Education	9,614	1618 (16.83%)	463 (4.82%)
LEP	11,780	2532 (21.49%)	540 (4.58%)
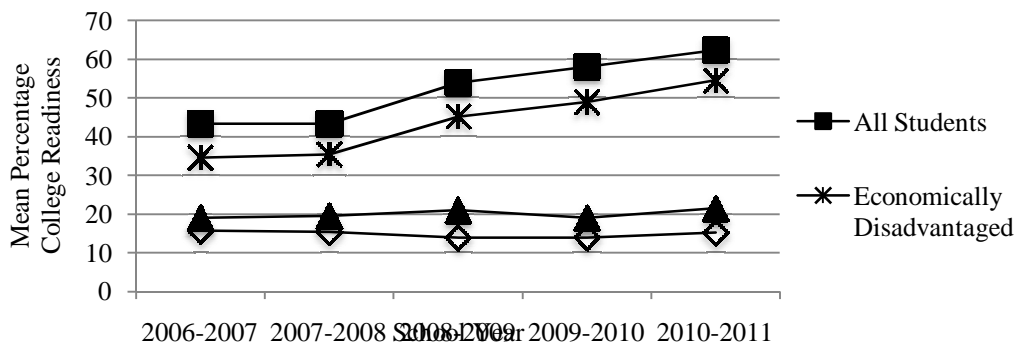
Figure 1: Trends in Mean Reading College Readiness Rates of all Students, Economically Disadvantaged, Limited English Proficient, and Special Education High School Graduates in Texas for the 2006-2007 Through the 2010-2011 School Years
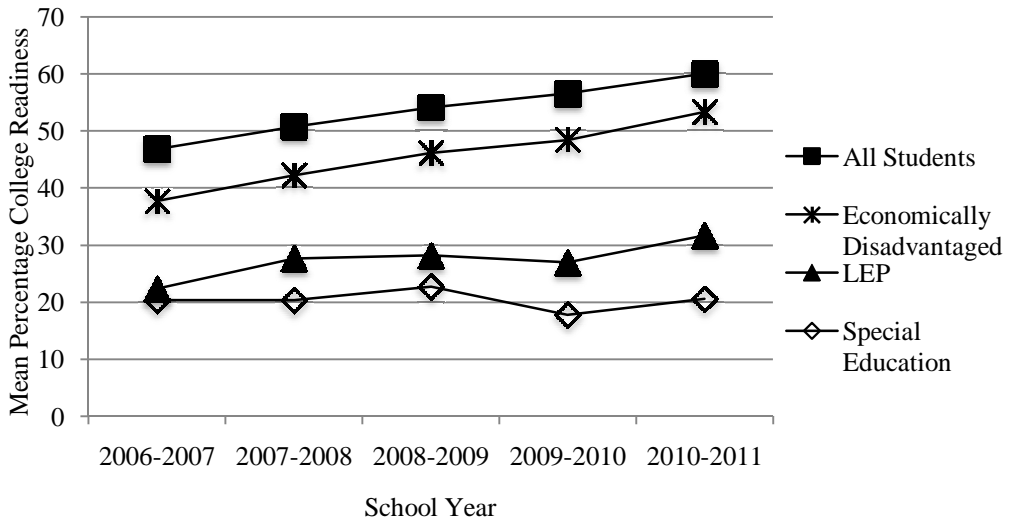
Figure 2: Trends in Mean Mathematics College Readiness Rates of all Students, Economically Disadvantaged, Limited English Proficient, and Special Education High School Graduates in Texas for the 2006-2007 Through the 2010-2011 School Years
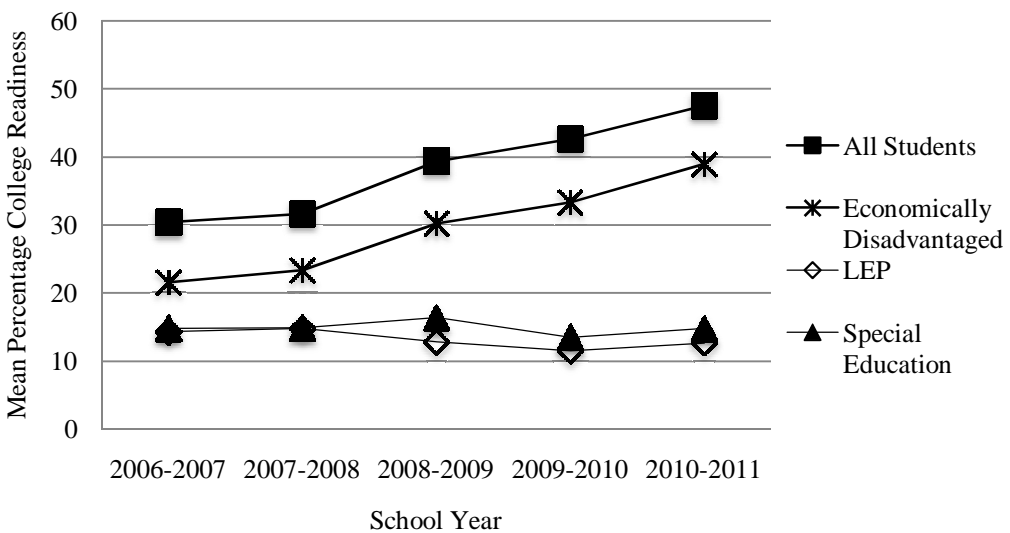
Figure 3: Trends in mean college readiness rates in both subjects of all students, economically disadvantaged, Limited English Proficient, and special education high school graduates in Texas for the 2006-2007 through the 2010-2011 school years