❒   34

Reading inequities by the economic status of Texas grade 3 english language learners: A Texas, multiyear analysis

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Article Info

ABSTRACT

Analyzed in this investigation were the current Texas state-mandated assessments in reading and the extent to which test scores differed among English Language Learners who were Not Poor (i.e., did not qualify for the reduced or free lunch program), English Language Learners who were Moderately Poor (i.e., qualified for the reduced lunch program), and English Language Learners who were Extremely Poor (i.e., qualified for the free lunch program). In all cases, reading achievement was lowest for English Language Learners who were Very Poor, followed by English Language Learners who were Moderately Poor. English Language Learners who were Not Poor had the highest reading performance in all four school years. Implications for policy and practice, as well as recommendations for future research, are provided.

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1.   INTRODUCTION

Reading Inequities by the Economic Status of Texas Grade 3 English Language. Learners: A Texas, Multiyear Analysis. According to the [1], the most definitive factor that affected student academic achievement was the economic status of the household in which the student lived. Poverty influences the prior knowledge that students have when they enter school along with their reading skills [2]. Without prior knowledge gained by experiences, students in poverty are at a disadvantage not only when they enter school but throughout their educational experience. Students in poverty come to school with a lack of resources such as emotional, relational, physical, and knowledge of informal or hidden rules [3]. Poverty not only affects student academic achievement, but also increases the likelihood of students dropping out of school [4].

In a recent national study, [5] compared the academic achievement of students in poverty with the academic achievement of students who were privileged. In his examination of academic achievement for over five decades, [5] established that the achievement gap between these two groups of students had increased from 0.9 SD to 1.25 SDs from 1950 through 2000. The achievement gaps that were present among ethnic/racial groups did not decrease as the students transitioned from the first grade to middle school grades, but rather continued to widen over time. Household experiences, as well as the experiences students have prior to and while in school, affect the learning that occurs inside of the classroom. [5] contended that school systems and policymakers need to work together to build early interventions during the primary years in school to address these achievement gaps.

In a recent study of school economic composition and student achievement, [6] analyzed the relationships of high school student economic status with student academic success. Students who were

enrolled in a school with a higher economic status were 68% more likely to attend a 4-year institution than were students who were enrolled in a school with a lower economic status. [6] suggested that mediating factors such as emphasis on academics in the schools and integration of economic levels (i.e., Not Poor, Moderately Poor, Very Poor) within the school may address the negative consequences of attending a low socioeconomic school.

In Texas, the state of interest in this investigation, [2] examined the reading skills of high school students as a function of student economic status. They analyzed data from the 2003-2004 through the 2011-2012 school years from the Texas Assessment of Knowledge and Skills Exit Level English Language Arts exam. [2] documented the presence of statistically significantly lower reading skills for students in poverty compared to their more economically privileged peers. In their 8-year analysis of Texas statewide data, they established the presence of moderate effect sizes regarding poverty and student reading performance.

In another recent investigation conducted in Texas, [7] examined advanced levels of academic achievement by student economic status. In their analyses of the Exit-Level Mathematics and English Language Arts test scores on the state-mandated assessment, statistically significantly lower percentages of students who were economically disadvantaged met the Commended Performance standard than did students who were not economically disadvantaged. In their study, students in poverty statistically significantly underperformed their counterparts in both reading and mathematics. Of note in their investigation was that 43% of their sample were economically disadvantaged. According to the [8], the statewide percentage of public school students who are economically disadvantaged increased from 55.5% in the 2005-2006 school year to 58.9% in the 2015-2016 school year. The implications of these high percentages of students in poverty include limiting their access to secondary education and subsequent effects on employment.

In another recent study conducted in Texas, [9] analyzed data on the 2012-2013 through the 2014-2015 State of Texas Assessment of Academic Readiness Reading tests for Grade 3 students. In her research, three tiers of poverty classifications were present: Not Poor, Moderately Poor, and Extremely Poor. Students classified as Extremely Poor qualified for the federal free lunch program whereas students classified as Moderately Poor qualified for the federal reduced price meals program. Students in the Not Poor group did not qualify for either federal meal program. [9] established the presence of a clear stair-step of achievement [10] in that students who were Extremely Poor had the lowest reading performance in all three school years. Students who were Moderately Poor had the next lowest reading performance in all three school years. Consistent with the extant literature, students who were not in poverty had the highest levels of reading performance.

In an international study, [11] analyzed data from the Canadian National Longitudinal Study of Children and Youth on the relationship of economic status with student age and academic performance. In particular, they focused on mathematics achievement. [11] determined that the achievement gap was twice as large at 12 years of age than at 7 years of age. As students mature, the effects of their family's economic status continue to influence their achievement in school.

With respect to the population of interest to this investigation, English Language Learners, the percentage of students in public schools in the United States who were English Language Learners was 9.3% in the 2013-2014 school year. This percentage reflected an increase of 0.5% from the 2003-2004 school year [12]. By 2025, the [13] estimated that 25% of the student population in the United States would be English Language Learners. The percentage of English Language Learners in Texas increased from 15.7% in the 2005-2006 school year to 19.55% in the 2015-2016 school year [8].

With respect to the state of interest in this investigation, Texas, a total of 5,359,127 students were enrolled in elementary and secondary public schools during the 2016-2017 school year. Of those students, 1,010,596 individuals were identified as being an English Language Learner, which represented about 18.86% of the Texas public school population [8]. With a large percentage of the United States and Texas population being an English Language Learner and that population increasing every year, it is imperative that empirical data be available about the relationships between student economic status and reading achievement.

The group of students who are English Language Learners warrant interest because of their documented achievement gaps. Students who are English Language Learners have lower academic achievement scores than do their peers [14, 15]. English Language Learners score lower on both standardized and non-standardized tests than do students who are native-English speaking students.

In a recent Texas investigation, [16] compared cohorts of students and followed from Grade 1 through high school graduation. They first separated the students into two groups: students who ever English Language Learners and those students who were never English Language Learners. From there, [16] further delineated the data in regard to students who graduated on time or students who graduated late. A major finding in the analysis was that the majority of students who graduated on time achieved the basic proficiency level on both the reading and mathematics exams, but had much lower success on the Commended Performance level. [16] determined student graduation from high school was more highly

correlated with race/ethnicity than with English Language Learner status. Consistent with previous research [17], poverty and access to college ready academic opportunities were among the most influential factors that determined whether or not students enrolled in a postsecondary setting, regardless of their English Language Learner status [16].

The population of English Language Learners has increased almost 3% or 280,000 students over the last 10 years in Texas [8] and is projected to continue to increase. As with the increase in English Language Learners, in the United States, 51% of students in public primary and secondary schools were economically disadvantaged in 2013 [12]. In Texas, in the 2015-2016 school year, 58.93% of students were classified as economically disadvantaged, with 42.82% being eligible for free meals and 5.98% being eligible for reduced price meals [8]. With increased percentages of English Language Learners and students in poverty in the educational system, educators have to accommodate for the limited experiences and resources of these students [5]. Students who are economically disadvantaged do not have the same academic skills as students who are not economically disadvantaged [7, 18-20] nor do students with limited English exposure. With this increase in the numbers of English Language Learners, educators need additional resources to meet the academic and linguistic needs of their students to close the achievement gap that has increased in recent years[21, 22]. As such, the combination of English Language Learners and students in poverty needs to be addressed.

The purpose of this study was to examine the degree to which differences were present in the reading achievement of Grade 3 English Language Learners by their economic status. Specifically analyzed in this investigation were the current Texas state-mandated assessments in reading and the extent to which test scores differed among English Language Learners who were Not Poor (i.e., did not qualify for the reduced or free lunch program), for English Language Learners who were Moderately Poor (i.e., qualified for the reduced lunch program), and for English Language Learners who were Extremely Poor (i.e., qualified for the free lunch program). By examining three years of Texas statewide data, the degree to which trends were present in reading performance by the economic status of Grade 3 English Language Learners was determined.

Educational leaders are held accountable for student performance on standardized assessments. In Texas, in particular, educational leaders are held accountable publicly for the academic performance of their students, as an overall group, as well as for subgroups (e.g., English Language Learners, economically disadvantaged). Given the presence of continued achievement gaps by ethnicity/race and by economic status, educational leaders need to examine data on an ongoing basis to determine the degree to which any existing achievement gaps may have changed. In Texas, the State of Texas Assessment of Academic Readiness recently replaced the former state-mandated assessment, the Texas Assessment of Knowledge and Skills. In an exhaustive review of the literature, only one study was located in which data from the new Texas state-mandated assessment were analyzed [9]. As such, results from this article provide important data regarding the presence of achievement gaps on the new assessment in Texas.

Another element of importance in this investigation is the manner in which student economic status was addressed. Typically, researchers examine student economic status, as students are either economically disadvantaged or not economically disadvantaged. In this empirical investigation, however, students who were determined to be economically disadvantaged were separated into two categories: those students who qualified for the reduced price lunch program and those students who qualified for the free lunch program. Through this process, the degree to which levels of poverty were related to student performance could be ascertained. Accordingly, a more nuanced investigation of the relationship of student poverty with reading achievement was conducted than is typically conducted when comparisons are made solely between students who are on the reduced/free lunch program and students who do not qualify for the reduced/free price lunch program.

With the abundance of research [e.g., 5, 20] in which students in poverty have statistically significantly lower academic achievement than students who are not poor, the high percentages of Texas students who live in poverty are a concern. In this investigation, results from the analyses of Grade 3 English Learners on the State of Texas Assessment of Academic Readiness Reading exam can provide relevant information to educational leaders and policymakers regarding the relationship of student economic status to their present level of achievement.

The research questions investigated in this study were: (a) What is the difference on the STAAR Reading Level II Academic Performance measures (i.e., Phase-in 1, Phase-in 2, and Final Satisfactory) for Grade 3 English Language Learners as a function of their economic status (i.e., Not Poor, Moderately Poor, Very Poor)?; (b) What is the difference on the STAAR Reading Level III Academic Performance measures for Grade 3 English Language Learners as a function of their economic status?; (c) What is the difference on the STAAR Reading Reporting Category 1: Understanding Across Genres for Grade 3 English Language Learners as a function of their economic status?; (d) What is the difference on the STAAR Reading

Reporting Category 2: Understanding/Analysis of Literary Texts for Grade 3 English Language Learners as a function of their economic status?; (e) What is the difference on the STAAR Reading Reporting Category 3: Understanding/Analysis of Informational Texts for Grade 3 English Language Learners by their economic status?; (f) What trend is present over time in the STAAR Reading Level II Academic Performance measures for Grade 3 English Language Learners by their economic status?; and (g) What trend is present in the STAAR Reading Reporting Categories scores for Grade 3 English Language Learners by their economic status? The first five research questions were repeated for the 2012-2013, 2013-2014, and 2014-2015 school years whereas the last two research questions were comparisons across these three school years. As such, a total of 17 research questions were present in this empirical investigation.

2.   METHOD
2.1. Research design
For this investigation, the research design was a causal-comparative investigation [23]. Archival data were analyzed in this multiyear investigation. A causal-comparative research design was present because the independent variable of economic status had already occurred, along with the test scores of Grade 3 English Language Learners on the State of Texas Assessment of Academic Readiness Reading exams. When archival data are analyzed, neither the independent variable nor the dependent variables can be manipulated [23]. Moreover, extraneous variables cannot be controlled.

2.2. Participants and instrumentation
Participants in this study were all Grade 3 English Language Learners who completed the State of Texas Assessment of Academic Readiness Reading exam in the 2012-2013, 2013-2014, or 2014-2015 school years. English Language Learners are students who are "in the process of acquiring English and has another language as the first native language" [24]. The level of economic status (i.e., Not Poor, Moderately Poor, and Very Poor) for each student was provided by the Texas Education Agency. The [25] defined economically disadvantaged as students being eligible for the free or reduced-price lunch program or other public assistance. For the purpose of this study, students were categorized into three groups of students: Very Poor, Moderately Poor and Not Poor. Students who were eligible for the free lunch program were regarded as Very Poor and had a family income of 130% or less of the federal poverty line. Those students who were eligible for the reduced lunch program were referred to as Moderately Poor and had a family income of 131% to 185% of the federal poverty guideline. Students who did not qualify for either the reduced-price meals or the free lunch program were placed in the Not Poor group. For a 1-person household, the federal poverty annual income had to be less than $11,880 in 2016. For each person in the household, an amount of $4,160 was added to the threshold [26].

During the 2011-2012 school year, Texas changed the mandatory standardized achievement test from the Texas Assessment of Knowledge and Skills to the State of Texas Assessment of Academic Readiness. With this change, Texas changed from assessing students on basic skills to assessing students on the application of knowledge and skills [8]. Students are assessed in reading in Grades 3 through 8. On each assessment, test creators use the blueprint to determine which Texas Essential Knowledge and Standards are tested each year. Texas Essential Knowledge and Skills are further delineated into Readiness Standards and Supporting Standards. Readiness Standards vary for each grade level and content area but are most critical for students to be successful in the current grade level and to be prepared for the next course [8]. Supporting Standards are concepts and content that are newly introduced in the current grade level and prepare students for the next grade level but not critical for students to master the current grade level [8].

The Texas Education Agency defines reading skills across three reporting categories of the State of Texas Assessment of Academic Readiness Reading exam in Grade 3. Students' ability to demonstrate basic reading understanding across genres (i.e., fiction, poetry, drama, literary non-fiction, expository, persuasive) by determining "the meaning of grade-level academic words in English, using context to determine the meaning of unfamiliar words, and comparing and contrasting themes or moral lessons" is assessed in Reporting Category 1[27, para. 3]. In Reporting Category 2, students must demonstrate the ability "to comprehend and analyze literary texts (i.e., fiction, poetry, drama, literary nonfiction) for elements such as foreshadowing, character development, sensory detail, and figurative language" [27, para. 4]. For Reporting Category 3, students must be able "to comprehend and analyze informational texts (i.e., expository, persuasive) by demonstrating the ability to summarize the main idea and supporting details, analyze organizational patterns and text features, and make logical connections between ideas and across texts" [27, para. 5]. To that end, questions remain regarding the degree of literacy students have and the extent to which disparities exist by economic status.

The Texas Education Agency has created three levels of performance: Level 1: Unsatisfactory Academic Performance, Level 2: Satisfactory Academic Performance, and Level 3: Advanced Academic Performance [28]. As the STAAR Reading exam was new, the Texas Education Agency gradually increased the performance standard (i.e., Phase-in 1, Phase-in 2, Final Satisfactory). To ensure score validities and score reliabilities, the Texas Technical Advisory Committee conducted numerous studies. External studies were compared to the SAT and ACT as well as vertical scale studies that allowed a comparison of student performance across grades within a content area [28]. Readers are directed to the Texas Education Agency website for further information regarding score validities and score reliabilities for the STAAR Reading assessments.

3. RESULTS

To determine whether a difference was present in the Level II Phase-in 1, Phase-in 2, and Final Satisfactory performance standards by the degree of economic disadvantage for English Language Learners, Pearson chi-square procedures were performed. This statistical procedure was most appropriate to use because both the independent variable of economic status (i.e., Not Poor, Moderately Poor, and Very Poor) and the STAAR Reading test dependent variables (i.e., met or did not meet standard) were categorical in nature and constituted frequency data. As such, the optimal inferential statistical procedure was the Pearson chi-square [29]. Given that the sample size was greater than five per cell, the assumptions were met.

3.1. Research question one results

Concerning the Level II Phase-in 1 Satisfactory Performance Standard by the economic status of English Language Learners, the result for the 2012-2013 school year was statistically significant, $\chi^2(2) = 709.58$, $p < .001$. The effect size, Cramer's V, was below small, .09 [30]. As revealed in Table 1, English Language Learners who were Very Poor had the lowest met standard rates on this Phase-in standard. A stair-step effect [10] was observed, with the Not Poor group having the highest met standard rates at 78.3%, followed by the Moderately Poor group at 74.2%, and then the Not Poor group at 66.1%.

Table 1. Frequencies and percentages for the grade 3 reading phase-in 1 satisfactory performance standard of english language learners by their economic status in the 2012-2013, 2013-2014, and 2014-2015 school years

School Year and Economic Status	Met Standard		Did Not Meet Standard	
	n	%	n	%
2012-2013				
Not Poor	7,972	78.3%	2,211	21.7%
Moderately Poor	4,340	74.2%	1,509	25.8%
Very Poor	42,885	66.1%	22,015	33.9%
2013-2014				
Not Poor	8,238	76.1%	2,592	23.9%
Moderately Poor	4,573	72.3%	1,749	27.7%
Very Poor	41,753	63.3%	24,171	36.7%
2014-2015				
Not Poor	9,803	74.3%	3,392	25.7%
Moderately Poor	4,416	71.1%	1,792	28.9%
Very Poor	42,651	62.9%	25,176	37.1%

With respect to the 2013-2014 school year, the result was statistically significant, $\chi^2(2) = 803.32$, $p < .001$, and yielded an effect size, Cramer's V, that was small, .10 [30]. Similar to the 2012-2013 school year, a stair-step effect [10] was present. English Language Learners who were Not Poor had the highest met standard, 76.1%, followed by the Moderately Poor group, 72.3%, and then the Very Poor group, 63.3%.

Regarding the 2014-2015 school year, the result was statistically significant, $\chi^2(2) = 737.78$, $p < .001$, Cramer's V of .09, a below small effect size [30]. Similar to the previous two school years, English Language Learners who were Not Poor had the highest percentage who met this Phase-in standard, 3.2% higher, than the Moderately Poor group, and 11.4% higher than the Very Poor group. Delineated in Table 1 are the descriptive statistics for this school year.

Concerning the Level II Phase-in 2 Satisfactory Performance Standard by the economic status of English Language Learners, the result for the 2012-2013 school year was statistically significant, $\chi^2(2) = 892.34$, $p < .001$. The effect size, Cramer's V, was small, .11 [30]. As revealed in Table 2, English Language Learners who were Very Poor had the lowest met standard rates on this Phase-in standard. A stair-step effect

[10] was present, with the Not Poor group having the highest met standard rates, 14.8% higher, than the Very Poor group and 5.7% higher than the Moderately Poor group on the Phase-in 2 Satisfactory Performance Standard.

Table 2. Frequencies and percentages for the grade 3 reading phase-in 2 satisfactory performance standard of english language learners by their economic status in the 2012-2013, 2013-2014, and 2014-2015 school years

School Year and Economic Status	Met Standard		Did Not Meet Standard	
	n	%	n	%
2012-2013				
Not Poor	5,734	56.3%	4,449	43.7%
Moderately Poor	2,958	50.6%	2,891	49.4%
Very Poor	26,938	41.5%	37,962	58.5%
2013-2014				
Not Poor	6,224	57.5%	4,606	42.5%
Moderately Poor	3,239	51.2%	3,083	48.8%
Very Poor	27,732	42.1%	38,192	57.9%
2014-2015				
Not Poor	8,542	64.7%	4,653	35.3%
Moderately Poor	3,680	59.3%	2,528	40.7%
Very Poor	34,209	50.4%	33,618	49.6%

With respect to the 2013-2014 school year, the result was statistically significant, $\chi^2(2) = 1008.10$, $p < .001$, and yielded an effect size, Cramer's V, .11, that was small [30]. Similar to the 2012-2013 school year, a stair-step effect [10] was present. English Language Learners who were Not Poor had the highest met standard, 12.8% higher, than the Very Poor group and 3.8% higher than the Moderately Poor group on the Phase-in 2 Satisfactory Performance Standard.

Regarding the 2014-2015 school year, the result was statistically significant, $\chi^2(2) = 1005.70$, $p < .001$. The effect size, Cramer's V, was small, .11 [30]. Similar to the previous two school years, English Language Learners who were Not Poor had the highest percentage who met this standard, 14.3% higher, than the Not Poor group and 5.4% higher than the Moderately Poor group. Delineated in Table 2 are the descriptive statistics for this school year.

Concerning the Level II Final Satisfactory Performance Standard by the economic status of English Language Learners, the result for the 2012-2013 school year was statistically significant, $\chi^2(2) = 803.39$, $p < .001$. The effect size, Cramer's V, was small, .10 [30]. As revealed in Table 3, English Language Learners who were Very Poor had the lowest met standard rates on this Phase-in standard. A stair-step effect [10] was observed, with the Not Poor group having the highest met standard, 12.8% higher, than the Very Poor group and 6.5% higher than the Moderately Poor group.

Table 3. Frequencies and percentages for the grade 3 reading final satisfactory performance standard of english language learners by their economic status in the 2012-2013, 2013-2014, and 2014-2015 school years

School Year and Economic Status	Met Standard		Did Not Meet Standard	
	n	%	n	%
2012-2013				
Not Poor	3,838	37.5%	6,402	62.5%
Moderately Poor	1,821	31.0%	4,049	69.0%
Very Poor	16,100	24.7%	49,206	75.3%
2013-2014				
Not Poor	4,235	38.9%	6,649	61.1%
Moderately Poor	2,082	32.8%	4,267	67.2%
Very Poor	16,896	25.5%	49,442	74.5%
2014-2015				
Not Poor	4,884	37.0%	8,311	63.0%
Moderately Poor	1,916	30.9%	4,292	69.1%
Very Poor	15,945	23.5%	51,882	76.5%

With respect to the 2013-2014 school year, the result was statistically significant, $\chi^2(2) = 928.16$, $p < .001$, and yielded an effect size, Cramer's V, .11, that was small [30]. Similar to the 2012-2013 school year, a stair-step effect [10] was present. English Language Learners who were Not Poor had the highest met standard achievement, 12.8% higher, than the Not Poor group and 3.8% higher than the Moderately Poor

group on the Phase-in 2 Satisfactory Performance Standard. Descriptive statistics for this analysis are contained in Table 3.

Regarding the 2014-2015 school year, the result was statistically significant, $\chi^2(2)$ = 1124.78, $p <$ .001, Cramer's V of .11, a small effect size [30]. Similar to the previous two school years, English Language Learners who were Not Poor had higher passing rates, 13.5% higher, than the Very Poor group and 6.2% higher than the Moderately Poor group.

3.2. Research question two results

Concerning the Level III Advanced Academic Performance standard by the economic status of English Language Learners, the result for the 2012-2013 school year was statistically significant, $\chi^2(2)$ = 485.26, $p <$ .001. The effect size, Cramer's V, was below small, .08 [30]. As revealed in Table 4, English Language Learners who were Very Poor had the lowest met standard rates on this performance standard. A stair-step effect [10] was present, with the Not Poor group having the highest met standard rates, 6% higher, than the Very Poor group and 3.7% higher than the Moderately Poor group.

Table 4. Frequencies and percentages for the grade 3 reading level iii advanced academic performance standard of english language learners by their economic status in the 2012-2013, 2013-2014, and 2014-2015 school years

School year and economic status	Met Standard		Did Not Meet Standard	
	n	%	n	%
2012-2013				
Not Poor	1,765	17.2%	8,475	82.8%
Moderately Poor	790	13.5%	5,080	86.5%
Very Poor	6,588	10.1%	58,718	89.9%
2013-2014				
Not Poor	1,616	14.8%	9,268	85.2%
Moderately Poor	738	11.6%	5,611	88.4%
Very Poor	6,108	9.2%	60,230	90.8%
2014-2015				
Not Poor	2,475	18.6%	10,807	81.4%
Moderately Poor	888	14.3%	5,338	85.7%
Very Poor	10,354	11.8%	77,486	88.2%

With respect to the 2013-2014 school year, the result was statistically significant, $\chi^2(2)$= 343.79, $p <$ .001, and yielded an effect size, Cramer's V,.06, that was below small [30]. Similar to the 2012-2013 school year, a stair-step effect [10] was present. English Language Learners who were Not Poor had the highest passing rates, 4.7% higher, than the Very Poor group and 3.2% higher than the Moderately Poor group on the Level III Advanced Academic Performance standard.

Regarding the 2014-2015 school year, the result was statistically significant, $\chi^2(2)$ = 794.72, $p <$ .001. The effect size, Cramer's V, .10, was small [30]. Similar to the previous two school years, English Language Learners who were Not Poor had the highest percentage who met this performance standard, 8.6% higher, than the Poor group and 4.3% higher than the Moderately Poor group. Delineated in Table 4 are the descriptive statistics for this school year.

3.3. Research question three overall results

Prior to conducting a multivariate analysis of variance (MANOVA) statistical procedure to answer the third research question, its underlying assumptions were checked. Specifically data normality, Box's Test of Equality of Covariance, and Levene's Test of Equality of Error Variances were examined. Although the assumptions for the MANOVA procedure were not all met, the robustness of a MANOVA procedure made it appropriate to use on the data in this study [29].

For the 2012-2013 school year, the MANOVA revealed a statistically significant difference, Wilks' Λ = .98, $p <$ .001, partial η^2 = .01, in overall reading performance as a function of economic status. Using [30]'s criteria, the effect size was small. With respect to the 2013-2014 school year, the MANOVA revealed a statistically significant difference, Wilks' Λ = .98, $p <$ .001, partial η^2 = .01, in overall reading performance as a function of economic status. Using [30]'s criteria, the effect size was small. Similarly for the 2014-2015 school year, the MANOVA revealed a statistically significant overall difference, Wilks' Λ = .98, $p <$ .001, partial η^2 = .01, in reading performance as a function of economic status. Using [30]'s criteria, the effect size was small. Because the MANOVAs for each school year revealed the presence of statistically significant

differences in aggregated reading performance by student economic status, univariate follow-up analysis of variance (ANOVA) procedures were calculated on each of the three STAAR Reading Reporting categories.

3.4. Research question three reading reporting: category 1 results

For the 2012-2013 school year, Grade 3 STAAR Reading Reporting Category 1 raw scores were statistically significantly different by the economic status (i.e., Not Poor, Moderately Poor, and Very Poor) of English Language Learners, $F(2, 80929) = 698.41$, $p < .001$, $\eta^2 = .02$, a small effect size [30]. Scheffe' post hoc procedures were then conducted to determine which pairs of economic groups had different raw scores. These post hoc procedures revealed that all three pairwise comparisons were statistically significantly different. As revealed in Table 5, English Language Learners who were Not Poor had an average raw score that was 0.29 points higher than the average raw score of English Language Learners who were Moderately Poor and 0.60 points higher than the average raw score of English Language Learners who were Very Poor on the Grade 3 STAAR Reading Reporting Category 1. English Language Learners who were Moderately Poor had an average raw score that was 0.31 points higher than the average raw score of English Language Learners who were Very Poor.

Concerning the 2013-2014 school year, a statistically significant difference was yielded on the STAAR Reading Reporting Category 1 raw scores by the economic status of English Language Learners, $F(2, 83073) = 527.14$, $p < .001$, $\eta^2 = .01$, small effect size [30]. To determine which pairs of student groups differed from each other, Scheffe' post hoc procedures were again conducted. Statistically significant differences were present for each pairwise comparison. As such, a clear stair step [10] of achievement was revealed for English Language Learners by their economic status. English Language Learners who were Not Poor had an average raw score that was 0.22 points higher than the average raw score of English Language Learners who were Moderately Poor and 0.51 points higher than the average raw score of the English Language Learners who were Very Poor. English Language Learners who were Moderately Poor had an average raw score that was 0.29 points higher than the average raw score of English Language Learners who were Very Poor. Delineated in Table 5 are the descriptive statistics for this analysis.

Table 5. Descriptive statistics for the staar reading grade 3 reporting category 1 scores for english language learners by their economic status for the 2012-2013, 2013-2014, and 2014-2015 school years

School year and economic status	n	M	SD
2012-2013			
Not Poor	10,183	4.08	1.57
Moderately Poor	5,849	3.79	1.56
Very Poor	64,900	3.48	1.57
2013-2014			
Not Poor	10,830	4.17	1.57
Moderately Poor	6,322	3.95	1.56
Very Poor	65,924	3.65	1.62
2014-2015			
Not Poor	13,282	3.91	1.60
Moderately Poor	6,226	3.73	1.57
Very Poor	68,332	3.51	1.59

Similarly for the 2014-2015 school year, Grade 3 STAAR Reading Reporting Category 1 raw scores were statistically significantly different by the economic status of English Language Learners, $F(2, 87837) = 381.78$, $p < .001$, $\eta^2 = .01$, a small effect size [30]. Scheffe' post hoc procedures revealed that all three pairwise comparisons were statistically significantly different. As revealed in Table 5, English Language Learners who were Not Poor had an average raw score that was 0.18 points higher than the average raw score of English Language Learners who were Moderately Poor and 0.40 points higher than the average raw score of English Language Learners who were Very Poor on the Grade 3 STAAR Reading Reporting Category 1. English Language Learners who were Moderately Poor had an average raw score that was 0.22 points higher than the average raw score of the English Language Learners who were Very Poor.

3.5. Research question four reading reporting category 2 results

For the 2012-2013 school year, Grade 3 STAAR Reading Reporting Category 2 raw scores were statistically significantly different by the economic status of English Language Learners, $F(2, 80929) = 438.45$, $p < .001$, $\eta^2 = .01$, a small effect size [30]. Scheffe' post hoc procedures revealed that all three pairwise comparisons were statistically significantly different. As revealed in Table 6, English Language Learners who were Not Poor had an average raw score that was 0.34 points higher than the average raw score of English Language Learners who were Moderately Poor and 1.09 points higher than the average raw score

of English Language Learners who were Very Poor on the Grade 3 STAAR Reading Reporting Category 2. English Language Learners who were Moderately Poor had an average raw score that was 0.75 points higher than the average raw score of the English Language Learners who were Very Poor.

Concerning the 2013-2014 school year, a statistically significant difference was yielded on the STAAR Reading Reporting Category 2 raw scores by the economic status of English Language Learners, $F(2, 83073) = 719.40$, $p < .001$, $\eta^2 = .02$, small effect size [30]. To determine which pairs of student groups differed from each other, Scheffe' post hoc procedures were again conducted. Statistically significant differences were present for each pairwise comparison. As such, a clear stair step [10] of achievement was revealed for English Language Learners by their economic status. English Language Learners who were Not Poor had an average raw score that was 0.49 points higher than the average raw score of English Language Learners who were Moderately Poor and 1.39 points higher than the average raw score of English Language Learners who were Very Poor. English Language Learners who were Moderately Poor had an average raw score that was 0.89 points higher than the average raw score of English Language Learners who were Very Poor. Delineated in Table 6 are the descriptive statistics for this analysis.

Table 6. Descriptive statistics for the STAAR reading grade 3 reporting category 2 scores for english language learners by their economic status in the 2012-2013, 2013-2014, and 2014-2015 school years

School Year and Economic Status	n	M	SD
2012-2013			
Not Poor	10,183	11.26	3.68
Moderately Poor	5,849	10.92	3.67
Very Poor	64,900	10.17	3.79
2013-2014			
Not Poor	10,830	11.75	3.76
Moderately Poor	6,322	11.26	3.68
Very Poor	65,924	10.36	3.81
2014-2015			
Not Poor	13,282	11.12	4.02
Moderately Poor	6,226	10.68	3.88
Very Poor	68,332	9.93	3.93

Similarly for the 2014-2015 school year, Grade 3 STAAR Reading Reporting Category 2 raw scores were statistically significantly different by the economic status of English Language Learners, $F(2, 87837) = 570.61$, $p < .001$, $\eta^2 = .01$, a small effect size [30]. Scheffe' post hoc procedures revealed that all three pairwise comparisons were statistically significantly different. As revealed in Table 6, English Language Learners who were Not Poor had an average raw score that was 0.45 points higher than the average raw score of English Language Learners who were Moderately Poor and 1.20 points higher than the average raw score of English Language Learners who were Very Poor on the Grade 3 STAAR Reading Reporting Category 2. English Language Learners who were Moderately Poor had an average raw score that was 0.42 points higher than the average raw score of the English Language Learners who were Very Poor.

3.6. Research question five reading reporting category 3 results

For the 2012-2013 school year, Grade 3 STAAR Reading Reporting Category 3 raw scores were statistically significantly different by the economic status of English Language Learners, $F(2, 80929) = 548.47$, $p < .001$, $\eta^2 = .01$, a small effect size [30]. Scheffe' post hoc procedures revealed that all three pairwise comparisons were statistically significantly different. As presented in Table 7, English Language Learners who were Not Poor had an average raw score that was 0.44 points higher than the average raw score of English Language Learners who were Moderately Poor and 1.11 points higher than the average raw score of English Language Learners who were Very Poor on the Grade 3 STAAR Reading Reporting Category 3. English Language Learners who were Moderately Poor had an average raw score that was 0.67 points higher than the average raw score of the English Language Learners who were Very Poor.

Concerning the 2013-2014 school year, a statistically significant difference was yielded on the STAAR Reading Reporting Category 3 raw scores by the economic status of English Language Learners, $F(2, 83073) = 529.88$, $p < .001$, $\eta^2 = .01$, small effect size [30]. Scheffe' post hoc procedures yielded statistically significant differences for each pairwise comparison. As such, a clear stair step [10] of achievement was revealed for English Language Learners by their economic status. English Language Learners who were Not Poor had an average raw score that was 0.36 points higher than the average raw score of English Language Learners who were Moderately Poor and 1.04 points higher than the average raw score of English Language Learners who were Very Poor. English Language Learners who were Moderately Poor

had an average raw score that was 0.68 points higher than the average raw score of the English Language Learners who were Very Poor. Delineated in Table 7 are the descriptive statistics for this analysis.

Table 7. Descriptive statistics for the STAAR reading grade 3 reporting category 3 scores for english language learners by their economic status in the 2012-2013, 2013-2014, and 2014-2015 school years

School Year and Economic Status	n	M	SD
2012-2013			
Not Poor	10,183	10.26	3.68
Moderately Poor	5,849	9.8	3.67
Very Poor	64,900	9.15	3.79
2013-2014			
Not Poor	10,830	9.90	3.37
Moderately Poor	6,322	9.54	3.28
Very Poor	65,924	8.86	3.34
2014-2015			
Not Poor	13,282	10.33	3.50
Moderately Poor	6,226	9.92	3.35
Very Poor	68,332	9.19	3.38

Similarly for the 2014-2015 school year, Grade 3 STAAR Reading Reporting Category 3 raw scores were statistically significantly different by the economic status of English Language Learners, $F(2, 87837) = 699.46$, $p < .001$, $\eta^2 = .02$, a small effect size [30]. Scheffe' post hoc procedures revealed that all three pairwise comparisons were statistically significantly different. As revealed in Table 7, English Language Learners who were Not Poor had an average raw score that was 0.42 points higher than the average raw score of English Language Learners who were Moderately Poor and 1.14 points higher than the average raw score of English Language Learners who were Very Poor on the Grade 3 STAAR Reading Reporting Category 3. English Language Learners who were Moderately Poor had an average raw score that was 0.72 points higher than the average raw score of English Language Learners who were Very Poor.

3.7. Research question six

In all three school years, English Language Learners who were Very Poor had statistically significantly lower met standard performance on the Phase-in 1 standard than either English Language Learners who were Moderately Poor or English Language Learners who were Not Poor. English Language Learners who were Moderately Poor had statistically significantly lower met standard performance than English Language Learners who were Not Poor. As such, a clear stair step [10] of achievement was revealed for English Language Learners by their economic status. The met standard gap varied slightly between years, with the largest gap between English Language Learners who were Not Poor and English Language Learners who were Very Poor in the 2013-2014 school year with a 12.8% gap and the smallest gap during the 2014-2015 school year with an 11.4% gap. English Language Learners who were Moderately Poor had similar met standard rates as the Not Poor group, with an average achievement gap of 3.8% whereas the average achievement gap between English Language Learners who were Moderately Poor and English Language Learners who were Very Poor was 8.4%.

For the Phase-in 2 Academic Performance in all three school years, consistently, English Language Learners who were Very Poor had statistically significantly lower met standard rates both English Language Learners who were Not Poor and English Language Learners who were Moderately Poor. Similarly, English Language Learners who were Moderately Poor had statistically significantly lower met standard rates than English Language Learners in each of the three years. The met standard achievement gap varied slightly between years, with the largest gap between the English Language Learners who were Not Poor and English Language Learners who were Very Poor during the 2013-2014 school year with a 15.4% gap and smallest during the 2014-2015 school year with a 14.3% gap. English Language Learners who were Moderately Poor achieved more similarly English Language Learners who were Not Poor, with an average met standard gap of 5.8% whereas the average achievement gap between the English Language Learners who were Moderately Poor and English Language Learners who were Very Poor groups was 9.0%.

For the three comparisons, the Final Satisfactory Performance met standard had the least gap between English Language Learners. Though the English Language Learners who were Very Poor met standard statistically significantly lower than both English Language Learners who were Moderately Poor and English Language Learners who were Very Poor, it did so by the smallest margin. The met Final Satisfactory standard gap varied slightly between years, with the largest gap between English Language Learners who were Not Poor and English Language Learners who were Very Poor during the 2014-2015 school year with a 13.5% gap and smallest during the 2012-2013 school year with a 12.8% gap. English

Language Learners who were Moderately Poor group met standard more similarly to English Language Learners who were Not Poor group, with an average achievement gap of 6.2% whereas the average gap between English Language Learners who were Moderately Poor and English Language Learners who were Very Poor groups was 7.0%.

3.8. Research question seven

For the STAAR Reading Grade 3 Reporting Category 1 raw scores, each of the three years English Language Learners who were Very Poor had statistically significantly lower average scores than English Language Learners who were Not Poor and Moderately Poor. On average, English Language Learners who were Very Poor had an average raw score that was 0.51 raw points lower than the average raw score of English Language Learners who were Not Poor and an average of 0.28 raw points lower than the average raw score of English Language Learners who were Moderately Poor. English Language Learners who were Moderately Poor were on average raw score that was 0.23 raw points lower than the average raw score of English Language Learners who were Not Poor. As such, a clear stair step [10] of achievement for was revealed for English Language Learners by their economic status.

Similarly for the Grade 3 STAAR Reading Reporting Category 2, the average raw scores of English Language Learners who were Very Poor had statistically significantly lower average raw scores than both English Language Learners who were Not Poor and Moderately Poor. Specifically, English Language Learners who were Very Poor had an average raw score that was 1.22 raw points lower than English Language Learners who were Not Poor and an average of 0.80 raw points lower than English Language Learners who were Moderately Poor. As such, the average raw score of English Language Learners were 0.46 raw points lower than English Language Learners who were Not Poor.

Similarly for Reporting Category 3 STAAR Reading Grade 3 raw scores, English Language Learners who were Very Poor had statistically significantly lower raw points than both English Language Learners who were Not Poor and Moderately Poor. English Language Learners who were Very Poor had an average raw score that was 1.10 lower than English Language Learners that were Not Poor and an average of 0.69 raw points lower than English Language Learners who were Moderately Poor. The same as the previous two comparison, English Language Learners who were Moderately Poor had an average raw score 0.41 lower than English Language Learners who were Not Poor.

4.   DISCUSSION

In every analysis for this multiyear study, English Language Learners who were Very Poor performed statistically significantly lower than English Language Learners who were Moderately Poor. Additionally, English Language Learners who were Moderately Poor performed statistically significantly lower than English Language Learners who were Not Poor. When analyzing the reading performance by economic status, the level of poverty makes a difference [9, 18]. Specific to English Language Learners, the greater the poverty of the family, the lower the student achievement was. The differences might be attributed the lack of resources and background knowledge that English Language Learners who are Very Poor have [5]. These differences could lead to continued discrepancies with high school graduation rates, college admission rates, and employment rates [7]. Results from this study are consistent with outcomes from other researchers who established the existence of lower reading academic performance among students who were economically disadvantaged when compared to students who were not economically disadvantaged [9, 5, 20].

4.1. Implications for policy and for practice

Based upon the results of this investigation, several implications for policy and for practice can be made. First, additional resources in the classroom, such as student manipulatives and experiential learning, can be used to provide hands-on learning for English Language Learners to increase their English proficiency and their academic achievement. Second, a Literacy coach could be utilized for campuses to aide in the strengthening of students reading ability. This coach could provide additional supports to English Language Learners who are behind their peers and provide 1-1 instruction. Third, school districts could provide ongoing professional development for new and veteran teachers on research based and student focused practices. Fourth, English Language Learners could be assessed in ways other than standardized tests that might provide a different measurement of their knowledge. [15] suggested the linguistic complexity of standardized tests such as the STAAR may be partly responsible for the performance gaps between English Language Learners and their peers. Despite awareness of the influence of economic status on student achievement from the [1], the achievement gap between the rich and the poor has widened or remained the

same since its publication [5]. Because additional supports are needed, further collaborative efforts among federal, state, and local educational authorities to close the achievement gap are needed.

4.2. Recommendations for future research

Based upon the results of this empirical multiyear investigation, several recommendations for future research can be made. First, this study was conducted on data on only Grade 3 English Language Learners. The degree to which the findings obtained herein would be generalizable to English Language Learners in other grade levels is not known. Accordingly, researchers are encouraged to examine the reading achievement of English Language Learners at both earlier grade levels and at middle school and at the high school levels. Second, data on only English Language Learners were analyzed in this investigation. As such, researchers are encouraged to analyze data on other groups of students such as students who are at-risk and students in special education. Third, only the reading performance of English Language Learners was analyzed in this study. Given that mathematics is also assessed on the Grade 3 STAAR assessments, researchers are encouraged to analyze the mathematics performance of English Language Learners to ascertain whether findings in mathematics performance would be similar to the reading results delineated herein.

Fourth, data on only Texas students were analyzed in this article. The extent to which the results of this study on only Texas students would be generalizable to English Language Learners in other states is not known. It is possible that the reading achievement of English Language Learners in other states differs from the reading achievement of English Language Learners in Texas. Fifth, researchers are encouraged to conduct longitudinal studies in which they follow the progress of students from Grades 1 through graduation. Are the reading gaps documented herein present in Grade 1 and how do they change over time? Finally, researchers are encouraged to conduct qualitative and mixed methods research studies to analyze in more depth than is possible in a purely quantitative investigation the academic achievement of English Language Learners.

5.   CONCLUSION

In this research investigation, the degree to which differences were present in the reading performance of Texas Grade 3 English Language Learners were examined as a function of their economic status. Texas statewide data for three school years were analyzed. Inferential statistical procedures revealed the presence of statistically significant differences in reading by the economic status of English Language Learners. Clearly established was the presence of a stair-step effect [10]. English Language Learners who were Very Poor had statistically significantly lower reading performance than English Language Learners who were Moderately Poor, and English Language Learners who were Moderately Poor had statistically significantly lower reading performance than English Language Learners who were Not Poor.

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