

Achievement Difference Between LEP Students Versus Non- LEP Students

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Abstract

This paper examines if there is a significant difference in academic achievement for English language learners in Reading and Mathematics in three different school districts in Illinois and what programs are needed for Limited English Proficient (LEP) students to close the achievement gap to be college ready. Data for this study was obtained from the archived Illinois Standards Achievement Test (ISAT) results data on the Illinois State Board of Education (ISBE) website. The electronic data was retrieved from three district achievements records in the subject areas of reading, and mathematics from 2012 to 2014 for 4th and 7th grades. The districts researched were City of Chicago SD 299, North Chicago SD 187, and Chicago Ridge SD 127. The aggregated nature of this data allows only a descriptive comparison of LEP versus Non-LEP ISAT performance. The findings of this study show that LEP students are far behind Non-LEP students in meeting the standards of the ISAT and therefore in their readiness for college. To remediate this gap, a variety of programs are provided, by law, in public schools to assist LEP students to learn English and to be more successful in meeting classroom requirements.

Keywords: Limited English Proficient (LEP), Non- Limited English Proficient (Non-LEP), Illinois Standards Achievement Test (ISAT), Universal Design for Learning (UDL).

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1. Introduction and Rational

In last two decades, the number of English language learners (ELL) joining public schools within America has increased. Studies have shown that the academic achievement of the English language learners has and remains relatively lower. A study by Coleman and Goldenberg (2009) attributed limited language capabilities as a major factor that causes poor performance among the ELL students. According to the Guidelines for the Assessments of English Language Learners (2009), ELLs vary widely in their level of English language proficiency, and furthermore, ELLs may have varying levels of oral and written English proficiency. The ELL programs must be accompanied by supporting materials, learning technologies, and competent instructors with experience in learning environments that are culturally diverse (De la Colina et al. 2009).

Also, parent participation is increasingly becoming a part of the prerequisites for the ELL student success. Research in the education sector is striving in exploring new ways that can improve student learning. For example, parental involvement has been proven as a compelling factor that has a direct impact on learner's learning development (Wei & Zhou, 2012). Panferov (2010) affirmed that ELL parental involvement has a positive correlation in ELL student learning and skill development.

1.2 Focus of the Research

To find if there is a significant difference in academic achievement for English language learners in three different districts in Illinois. The information gained from this study will aid in the investigation of academic skill gaps in ELL students through a comparison of 2012 through 2016 Illinois Standards Achievement Test (ISAT) achievement level report in the all subject area. The results will inform other educators and me if further services need to be provided to meet the developmental needs of ELL students. If differences in academic achievement do exist, this study will evaluate if the educational supports that have been identified as being essential for Limited English Proficient (LEP) learners are being provided in the three Illinois school districts.

Butler, Castellon-wellington, and Stevens (2010) found out that English language learners are struggling academically. For example, Butler, Castellon-wellington, and Stevens (2010) found out there exists a strong correlation between the ELL student's English language proficiency and their respective academic achievements. The ELL students' poor performance is attributed to their limited English language proficiency. Additionally, variables such as socioeconomic status, ELL student's native language proficiency, duration of stay within the United States, and an opportunity to learn significantly moderate the student performance (Butler, Castellon-wellington, and Stevens, 2010).

1.3 Statement of the Problem

Prior research has indicated that English language learners usually records lower proficiency score than the native English students. Is there eminent development skill gap between the English native and the ELL students on 2012

to 2016 ISAT Achievement Level Report score in all subject area?

1.4 Research Question

1. What is the difference in the percentage of LEP versus Non-LEP elementary and middle school students meeting State standards for reading on the Illinois State Achievement Test (ISAT)?
2. What is the difference in the percentage of LEP versus Non-LEP elementary and middle school students meeting State standards for mathematics on the Illinois State Achievement Test (ISAT)?
3. If these differences do exist in reading and math, what programs needed for LEP students to close the achievement gap to become college ready?

2. Previous study

English language learners (ELL) consist of students who are not able to converse fluently and learn effectively in the English language; they came from non-English speaking backgrounds (Master *et al.*, 2016). Research shows that English native performs better compared to ELL students. Henry, Baltus, and Nistor (2014) concluded that native students performed well in mathematics tests than their ELL counterparts. In this study, a total of 100 students from each group were assessed. Furthermore, A study by Koziol (2014) on the 'Achievement Difference between English Language Learners and English Native Students' reported there is prevalent skill gap between the native and ELL students. Natalie compared the academic achievement in 2013 English language arts MAP scores between the English language learners and the native students. She noted that the English native recorded better results than the English language learners.

Additionally, a quantitative study by Halle *et al.* (2012) showed that there is a direct relationship between English proficiency level and the academic performance. The study explored the development of English language learners from Montessori to grade eight. They reported that performance in mathematics achievement varied based on the English proficiency level. The native speakers often scored better than the ELLs. Moreover, the performance among the ELLs differed based on the level at which they attained English proficiency. English language learners who were proficient in English in kindergarten and grade one indeed performed better than those who attained language proficiency in later grades (Halle *et al.*, 2012).

A longitudinal study by Ready and Tindal (2006) that assessed the academic abilities of ELL students as they advanced from kindergarten to first grade reported that there are significant differences in academic capacities among different ethnic groups. They noted that English language minority Hispanic students joining nursery showed smaller academic skills capacity in comparison to other language minority children such as Asians.

Japsen and DeAlth (2005) found out student's age plays a significant role in language development. For example, the study by Japsen and DeAlth (2005) that analyzed ELL students' proficiency development indicated that within one year of studies, elementary students recorded the highest average proficiency growth compared to older grades. Moreover, a study involving 100 Hispanic students revealed that those students who showed proficiency in the Spanish language consequently recorded better English command than Hispanic who did not have a good mastery of their native language (Leonard, 2013). Also, Socioeconomic status also affects English language development among the ELL students. For instance, English language learners from schools that receive at least 70% free lunch (high-poverty school) acquire English proficiency slower than students in privileged schools (Leonard, 2013).

According to a study (Hur & Suhyun, 2012) on 'interactive technology in English language learners' classroom' asserted that the use of interactive smart boards, digital storytelling, and podcasts significantly improves ELL's vocabulary skills. A study by Levy (2009) reported that the use of interactive and manipulatives props while reviewing a concept significantly increases the learners' level of understanding. The English language learners are able to form imageries of what is being addressed thus improving their language vocabulary and content comprehension.

The institutions should install support materials that are interactive with the English language learners. According to a study (Hur & Suhyun, 2012) on 'interactive technology in English language learners' classroom' asserted that the use of interactive smart boards, digital storytelling, and podcasts significantly improves ELL's vocabulary skills. Hur & Suhyun, (2012) reported that the use of technology increases teacher-student collaboration and relationship that has been attributed to impact positively on the student's understanding and skill acquisition.

3. Methodology

The research relied on the archived data on Illinois State Board of Education ISBE's website. The LEP and non-LEP students will form part of the independent variables while the percentages on the ISAT report will be the study's dependent variables. The data will be obtained by researching on three districts (City of Chicago SD 299, North Chicago SD 187, and Chicago Ridge SD 127-5) in Illinois academic performance from 2012 to 2014 ISAT percentages for fourth and seventh grades students in reading, and mathematics. The study examined the district's

program for educating ELL students in order to identify the reason that lagged behind in the ISAT differences between LEP and non-LEP students. In addition, the ethnicity group and the expenditures in all three districts will be retrieved.

3.2 Population and Sample

All the student participants come from different schools distributed across three districts of Illinois: around three hundred schools located in the City of Chicago SD 299 district, three schools in Chicago Ridge SD 127-5 district, and eight schools in North Chicago SD 187 district. The participants' ages range include grade 4 and grade 7. The percentage of ELL students in the City of Chicago SD 299 District who are eligible for bilingual education is 18%. In the Chicago Ridge SD 127-5 district, the percentage of ELL students is 27% the same percentage as in the North Chicago SD 187 district. The district finances in all three districts are different. The average of instructional spending per pupil from 2012 to 2014 in the City of Chicago SD 299 District is \$8.926, \$6.395 in the Chicago Ridge SD 127-5 district, and \$7.486 in the North Chicago SD 187 district. These expenditures are for only the activities directly dealing with the teaching of students or the interaction between teachers and students. The use of these three school districts will enable the generalization of findings to all Chicago Metropolitan school districts and perhaps to similar urban school districts nationwide.

The percentage of students belonging to a particular racial and ethnic group are different in all three districts. In the City of Chicago SD 299, there are 9.7% white, 38.9% Black, 46.1% Hispanic, 3.7% Asian, 0.2% American Indian, 1.2% two or more races. In the Chicago Ridge SD 127-5, there are 69% White, 9% Black, 18.4% Hispanic, 1.7% Asian, 0.1% American Indian, and 1.7% two or more races. In the North Chicago, there are 5.7% White, 38.1% Black, 52.6% Hispanic, 0.8% Asian, 0.2% American Indian, and 2.2% two or more races.

The research will review the 2012 to 2014 ISAT percentages for LEP and non-LEP students in the subject area of reading and mathematics for only students in the fourth and seventh grade.

3.3 Data collection

Data was obtained from the archived ISAT results data on the Illinois State Board of Education (ISBE) website. The electronic data included the three district achievements records in the subject area of reading, and mathematics from 2012 to 2014. The researcher contacted with each district and gathered the updated ELL and bilingual program manual. This is considered an integral part of the data in order to identify the distinctions in providing the ELL programs among the three districts.

3.4 Data Analysis

The Illinois State Achievement Test ISAT data available from the ISBE website consist of aggregated percentages of those meeting standards for LEP and Non-LEP students by school district and grade level in reading and mathematics. The aggregated nature of this data allows only a descriptive comparison of LEP versus Non-LEP ISAT performance. However, given that the aggregated data represents the entire population of district students, all observed differences between LEP and Non-LEP per-cents can assumed to be statistically significant. Therefore, if observed differences in percent ISAT performance between LEP and Non-LEP students exist, these differences can assume to be not due to chance but due to some non-chance factors. This study will investigate these factors.

4. Results

Data was gathered on the percentage of students meeting state standards on the ISAT for LEP students versus Non-LEP students for reading and mathematics for the school years 2012 thru 2014. The data analyzed was restricted to 4th grade (representing the elementary school level) and 7th grade students (representing the middle school level) from three Chicago area school districts. Below is a comparison of the percentages of students meeting state standards on the ISAT for LEP versus Non-LEP students for the subject areas of reading and mathematics in the three districts. Table 1. And Table 4. represent the Percentages of LEP and Non-LEP Meeting ISAT Standards in the first district "City of Chicago" in Reading and Mathematics for the school years 2012 thru 2014. Table 2. And Table 5. represent the Percentages of LEP and Non-LEP Meeting ISAT Standards in the second district "Chicago Ridge" in Reading and Mathematics for the school years 2012 thru 2014. Table 3. And Table 6. represent the Percentages of LEP and Non-LEP Meeting ISAT Standards in the third district "North Chicago" in Reading and Mathematics for the school years 2012 thru 2014. Figure 1. displays the data from Table 1. in a paragraph format. Figure 2. Converts the data from Table 2. And displays in a paragraph format. Figure 3. displays the data from Table 3. in a paragraph format.

Reading

Table 1. The Percent of LEP and Non-LEP Meeting ISAT Standards in City of Chicago in Reading.

District 1 - City of Chicago- SD299- Reading						
	2012		2013		2014	
	4th Grade	7th Grade	4th Grade	7th Grade	4th Grade	7th Grade
LEP	30%	26%	10%	9%	8%	8%
NON-LEP	71%	75%	51%	56%	50%	57%

Table 2. The Percent of LEP and Non-LEP in Chicago Ridge SD 127-5 in Reading Subject.

District 2 - Chicago Ridge SD 127-5- Reading						
	2012		2013		2014	
	4th Grade	7th Grade	4th Grade	7th Grade	4th Grade	7th Grade
LEP	45%	39%	0%	7%	8%	7%
NON-LEP	66%	79%	52%	61%	54%	43%

Table 3. The Percent of LEP and Non-LEP in North Chicago SD 187 in Reading Subject.

District 3 - North Chicago SD 187- Reading						
	2012		2013		2014	
	4th Grade	7th Grade	4th Grade	7th Grade	4th Grade	7th Grade
LEP	32%	23%	4%	7%	10%	4%
NON-LEP	50%	61%	40%	30%	35%	44%

Figure 1. displays the data from Table 1. in a paragraph format.

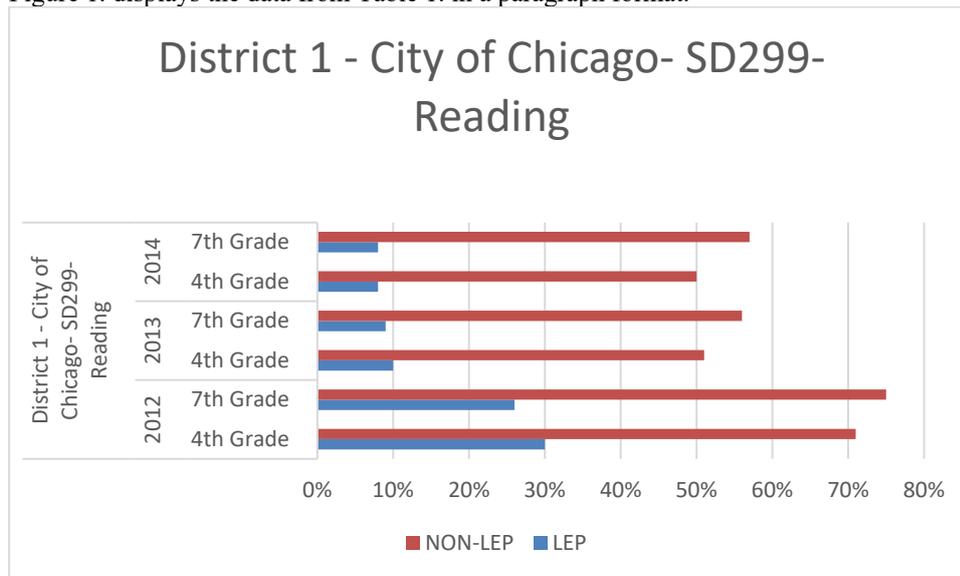


Figure 2. displays the data from Table 2. in a paragraph format.

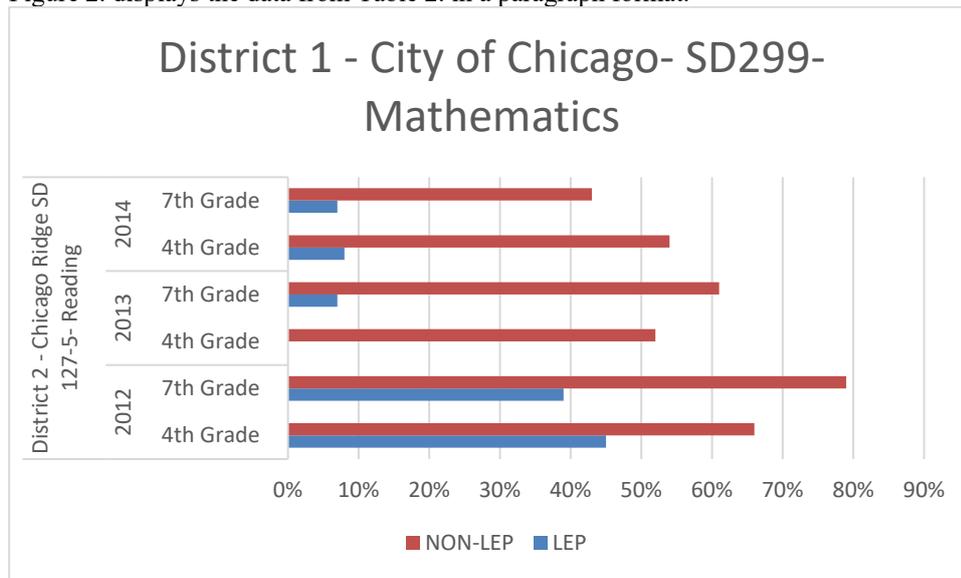
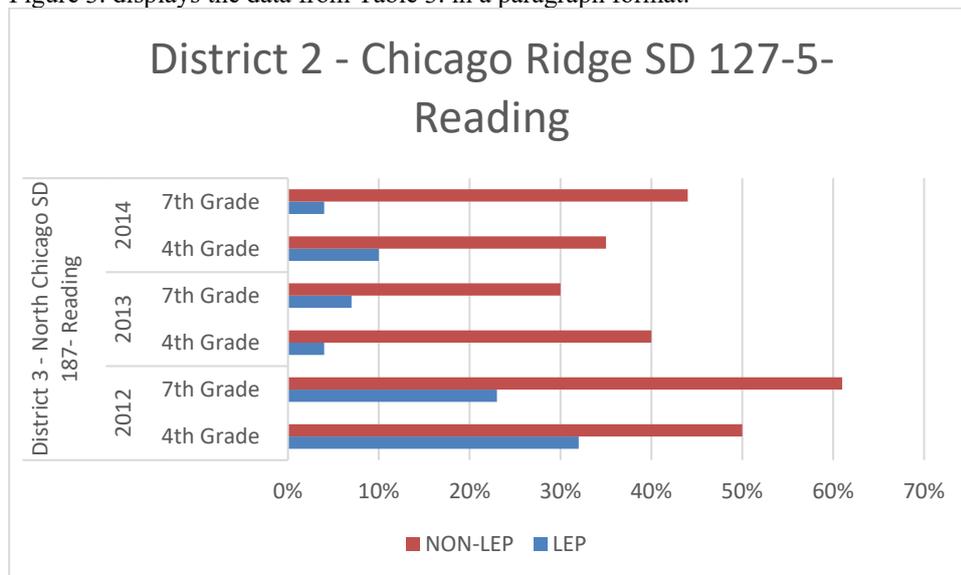


Figure 3. displays the data from Table 3. in a paragraph format.



The aggregated comparison of LEP versus Non-LEP students, across grade level, school district and school year, shows that Non-LEP students have a 60% passing rate versus 15% for LEP students. When broken down by grade level only, 4th grade Non-LEP students have a passing rate of 52% versus a passing rate of 16% for LEP students (see Table 8 and Table 5). 7th grade Non-LEP students have a passing rate of 56% versus a passing rate of 14% for LEP students (see Table 4 and Table 5).

When comparing grade levels over time, 4th grade Non-LEP had a decrease of 15% in passing rate from 2012-2013 compared to a decrease of 31% for LEP students. From 2013-2014, there was a slight decrease of 2% for Non-LEP students compared to a slight increase of 4% for LEP students. It should be noted that this increase was negligible compared to the large decrease of 31% from 2012-2013. 7th grade Non-LEP students had a decrease of 23% in passing rates from 2012-2013 compared to a decrease of 22% for LEP students. From 2013-2014, there was virtually no change in passing rates for Non-LEP students and LEP students.

Mathematics

Table 4. The Percent of LEP and Non-LEP Meeting ISAT Standards in City of Chicago in Mathematics.

District 1 - City of Chicago- SD299- Mathematics						
	2012		2013		2014	
	4th Grade	7th Grade	4th Grade	7th Grade	4th Grade	7th Grade
LEP	64%	50%	22%	18%	25%	15%
NON-LEP	85%	82%	56%	57%	60%	54%

Table 5. The Percent of LEP and Non-LEP Meeting ISAT Standards in Chicago Ridge in Mathematics.

District 2 - Chicago Ridge SD 127-5- Mathematics						
	2012		2013		2014	
	4th Grade	7th Grade	4th Grade	7th Grade	4th Grade	7th Grade
LEP	56%	60%	4%	24%	10%	16%
NON-LEP	79%	86%	45%	60%	48%	40%

Table 6. The Percent of LEP and Non-LEP Meeting ISAT Standards in North Chicago in Mathematics.

District 3 - North Chicago SD 187- Mathematics						
	2012		2013		2014	
	4th Grade	7th Grade	4th Grade	7th Grade	4th Grade	7th Grade
LEP	47%	44%	10%	7%	14%	2%
NON-LEP	62%	64%	31%	29%	37%	30%

The aggregated comparison of LEP versus Non-LEP students, across grade level, school district and school year, shows that Non-LEP students have a 56% passing rate versus 27% for LEP students. When broken down by grade level only, 4th grade Non-LEP students have a passing rate of 56% versus a passing rate of 28% for LEP students. 7th grade Non-LEP students have a passing rate of 56% versus a passing rate of 26% for LEP students.

When comparing grade levels over time, 4th grade Non-LEP had a decrease of 31% in passing rate from 2012-2013 compared to a decrease of 44% for LEP students. From 2013-2014, there was a slight increase of 4% for Non-LEP students matching the increase of 4% for LEP students. 7th grade Non-LEP students had a decrease of 29% in passing rates from 2012-2013 compared to a decrease of 35% for LEP students. From 2013-2014, there was 7% decrease in passing rates for Non-LEP students compared to 5% for LEP students.

Table 7. Percent Decrease for LEP vs. Non-LEP Students Meeting ISAT Standards from 2012-2013 by District by Grade - Reading

Percent decrease from 2012-2013 by District by Grade - Reading								
	District 1		District 2		District 3			
	4 th	7 th	4 th	7 th	4 th	7 th		
LEP	20	17	28	32	28	16		
Non-LEP	20	19	20	19	10	31		

Table 8. Percent Decrease for LEP vs. Non-LEP Students Meeting ISAT Standards from 2012-2013 by District by Grade - Mathematics

Percent decrease from 2012-2013 by District by Grade - Mathematics								
	District 1		District 2		District 3			
	4 th	7 th	4 th	7 th	4 th	7 th		
LEP	42	32	52	36	37	37		
Non-LEP	29	25	34	26	31	35		

Findings reported earlier in this paper show that, in general, the percentage of Non-LEP students meeting ISAT standards is significantly higher than LEP student for both Reading and Mathematics. Another finding of this study is the dramatic decrease in the percentage of students meeting ISAT standards from 2012 – 2013 for both LEP and Non-LEP students in Reading and in Mathematics. The tables above present the percentage decreases for each grade level within Districts. For Reading, the decreases for the 4th and 7th grades in District 1 are comparable. However, in District 2; the decreases are significantly higher for LEP students for both 4th and 7th grades. In District 3, 4th grade LEP students have a higher decrease while in 7th grade Non-LEP students have a higher decrease. For Mathematics, decreases are significantly higher for LEP students across grade levels and Districts. It is interesting that percentage decreases are generally higher for Mathematics compared to Reading across Districts and grade levels.

5. Conclusion and Discussion

The findings of this study show that LEP students are far behind Non-LEP students in meeting the standards of the ISAT and, therefore, in their readiness for college. To remediate this gap, a variety of programs are provided, by law, in public schools to assist LEP students to learn English and to be more successful in meeting classroom requirements. What is not known is which of the provided programs are most successful in accomplishing these goals. More research is needed to determine what programs, or combination of programs, are most successful in helping LEP students learn English in a timely manner.

5.1 Recommendation for Future Research

Since the data indicates that the significant differences do exist in Reading and Mathematics between LEP and Non-LEP students, programs must be identified that will close the achievement gap and assist LEP students to become college ready by the time they graduate from high school. Below is evaluation of programs currently being offered in Chicago school districts. From this evaluation, recommendation for program implementation and future research are explained.

1. It is recommended that studies of this nature be replicated to contribute to the breadth and depth of this topic and for comparative analysis. This could be accomplished through qualitative studies focusing on interviewing the administrators, and teachers in each district to identify the reasons behind the achievement gap between LEP and Non-LEP students. Also, a quantitative study might expand into multiple regions measuring the prevalence of administrators and teachers' perspectives regarding the achievement differences.
2. It is also recommended a study investigating the dynamics of achievement differences from the school's perspectives be expanded into preschool, elementary schools, middle schools, and high schools' settings. Focusing on barriers and facilitators may provide data that could contribute to an improvement in service delivery and potentially positively impact ELL student performance.
3. Future research should prove that dual language programs are enrichment programs and beneficial for both English and other language speakers.

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