

How 12th-Grade English Learners Selected Instructional Models During the COVID-19 Pandemic

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Abstract

Researchers examined the characteristics and factors influencing English learners' (ELs) selection of instructional delivery models in a school district in Florida during the COVID-19 pandemic. Secondary data were analyzed related to background and contextual factors that may have influenced student choice of model, such as face-to-face, home connect, or virtual school, to complete their senior year of high school and meet graduation requirements. These factors included student background, achievement measures, and school demographics. Findings underscore the need to understand the challenges of remote learning experiences for ELs and their potential for successful course completion. Local education agencies must ensure ELs have equal access to academic grade-level content through high-quality instruction, and state agencies should develop guidance on how best to do this in remote teaching contexts.

Keywords: English learners, graduation, remote instruction, pandemic

Introduction

The high school graduation rate of English Learners (ELs) has increased nationally from 57% in 2010–11 to 68.4% in 2017–18 but still trails the non-EL student graduation rate of 84% (National Center for Education Statistics [NCES], 2019). In Florida, the graduation rate in 2018–19 was 75% for ELs compared to 86.9% for non-ELs (Florida Department of Education, 2020), although only 62% of ELs graduated within four years compared to 82% of Florida's non-EL students (US Department of Education, 2018). Teachers are often challenged to help students persist to graduation despite the challenges many of these adolescents will face in passing required assessments in English. Advocates of ELs seek to ensure that they have accessible pathways to obtaining a high school diploma, which leads to higher educational opportunities and economic outcomes (National Academies of Science, Engineering, and Medicine, 2017). There is debate over the best ways to support English learning in "mainstream" classrooms and, more recently, to identify and implement optimal strategies promoting EL student achievement in blended and remote instruction models widely implemented during the COVID-19 pandemic. It should also be understood that many adolescent newcomer ELs are just beginning to develop their proficiency in academic English while simultaneously studying core content areas. Moreover, these newly arrived students have the same accountability standards as their native English-speaking peers. They must participate in rigorous, standards-based curricula and high-stakes assessments before they master the language of instruction (Echevarria et al., 2023).

As many experts in the field agree that remote learning is not a practical option for ELs and struggling learners (Ahn & McEachin, 2017; Dorn et al., 2020; Sugarman & Lazarin, 2020), we wanted to explore the characteristics of the population of seniors in one school district who opted for the remote and virtual instructional models potentially hindering their ability to meet state graduation

requirements. This study aimed to investigate the variables associated with an EL student's choice of an instructional model when traditional face-to-face school is not available or desirable during a crisis such as a pandemic. If the students with lower GPAs and achievement scores in language, reading, and math have selected remote instruction, along with those with less time in US schools and interrupted education, that option could hinder their ability to pass state assessments required for graduation.

We sought to examine patterns of enrollment based on student achievement, background information, and school demographic data. We analyzed background and contextual factors that may have influenced the 12th grade EL's selection of instructional delivery model from the options offered in one school district in Florida: face-to-face, home connect, or virtual school. The research questions were:

1. Is there a statistically significant difference in an EL student's choice of instructional model according to achievement entering senior year?
2. How do background factors correlate to an EL student's choice of instructional model?
3. Do school context variables such as school grade, geographic zone, district or charter school, or Title 1 designation correlate to an EL student's choice of instructional model?

Literature Review

With the transition to remote learning during the pandemic, which differs from virtual school and has been widely described as “emergency remote teaching” (Hodges et al., 2020; Milman, 2020), several researchers examined district responses for ELs. When considering the effects of remote instruction on ELs, the digital divide and the “digital use divide” are frequently cited as obstacles (Altavilla, 2020; Sugarman & Lazarin, 2020). While it may appear to some teachers that their low-income and minority students (including ELs) use technology in school more often than their high-SES and white peers, the digital-use divide has to do with the *quality* of technology-based teaching and learning (Altavilla, 2020). Empirical evidence from studies of statewide virtual schools appears to confirm the notion that struggling students often have adverse outcomes (Ahn & McEachin, 2017; Fitzpatrick et al., 2020). These students may lack the technology access, proficiency, and support at home to succeed in online learning environments.

English Learners in Secondary Schools

English learners are the fastest-growing student group in the PreK–12 school population, and many have struggled to succeed in school (TESOL, 2018). Adolescent newcomer students face particular challenges in comprehending complex, grade-level texts and participating in academic discourse in courses that lead to rigorous state achievement tests required for graduation (Echevarria et al., 2023; Faltis et al., 2010; Santibanez & Gandara, 2018).

They are often placed in mainstream classrooms with native English speakers and minimal support in their native language. Researchers have called attention to the specific linguistic needs of ELs and proposed linguistically responsive pedagogy (Coady et al., 2011; Lucas et al., 2008) that includes learning about the backgrounds and linguistic assets of ELs, identifying the language demands of lessons to promote academic language development along with content area knowledge, and scaffolding learning.

Secondary teachers have a range of learners in a mainstream setting, with native English speakers and ELs who are long-term English learners (six or more years in an ESOL program and still not meeting state proficiency requirements to exit) alongside newcomers (recent arrivals to the country who may have limited and/or interrupted formal education.) Secondary teachers may be masters of their content yet not skillful in promoting English language development (Molle, 2021), and there are data to

suggest that educators' reported lack of preparation to teach ELs is particularly acute at the secondary level (Harper & de Jong, 2009; McGraner & Saenz, 2009; Reeves, 2006; Santibanez & Gandara, 2018). EL student performance on national assessments such as the NAEP reveals gaps that may persist through high school and affect graduation rates, with ELs trailing the national average by nearly 17 percentage points (Weyer, 2018). These longstanding disparities in student outcomes have prompted numerous researchers and practitioners to reexamine the ways in which these students are served.

Challenges of Virtual School Learning

Virtual schools provide students with the flexibility to tailor learning experiences that are commonly not found in traditional brick-and-mortar schools (Fitzpatrick et al., 2020). According to Heissel (2016), virtual classes have rapidly expanded over the past few years due to improved technology levels and the ability to provide schools with quality education for less cost, indicating that rural or urban schools are not provided with the same resources as their suburban counterparts. However, when examining students' participation in remote learning environments, a growing body of research suggests that online schooling can come with an online penalty for struggling and vulnerable learners (Dynarski, 2018). Recent research from full-time K–12 virtual schools (Ahn & McEachin, 2017; Fitzpatrick et al., 2020) suggests that many students earn lower grades and fail more often in online learning settings than on-campus learning experiences. Quantitative research studies of Florida and Indiana's well-established statewide virtual schools show more mixed outcomes, with positive effects for online modalities on course grades but adverse impacts on longer-term outcomes like graduation readiness and standardized test performance (Fitzpatrick et al., 2020; Hart et al., 2019).

In North Carolina, small, rural, or less affluent schools that struggle to attract and retain high-quality teachers or support an extensive curriculum encourage students to complete more coursework online (Heissel, 2016). An analysis of student data revealed that students who struggled in mathematics achieved worse outcomes when enrolled in a virtual online algebra course in the eighth grade than their high-achieving counterparts who received traditional classroom instruction. Thus, although virtual education provides schools in North Carolina with cost-saving and higher-quality teaching, it can lower academic performance. High course grades, self-discipline, and technological support at home and school are needed to promote online learning success (Heissel, 2016).

There were few ELs in these studies, and as the authors reported, little is known about the motivation behind online enrollment in virtual classes for high school students. Therefore, a need exists to focus on the characteristics of ELs who enroll in remote learning options and if there are specific characteristics, such as the background and school context variables examined in this study, that will indicate the potential for successful completion. With the transition to remote learning due to mandatory school closures in the spring of 2020, several researchers examined individual state and district responses focusing on equitable approaches for ELs.

Remote Learning and English Learners

Peterson et al. (2020) used a case study to explore how one district in Minnesota used crisis remote learning solutions for its most marginalized student populations, including English learners. Their recommendations for equitable distance learning approaches include taking time to build relationships with students and leading with empathy. They concluded that school leaders must consider all stakeholders, including parents working and managing children at home, families facing economic hardship, everyone who has lost family members, staff feeling directionless, and students who are lonely and tasked with new responsibilities (Peterson et al., 2020). Garbe and colleagues (2020) studied parents' experiences with remote learning during COVID-19 and the challenges that may impact parental involvement, such as economic resources, lack of internet access, lack of interest in using technology, and low digital self-efficacy. They used an open-ended survey of 122 parents;

based on responses parents shared about their struggles, researchers categorized struggles with balancing responsibilities, non-positive learner motivation, accessibility, and learning outcomes. As parents were responsible for deciding whether to send their children back to school for face-to-face instruction or opt for a remote or virtual model, their insight is critical to understanding instructional model selection and potential benefits and consequences for learners.

When considering the effects of remote instruction on ELs, the digital divide and the “digital use divide” are frequently cited as obstacles for many families. According to Altavilla (2020), teachers often assign ELs to use computers for vocabulary drills, phonics practice, and other rote lessons rather than higher-level thinking tasks. Unfortunately, few teachers have the resources and training to use technology in ways that provide ELs with meaningful opportunities for higher-order thinking and learning. Teachers and students may need carefully planned approaches to effectively use technology to ensure exercises, activities, and homework are designed to facilitate language development (Hartshorn & McMurry, 2020). Additionally, language learners require authentic social interaction. During the pandemic, while ELs were at home and may have had minimal chances to interact with English-speaking peers, it was essential for teachers to find ways to promote these kinds of interactions. Hartshorn and McMurry (2020) surveyed 153 students in intensive English programs and 41 TESOL teachers at Brigham Young University. They reported that many students and some teachers saw the online approach to teaching and learning as a hindrance that undermined student language development and created additional stress. In a review of student performance data, the students made markedly less progress with their speaking compared to their performance the previous semester. These findings suggest that the complications of using technology and the constraints on practicing English through authentic interactions during this period may have undermined student language development in terms of their speaking skills (Hartshorn & McMurry, 2020).

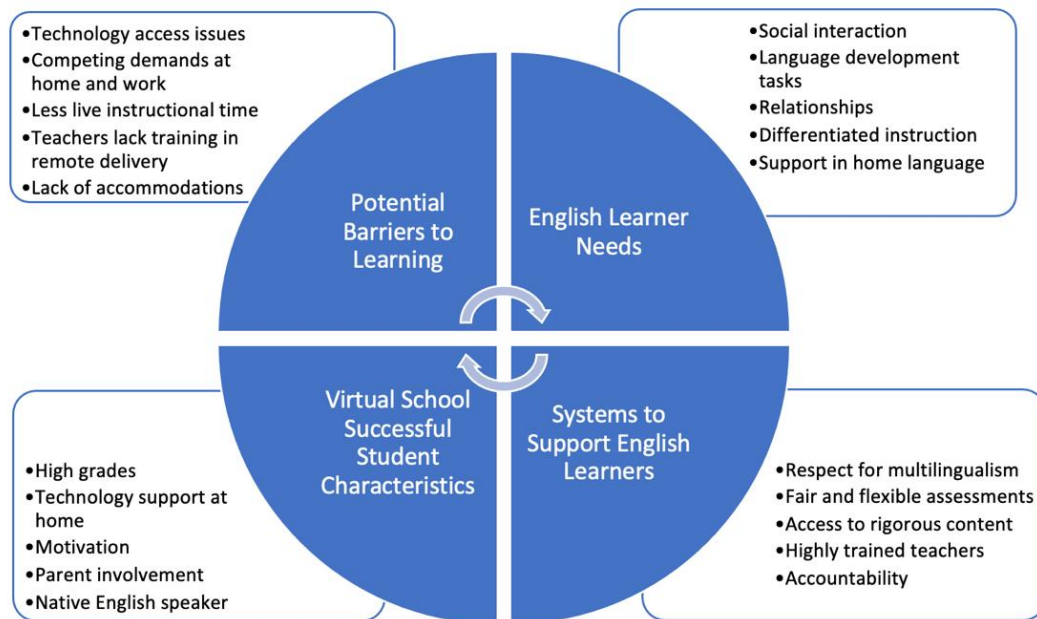
It remains unclear how effective remote and virtual learning can be, given that most K–12 students and teachers have little experience with online instruction and that significant gaps in technology access exist in many parts of the country (Huck & Zhang, 2021; Kuhfeld et al., 2020). Educators’ lack of experience in remote teaching was brought to the forefront during the COVID-19 pandemic, with numerous reports of teachers feeling overwhelmed and unprepared as they tried to navigate distance learning for the first time. However, demand for these learning models has increased in the K–12 sector (Archambault & Kennedy, 2014; Rice & Deschaine, 2020). Without high-quality pedagogical and technical preparation for educators, students may experience a significant widening of opportunity and achievement gaps.

A framework for connecting the key concepts from our literature review to our study is displayed in Figure 1.

Theoretical Framework

Our framework underscores the principle that quality, equitable instruction for ELs requires specialized knowledge and skills to respond to their unique linguistic and cultural needs. The EL needs included in this framework are amplified in the remote environment, where these students have reported additional barriers. ELs and other students from lower socio-economic households struggled with broadband access, less live teacher instruction, and a lack of classroom accommodations such as native language teaching assistants and peer support. Additionally, prior studies of virtual learners indicate that successful students are self-motivated, have a previous record of high grades, and, most notably, are native English speakers (Hart et al., 2016). Reich et al. (2020) compiled recommendations from 50 states during the pandemic. They found that only a few state documents explicitly indicated that local educational agencies (LEAs) must ensure that English learners continue to have equal access to academic grade-level content, without providing clear guidance on how to do this remotely.

Figure 1. *Conceptual Framework for English Learner Participation in Remote Instruction*



We also take an equity perspective with our framework, explicitly drawing on the work of Faltis (1993) and Nguyen and Commins (2020). Faltis (1993) initially put forth three equity elements for EL students: access, participation, and benefit. Nguyen and Commins (2020) developed the CLEAR paradigm, which addresses critical understandings about equity-centered teaching to represent complex realities of educational change across contexts and views all educators as social change agents. Intersecting theoretical perspectives in sociocultural, sociolinguistic, and critical pedagogy inform these understandings about achieving educational equity in an increasingly multilingual society.

Methods

We analyzed background and contextual factors that may have influenced a 12th-grade EL’s selection of instructional delivery model from the options offered in one school district in Florida: face-to-face, home connect, or virtual school. Students in the *face-to-face* model attended classes in person at their high schools. In contrast, students who opted into *home connect* joined classes taught simultaneously in a face-to-face classroom from their homes using remote login via Zoom. Students who selected the *virtual school* model took all their courses online, in an asynchronous format, through the district’s accredited virtual school. Students who selected the *homeschool* model were learning at home; parents/caregivers assumed responsibility for their curriculum, educational materials, and evaluations necessary to determine student progress. Due to the low number of participants in the home school model ($n = 4$) and incomplete data sets for a few of these students, we did not include them in our statistical analysis tests.

Sample and Population

This study used a convenience sample of all ELs in grade 12 for the 2020–21 school year in one large school district in Florida ($n = 861$). The district includes 26 schools, with 18 district schools and eight charter schools. The archival data were obtained directly from the district learning management system in a report run by one of the researchers who worked for this district on September 10, 2020,

with IRB approval. Additional information regarding school demographics was obtained from the Florida Department of Education's public website.

The students' demographic variables include their choice of instructional model, gender, number of years in a US school, home language, years of interrupted schooling, and exceptional student education (ESE) classification. Achievement scores were obtained from the most recent annual language proficiency and reading assessments ACCESS for ELs (AFE) (WIDA, 2021) and mathematics scores from the Florida Postsecondary Education Readiness Test (PERT). We also included a variable for grade point average (GPA). There were non-response data for students who were newer arrivals to the state and had not yet taken the AFE or PERT assessments. The school data compiled from public websites included school grade, geographic zone, district or charter school, and Title 1 designation (Table 1). Only district schools receive school grades from the state and have federal Title 1 designations. The district was divided into three geographic zones (west, south, and east), with students assigned to schools within their zone. However, three schools in this study were non-traditional and accepted students living in any zone. Students in virtual school and homeschool are not included in zone designations.

Table 1. *Student Demographic Information*

Variable	<i>n</i>	%
Student Characteristics		
Gender Male	492	57
Gender Female	369	43
Home Language English	10	1
Home Language Spanish	682	79
Home Language Haitian Creole	58	7
Home Language Other	111	13
ESE Services	67	7
Years in US School 1–2 years*	275	32
Years in US School 3–5 years	254	29.5
Years in US School 5 + years	332	38.5
Interrupted Education	98	11
Achievement Scores		
GPA below 2.0	221	25.7
GPA 2.0 or higher	640	74.3
AFE Overall below 4.0	584	67.8
AFE Overall 4.0 or higher	148	17.2
AFE Reading below 4.0	652	75.7
AFE Reading 4.0 or higher	140	16.3
PERT Mathematics below 97	353	41
PERT Mathematics 97 or higher	300	34.8
School Characteristics		
State Grade A	39	6
State Grade B	127	18
State Grade C	525	76

English Learner Instructional Models

Zone East	359	44
Zone South	306	37
Zone West	151	19
Title 1	412	61
Non-Title 1	263	39
District	691	80
Charter	166	20

Note: Students with less than one full year of instruction were coded as one year.

Instructional model participation in September 2020 is shown in Table 2. Fifty-nine percent of the students selected the face-to-face model, 38% selected home connect, 3% selected virtual school, and <1% selected home school. Students and their families were instructed that they would not be allowed to change their options until the conclusion of the first quarter. All students in district schools were provided with Chromebooks, and district high schools distributed mobile hotspot devices for internet connectivity.

Table 2. Instructional Model Participation

Group	<i>n</i>	%
Face-to-Face	326	37.86
Home Connect	507	58.89
Virtual	24	2.79
Home School	4	0.46

Multiple statistical tests were used to explore the three research questions. First, student and school data were analyzed with descriptive statistics indicating general data tendencies (mean, median, mode) and the spread of scores (variance, standard deviation, and range). Next, we applied inferential statistics through correlational analyses to describe and measure the degree of association between two or more variables. We used Pearson's *r* correlation, t-test, ANOVA, and multiple regression analysis to determine one or more predictor variables that could positively predict an outcome (choice of instructional model). See Table 3 for the research questions, variables, and tests used.

Table 3. Research Questions, Variables, and Statistical Tests

Research Question	Variables	Tests Used
RQ 1: Is there a statistically significant difference in EL student choice of instructional model according to achievement entering senior year?	<ul style="list-style-type: none"> • Student grade point average (GPA) • WIDA ACCESS for ELs overall language proficiency score • WIDA ACCESS for ELs reading proficiency score • Student scores in mathematics assessment PERT 	T-Test ANOVA Pearson <i>r</i> Cohen's <i>d</i> Multiple Regression Tukey's HSD
RQ 2: How do background factors correlate to an EL student's choice of instructional model?	<ul style="list-style-type: none"> • Gender • Participation in Exceptional Student Education (ESE) program • Native language • Number of years in US school • Interrupted formal education 	Pearson <i>r</i> Phi coefficient

RQ 3: Do school context variables correlate to an EL student's choice of instructional model?	<ul style="list-style-type: none"> • Socio-economic level • School grade • School location by zone • District or charter 	Correlation T-Test
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Data Analysis and Results

The three models for analysis were face-to-face ($n = 326$), home connect ($n = 507$), and virtual school ($n = 24$). For several tests, we used only students participating in the face-to-face and home connect instructional models as these were the primary options selected by students.

Research Question 1

In response to our first research question, “Is there a statistically significant difference in EL student choice of instructional model according to achievement entering senior year?” the researchers conducted a one-way ANOVA test. We found that when we disaggregate GPA, AFE scores, and PERT math scores by these three models, the mean of each is higher for students in the virtual school. Additionally, all 24 students in the virtual school model had the required GPA of 2.0 or higher for graduation. This finding supports previous research studies reporting that students who opt into virtual school for first-time course-taking are higher achievers (Hart et al., 2019).

Next, we examined the frequency of overall scores on the AFE language proficiency assessment ($M = 3.0$). This assessment score range is between 1 (entering) and 6 (reaching or full proficiency). The highest number of students ($n = 195$) fell in the 1.6–2.0 range, indicating an entering to emerging proficiency level. This minimal level of social and academic language proficiency could result in challenges for students trying to meet graduation requirements similar to those of their native English-speaking peers. Using $p = .05$ as the significance level, we found a significant difference in the mean AFE proficiency level scores between at least one pair of group means, with $F(2, 752) = 3.01, p < .05$. Results are shown in Table 4.

Table 4. ANOVA: Single Factor Results for Access for ELs (AFE) Overall Scores

Source of Variation	SS	df	MS	F	p	F crit
Between Groups	41.47	2.00	20.74	20.90	0.00	3.01
Within Groups	745.98	752.00	0.99			
Total	787.46	754.00				

A post-hoc test was needed to determine which groups have differences in means. While one of the most popular tests is the Tukey HSD, it is dependent on groups with equal numbers. If the means are based on unequal N 's, the N in Tukey's formula is based on the harmonic mean. Table 5 displays the number of students with AFE overall scores, the mean, and the standard deviation.

Table 5. Access for ELs (AFE) Scores for Students in Three Models

	n	M	SD
Home Connect AFE	302.00	3.28	0.98
Face-to-Face AFE	432.00	2.85	1.01
Virtual AFE	21.00	3.66	0.80

Using the calculation for harmonic mean, we determined that $N=60$. Using the Tukey-Kramer test, there is a significant difference between the means of group B (Face-to-Face) and group C (Virtual) with $F(3,60) = .44$, $p < .05$. Table 6 shows results from the Tukey HSD. There are no significant differences in means between groups A (Home Connect) and B (Face-to-Face) and Groups A (Home Connect) and C (Virtual). Table 7 shows the t-test used to verify the significance of differences in means, with $p < .05$. Therefore, we accept the alternative hypothesis for the difference in mean scores on the AFE of students in face-to-face and virtual models. Students in the virtual school model had significantly higher AFE scores than students attending classes face-to-face.

Table 6. *Tukey Kramer for Between Group Comparison*

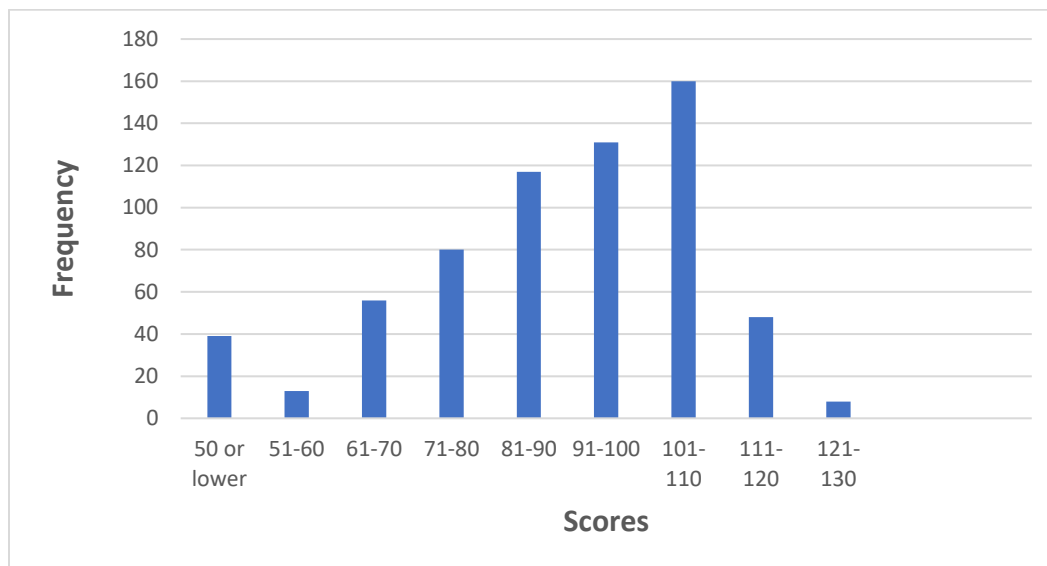
Comparison	Absolute Difference	Critical Range	Significant?
Home Connect and Face-to-Face	0.43	0.44	No
Face-to-Face and Virtual	0.81	0.44	Yes
Home Connect and Virtual	0.38	0.44	No

Table 7. *T-Test: Two-Sample Assuming Unequal Variances*

	Home Connect	Virtual
Mean	2.64	2.90
Variance	0.60	0.23
Observations	322	24
Hypothesized Mean Difference	0	
<i>df</i>	32	
<i>t</i>	-2.38	
$P(T \leq t)$ one-tail	0.01	
<i>t</i> Critical one-tail	1.69	
$P(T \leq t)$ two-tail	0.02	
<i>t</i> Critical two-tail	2.03	

The AFE reading proficiency scores were available for 793 students, with a mean score of 3.0 and a median of 2.6. Our analysis revealed that 652 students scored below 4.0, one of the indicators to be considered proficient in English in Florida. This figure indicates that most EL seniors in this study (75.7%) might not have yet obtained the cognitive academic language proficiency required to succeed on state assessments.

The third achievement score we examined was the Florida Post-Secondary Education Readiness Test (PERT) mathematics score. Students graduating in 2021 who do not achieve the required 3 on the Florida Algebra End of Course (EOC) assessment could earn a concordant score of 97 on the PERT assessment. Students were administered this test throughout the year during their junior and senior years, and we obtained scores for 653 students. None of the 861 students in this study had obtained a 3 on the Algebra EOC, so they needed a minimum score of 97 on the PERT to graduate. Figure 2 shows the frequency distribution for the PERT. The mean score is 89.62, and the mode is 50. The range of scores is 50-126.

Figure 2. Frequency Distribution of Scores on PERT Mathematics Assessment for 653 Students

In reviewing these scores, it is evident that only 299 students (34.7%) had met their mathematics requirement for graduation upon entering their senior year.

Research Question 2

To answer research question 2, “How do background factors correlate to an EL student’s choice of instructional model?” we conducted multiple Pearson’s r correlation tests on background variables without significant results linking native language or years in the country to particular models. Gender and ESE program services did not significantly correlate to the instructional model. We did, however, have an interesting finding for students with limited or interrupted formal education (SLIFE). These students are usually new to the US school system and have had interrupted or limited schooling opportunities in their native country. They have limited backgrounds in reading and writing in their native language(s) and are below grade level in most academic skills (Freeman et al., 2021). Students with these characteristics often struggle with coursework in English and receive low scores on standardized tests. A Phi correlation test indicated a strong correlation between students with this background variable and their choice of instructional model, $\phi = 1$, $n = 98$ ($r = 1$). Most of these students (75.5%) selected face-to-face, the recommended model for social interaction needed for English language development (Altavilla, 2020; Hartshorn & McMurry, 2020).

We applied multiple regression to investigate whether the choice of instructional model as the dependent variable could be predicted by a combination of student background and achievement data variables: the number of years in a US school, GPA, and ACCESS for ELs (AFE) overall language proficiency scores. We asked to what extent the independent variables could predict the dependent variable and the strength of each independent variable in this prediction. The two primary models were used, with home connect coded as 0 and face-to-face coded as 1. The multiple regression analysis run separately for each variable yielded no significant results, with $p > .05$ for each variable (Table 8). When all factors are included in the test, the results indicate no statistical significance between these coefficients, as $R = .23$, $R^2 = .054$, and adjusted $R^2 = .051$. $F(3, 728) = 8.02$, $p = .64$. This means that .5% of the values fit the model. Results are shown in Table 9. Further multiple regression tests with other variables similarly failed to yield significant correlation results.

Table 8. *Summary Output Regression for Instructional Model*

Regression Statistics	
Multiple R	0.233
R Square	0.054
Adjusted R Square	0.051
Standard Error	0.480
Observations	728

Table 9. *Multiple Regression for Home Connect or Face-to-Face Instruction Model with Number of Years in US School, GPA, and AFE Overall Score*

	<i>Coefficient</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-0.03	0.07	-0.45	0.64	-0.17	0.11
# Years in US School	0.00	0.00	0.11	0.91	-0.01	0.01
GPA - State	0.08	0.02	3.05	0.00	0.02	0.13
AFE Overall Proficiency Level	0.07	0.02	3.57	0.00	0.03	0.12

Research Question 3

To investigate research question 3, “Do school context variables correlate with an EL student's choice of instructional model?” we examined school context variables of school grade, geographic zone, district or charter school, and Title 1 designation. District schools account for the largest population of schools in the sample, with 80% representation. District schools receive grades from the state of Florida ranging from A to F. School grades are determined to measure the school's overall performance to understand how it serves its students. According to the Florida Department of Education (2022), a school's grade includes four achievement components, four learning gains components, a middle school acceleration component, and components for graduation rate and college and career acceleration. Approximately 50% of a school's letter grade is comprised of student performance on statewide standardized assessments, including the comprehensive assessments and end-of-course (EOC) assessments in English language arts (ELA), mathematics, science, and social studies. The number of points earned for each component is added and divided by the total number of available points to determine the percentage earned. To earn an A, a school must earn 62% of points or greater; B = 54% to 61% of points, C = 41% to 53% of points, D = 32%, and F = 31% of points or less.

Analysis of school context variables showed that 525 students (76%) attend schools with a school grade of C; 127 students (18%) attend schools scored as B, and 39 students (6%) attend schools scored as A. Researchers have identified academic challenges that many immigrant youths encounter in US schools, compounded by living in neighborhoods of poverty and attending under-resourced schools (Sibley & Brabeck, 2017). A weak negative correlation is associated with school grade and instructional models, face-to-face $r = -0.58$, and home connect $r = -0.64$. This finding indicates no significant relationship between grade 12 ELs attending district schools with a grade of C and the selection of either the face-to-face or home connect model.

We also tested the correlation between school zones and the choice of instructional models. There are three geographic zones for school assignment, and students are assigned to East ($n = 359$), South ($n = 306$), and West ($n = 151$) zone schools in this study. Three schools are non-traditional and accept students living in any zone. A strong negative correlation is apparent with zone and face-to-face

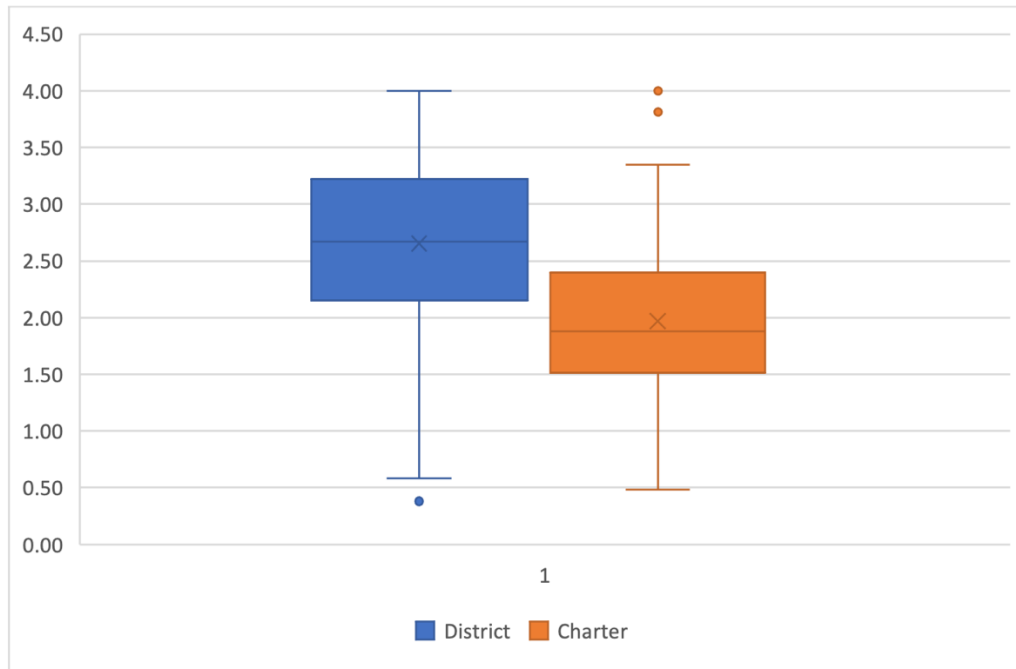
instructional model, with $r = -.013$. A weak positive correlation is associated with school zone and home connect, with $r = 0.26$. Therefore, there is also no significant correlation between the choice of instructional model and school zone.

Next, we considered the school's socio-economic status (SES) using Title I or non-Title I as variables. Schools in the sample are eligible for Title I funding based on the socio-economic level of their students. Title I schools account for 412 students in the sample, and 263 are enrolled in non-Title I schools. Some areas of the country reported that students with higher SES chose home connect models and learning pods. However, the state of Florida re-opened very early during the pandemic and pushed for families to send their children back to school. Using data from our descriptive statistical analyses, we determined no significant correlation between student choice of instructional model and school SES.

Finally, we examined student enrollment in district schools or charter schools. We found that students attending charter schools had a strong positive correlation with the face-to-face model of instruction, with 95% of our sample size of 177 students opting for this model. This result merits further investigation, as many charter high schools offer credit recovery through computer-based applications, so we had expected more students to select home connect and log in from home. However, charter schools may have reported that all their students would attend face-to-face to continue receiving state funding for enrollment.

We ran an independent samples t -test of GPA for students in district and non-district school (charter school) contexts. Using $p = .05$ as the level of significance, we also determined that there was a significant difference in the GPAs for district school students ($M = 2.56$, $SD = 0.87$) and charter school students ($M = 1.88$, $SD = 0.79$); $t(857) = 1.96$, $p = 0.00$. These results suggest that the students in our sample from district schools have higher GPAs than charter school students. We created a whisker box plot (Figure 3) to visualize the results.

Figure 3. Whisker Box Plot of Mean and Standard Deviation of GPA for Students in District and Charter Schools



Notably, the district students ($n = 683$) outnumber the charter school students ($n = 176$), and the variances are unequal. Due to the large sample size, we ran Cohen's d test to measure the effect size. Our results from this test were $d = .76$; therefore, we can conclude that this is a medium effect size in the difference between both groups. It is common practice for high schools in this district to send students who have not successfully earned credits and met graduation requirements to charter schools during their senior year. Once the student is transferred, the district school is no longer accountable for this student in their graduation rate calculations.

Conclusion

This study was conducted using archival data available from one school district information system; therefore, the statistical analyses are limited by data available and cannot capture the motivations behind student choice of model, challenges and benefits for students who selected remote or virtual options, and other differences in school cultures and environments. Prior studies have found that motivation, parent involvement, and technology skills are the possible causes of a student's success in online education programs (Rauh, 2011). Additionally, fewer students were in the virtual school model, limiting generalizability.

Further research in this area can continue by analyzing student graduation data. For example, how many students in each model met the requirements for the standard diploma, how many dropped out, and how many received a certificate of completion? Which variables may have influenced persistence to graduation? We could also explore which students were successful in the remote learning environment and if any chose to remain in virtual school once schools returned to face-to-face instruction.

This study may assist school leaders in better understanding the backgrounds of their 12th-grade ELs and the challenges they face as they complete their final year of high school during a disruptive pandemic and subsequent years after potential learning loss. Some findings indicate a need to provide intensive English language support and interventions to students entering their senior year of high school with low levels of language proficiency, thereby increasing their prospects of obtaining a standard diploma and pursuing post-secondary education. As schools have been tasked with providing continuous, equitable learning opportunities to all students through a choice of instructional models, there is a gap in the literature on the implications of each model on EL student learning. With virtual schooling on the rise in K–12 (Rice & Deschaine, 2020) and a required course component for graduation in many states, such as Florida, local education agencies must implement evidence-based systems that minimize barriers to participation.

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