

An Exploration of EL Achievement on AP Examinations

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Abstract

The College Board's Advanced Placement (AP) program has been used as a method to advance high school students' college and career readiness in the United States. While data are available on the achievement of underrepresented students on AP exams, data on English learners' (ELs) achievement on AP exams are limited. This study focused on EL AP examination achievement in a large urban school district in the United States. Results indicated that although EL participation in AP was low, the proportion of ELs achieving a 3 or higher on AP examinations was higher than that of non-ELs, predominantly in AP world language examinations. Findings from this study could be used by school districts to inform EL course-taking and achievement in AP..

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Since 2003, the number of Advanced Placement (AP) examinations given in the United States increased substantially. Based on data from the AP Report to the Nation (2014b), there was a 137% increase in the number of AP examinations taken by students between 2003 and 2013. During this same time period, the number of AP exams that were scored at a 3 or higher increased by 123%. Using publicly available AP data, calculations revealed that the trend continued from 2013 to 2019 with an increase of 62% in the number of AP examinations taken by students in the United States (College Board, 2014b; College Board, 2019b). Moreover, there was an increase of 68% in the number of AP examinations that were scored 3 or higher from 2013 to 2019 (College Board, 2014b, 2019b). As AP exam-taking increased, the College Board maintained data on the percentage of underrepresented students taking AP examinations as well as their achievement on AP examinations in the United States (College Board, 2014b, 2019b). Underrepresented or historically underserved students include students who are Hispanic/Latino, African American, Native American, Native Hawaiian or Pacific Islanders or mixed race (Penn State, n.d.).

Although data are maintained for underrepresented students at the national level through the College Board's (2014b, 2019b) AP participation and performance data, there is limited information on English learners' (EL) participation in AP courses and achievement on AP examinations. ELs are a growing population in the United States, representing approximately 5 million or 10.1% of the school-age population (National Center for Education Statistics [NCES], 2020). Because of the continued growth of ELs and the importance of AP as it pertains to college preparation, gauging EL AP participation and performance is a starting point to bridge the opportunity gap in EL AP participation and achievement to ensure this underrepresented group's college and career readiness.

This study contextualizes ELs' achievement on AP examinations by first reviewing EL participation in advanced courses and the obstacles impeding advanced course-taking. Then, policy efforts to increase underrepresented student participation and achievement in AP and EL participation and achievement in AP are presented. The background of the study concludes with a discussion of social justice theory, ELs, and school leaders as a theoretical lens to consider when analyzing the results of this study.

EL Participation in Advanced Courses

Participation trends of ELs in advanced courses reflect a general underrepresentation of ELs in advanced courses (Callahan, 2005; Callahan & Humphries, 2016; Callahan & Shifrer, 2016; Callahan, Wilkinson, & Muller, 2010; Estrada, 2014; Robinson-Cimpian, Thompson, & Umansky, 2016) and AP in particular. Using data from the Educational Longitudinal Study of 2002, Callahan and Shifrer (2016) analyzed the types of high school courses taken by students based on students' language status. The researchers found that only 11% of ELs in the sample had advanced courses (i.e., college preparatory courses) as part of their secondary course-taking pattern (Callahan & Shifrer, 2016, p. 478). ELs have limited opportunities to participate in advanced courses because of tracking mechanisms that place them in course-taking tracks where ELs may be continuously scheduled for remedial or standard-level courses (Callahan et al., 2010; Kanno & Kangas, 2014; Robinson-Cimpian et al., 2016). For instance, ELs may be placed in a remedial mathematics course in Grade 9, which may place them on a course-taking track that would limit their opportunity to participate in an advanced mathematics course like calculus by the end of their high school career. Researchers found that EL tracking patterns took in the early stages of second language acquisition and continued to persist after ELs exited from EL

programs, impacting EL academic trajectories (Callahan, 2005; Callahan et al., 2010; Estrada, 2014; Kolluri, 2018; Robinson-Cimpian et al., 2016).

Underrepresented Students and AP Participation and Achievement

While this research study is focused on ELs, it is essential to provide an overview of underrepresented students as ELs may be represented here as well within an ethnic/racial category. Across the United States, policymakers have used the AP program as a vehicle to increase student access to rigorous coursework (Malkus, 2016) and as an indicator of college readiness to institutions of higher education (Duncheon, 2018; Kanno & Varghese, 2010; Kolluri, 2018). Consequently, access to AP courses has been central to states' efforts in promoting and ensuring college readiness, albeit with mixed results in terms of student participation (Klugman, 2013) and achievement in AP. Researchers noted positive results with an increase in AP course offerings in high schools and AP examinations taken (Judson & Hobson, 2015; Kolluri, 2018; Malkus, 2016). For instance, in a longitudinal study determining AP participation of high school graduates from 1996 to 2012, Judson and Hobson (2015) discovered that the number of AP students grew by 290.7%.

However, although student participation grew, there was an overall drop in AP examination success rates from 1992 to 2012, decreasing from 65.5% in 1992 to 59.2% in 2012 (Judson & Hobson, 2015, p. 67). In disaggregating AP achievement data, the researchers noted that scores of 5 were not affected by the decrease in AP achievement. However, the number of students scoring a 2 through 4 decreased, while the number of students earning a score of 1 on AP examinations increased (Judson & Hobson, 2015). When analyzing the data by underrepresented students, decreases in achievement were most prevalent among American Indian, Black, and Hispanic students with Hispanics witnessing the most significant drop in

achievement of 9.7% (Judson & Hobson, 2015). Specifically, Hispanic students experienced a decrease in AP achievement in AP Art History, AP Music Theory, AP Spanish Literature, and AP Spanish Language with AP Spanish Language being the major contributor to decreases in Hispanic student achievement (Judson & Hobson, 2015). In analyzing the decrease in AP examination achievement, Judson and Hobson (2015) posited that the reason may lie in students feeling compelled to register for an AP examination as a result of being enrolled in an AP course, even though students may not have felt entirely prepared for the AP assessment. Additionally, a departure from student performance goals associated solely with AP examination achievement may have been a contributing factor as schools aimed to develop student confidence and interest in AP courses rather than examination achievement alone (Judson & Hobson, 2015).

EL AP Participation and Achievement

AP program participation for ELs is low (Kanno & Kangas, 2014). Non-ELs are over two times more likely than ELs to participate in AP courses with only two percent of ELs taking at least one AP course in high school (United States Department of Education Office for Civil Rights, 2014; Office of English Language Acquisition, 2015). Kanno and Kangas (2014) found that ELs exited from the EL program continued to be tracked into mostly remedial courses. Furthermore, AP world language courses such as AP Spanish Language and Culture or AP French Language and Culture comprised the majority of EL AP course-taking, with few excursions into other AP courses (Kanno & Kangas, 2014).

Kanno and Kangas (2014) found that school personnel considered teachers' ability to design instruction to meet ELs' needs when placing ELs into AP courses. Specifically, teachers and guidance counselors perceived there was a dearth of differentiated instruction to address the needs of EL students in advanced courses (Kanno & Kangas, 2014). The quality of instruction

and teacher preparedness to provide scaffolds in AP courses has been a theme in AP classes (Hertberg-Davis & Callahan, 2008; Hallett & Venegas, 2011) and a hinderance to participation for ELs and other underrepresented students. To support ELs in understanding and generating the academic language of specific subject areas (i.e., academic English), evidence-based scaffolds for development are crucial to instruction (DiCerbo, Anstrom, Baker, & Rivera, 2014; Taylor, Watson, & Nutta, 2014).

While EL achievement on national and state standardized tests is well documented, EL achievement on AP examinations is less documented. The College Board does not publish data on the number of EL AP test-takers and their achievement (College Board, 2014b, 2019). ELs are most likely represented indirectly in AP data published on traditionally underrepresented students by the College Board. According to the U.S. Department of Education Office for Civil Rights (2014), one percent of ELs received a score of 3 or higher on AP examinations.

Social Justice and English Learners

Social justice theory provides a theoretical lens through which to consider AP EL participation and achievement. Social justice theory is rooted in the constructs described by Rasinski (1987) of *proportionality* and *egalitarianism*. Proportionality leads to the creation of policies which are developed for equity, while egalitarianism leads to policies to address both equity and need (Rasinski, 1987). Egalitarianism to advance social justice can be achieved through the crafting of policies that promote redistribution, recognition, and representation for underrepresented groups (Fraser, 2005). School leaders are well positioned to further social justice for all students, particularly underrepresented students. By using social justice, school leaders can advance EL student achievement by embedding social constructs in their schools

(Albritton, Huffman, & McClellan, 2017; Berkovich, 2014; DeMatthews, 2015; DeMatthews & Mawhinney, 2014; Theoharis, 2007; Wang, 2018)

For example, in Theoharis and O’Toole’s (2011) seminal work on social justice, principals, and ELs, the researchers sought to understand how principals made ELs central to the context of teaching and learning with an orientation toward inclusive practices in their schools. The researchers found that once principals became aware of EL needs within their schools, principals interceded to address identified EL needs (Theoharis & O’Toole, 2011). Principals intervened by using their knowledge of EL instructional leadership practices, persuading faculty and staff to abandon deficit perspectives, and articulating a vision of inclusion for ELs as an integral part of the school community rather than a subgroup to be served (Theoharis & O’Toole, 2011). Other researchers had similar findings as they studied the principal practices that advanced social justice for ELs (DeMatthews & Izquierdo, 2018; Scanlan & López, 2012; Wiemelt & Welton, 2015). Specifically, principals established social justice orientations for ELs by restructuring the school to support the needs of ELs to include professional learning for themselves and for faculty; allocating resources in innovative ways, including logistical changes to master scheduling; and determining if the curriculum, teaching and learning, and assessments lead to high academic achievement (DeMatthews & Izquierdo, 2018; Wiemelt & Welton, 2015).

Within the context of school change for social justice leadership, principals fostered creativity among their staff (Wiemelt & Welton, 2015), an ethos of transcaring, where both teachers and school administrators acted as boundary spanners for “languages, cultures, and modes of knowing and performing” (García, Woodley, Flores, & Chu, 2012, p. 807) for ELs, and served as resources for teachers in research and theory informing EL instruction (DeMatthews & Izquierdo, 2018; Wiemelt & Welton, 2015). To be effective in addressing inequities that may be

hindering ELs' academic achievement, school leaders must possess a deeper understanding of EL instruction (Baecher, Knoll & Patti, 2013; DeMatthews & Izquierdo, 2018; Scanlan & López 2012; Theoharis & O'Toole, 2011; Wiemelt & Welton, 2015). Scanlan and López (2012) posited that principals must compel their faculty to view themselves as language teachers of ELs to open access to rigorous curriculum for ELs.

Research Method

Given the limited research on ELs' achievement on AP examinations, this study aimed to add to the literature on ELs' achievement in AP courses by exploring EL achievement on AP examinations in one large urban school district in the United States. This large urban school district was selected because of its large size based on overall student enrollment and high number of AP examinations given each year. The analysis in this study focused on the proportions of EL and non-EL achievement as measured by a score of 3 or higher on an AP examination. This study focused on one key research question: What is the relationship, if any, between the proportion of overall student achievement on AP examinations and English learner achievement on AP examinations?

Data Collection

AP archival data from the 2011 AP examination administration through to the 2014 AP exam administration were collected for this study. The AP examination period of 2011 to 2014 was selected to garner a more comprehensive understanding of EL and non-EL AP achievement over several years. A total of 55,782 AP course enrollment incidences were collected, where each student could be enrolled in more than one AP course and each course enrollment incidence included an AP score ranging from 1 to 5. As a result, the AP course enrollment incidences for the period of study represented a duplicated count because students could be enrolled in more

than one AP course. Of the AP course enrollment incidences collected, 1,696 were categorized as EL and 54,086 were categorized as non-EL. ELs represented three percent of the AP course enrollment incidences in this study. A total of 34 AP courses were included in the analysis across 19 high schools.

Population

The population in this study consisted of ELs and non-ELs in Grades 9 through 12 from 2011 to 2014 who were enrolled in AP courses and had an AP score of 1 to 5 in a large urban school district in Florida. Both current ELs and former ELs were included as a part of this research to gain an understanding of the achievement of both groups. Within this study, current ELs were defined as students receiving EL services and former ELs were defined as students who had been exited from the EL program for a period of two years. Both current and former ELs were included as part of this study because former ELs' academic performance was during the two-year period documented by a school-based EL committee. If the ELs' academic performance decreased, the former EL could have been re-categorized as a current EL. Throughout the results and discussion, the term ELs will be used to refer to both subgroups and current EL and former EL will be used to refer to each EL subgroup. Demographic information on the EL population was collected from the AP course enrollment incidences, indicating that the majority of AP EL course enrollment incidences were Hispanic (76%), followed by Asian (12.9%) AP course enrollment incidences. The majority of non-EL AP course enrollment incidences were White (46.4%) followed by Hispanic (25.3%).

Data Analysis

To complete the analysis, the chi-square test of independence was used to determine if there was an observed difference between the proportions of EL and non-EL achievement on AP

exams. A p value of $p = .05$ or less had to be met in the school-districtwide analysis and at each high school site to determine if there were observed differences. The chi-square test of independence was utilized for this study to analyze the relationship between the categorical variables of non-EL, EL, AP examination scores of 1 through 2, and AP examination scores of 3, 4, and 5. Achievement was defined as receiving a passing score of 3 or higher on an AP exam or receiving a non-passing score of 2 or lower on an AP exam (College Board, 2019a). For students who achieve a score of 3 or higher, there are positive college outcomes, including possible college credits accumulated through AP examinations and success in college (Kolluri, 2018).

In addition to the chi-square test of independence, descriptive statistics on proportions of achievement were conducted for each of the 19 high schools in the present study and disaggregated by EL and non-EL subgroup. Additional descriptive analyses were completed by current EL and former EL subgroups, based on the courses that had the highest percentage of current EL and former EL AP course enrollment. The results of the analyses are presented in the following section.

Results and Discussion

The overall analysis of EL ($n = 1,696$) and non-EL ($n = 54,086$) AP achievement, as measured by the chi-square test of independence, demonstrated statistically significant differences in proportions of AP exam achievement. The statistically significant chi-square result $\chi^2(1, n = 55,782) = 32.75, p < .001$ pointed to higher achievement for ELs across the 19 high schools included in the study. Descriptive analyses of overall achievement across the 19 high schools also demonstrated ELs had a higher proportion of AP scores 3 or above (53.6%) than non-ELs (46.6%). The preponderance of EL AP course enrollment incidences were in AP world language courses.

Further analysis by individual high school demonstrated that in eight of the 19 high schools, there were statistically significant differences in proportions of EL AP achievement and non-EL AP achievement. In seven of the eight high schools, EL AP achievement was higher than non-EL achievement, while the remaining high school had higher non-EL AP achievement. Chi-square test of independence results in the remaining 11 high schools did not demonstrate statistically significant differences in proportions of achievement, meaning that EL AP achievement and non-EL AP achievement were proportionally similar. Chi-square of independence results for each high school can be found in Table 1.

Table 1

Chi-Square Values for English Learners and Non-English Learners for Advanced Placement Achievement 2011-2014

High School	Chi-square Value	DF	N	p
HS 7	.004	1	990	.950
HS 19	.154	1	4,390	.695
HS 9	.544	1	2,555	.457
HS 4	.620	1	2,175	.432
HS 18	2.18	1	2,137	.140
HS 6	2.63	1	3,688	.105
HS 12	2.79	1	1,434	.095
HS 3	3.70	1	1,779	.084
HS 1	3.30	1	2,175	.070
HS 17	3.29	1	984	.070
HS 13	3.70	1	5,615	.055
HS 14	5.70	1	4,734	.002
HS 10	7.89	1	4,447	.005
HS 5	8.64	1	3000	.003
HS 15	11.84	1	4,733	.001
HS 8	12.09	1	5,816	.001
HS 2	15.42	1	2,803	.000
HS 16	120.34	1	984	.000
HS 11	42.41	1	592	.000

Note. Table is rank ordered by *p* value. Source: Ceballos, 2016, p. 102

Further descriptive analyses by high school site were completed to show proportions of achievement by high school. In 13 of the 19 high schools, the proportion of ELs achieving a 3 or higher on an AP exam was above 50% as seen in Table 2.

Table 2

Nineteen High Schools' Disaggregate Advanced Placement Exam Achievement: Proportions for English Learners and Non-English Learners 2011-2014

High School	EL Scores 3 or Above (%)	EL Scores 2 or Below (%)	Non-EL Scores 3 or Above (%)	Non-EL Scores 2 or Below (%)
HS 5	81.8	18.2	60.0	40.0
HS14	81.2	18.8	67.7	32.4
HS 19	68.0	32.0	66.7	33.3
HS 11	64.6	35.3	30.2	69.8
HS 16	62.3	37.7	21.7	78.3
HS 2	61.1	38.9	46.3	53.7
HS 13	60.0	40.0	51.9	48.1
HS 12	57.7	42.3	41.4	58.6
HS 10	57.1	42.9	42.9	57.1
HS 9	55.0	45.0	46.7	53.3
HS 18	50.5	49.5	42.9	57.1
HS 8	50.1	49.1	41.3	58.7
HS 3	50.0	50.0	36.5	63.5
HS 6	40.3	59.7	31.0	69.0
HS 15	36.9	63.1	58.1	41.9
HS 4	36.0	64.0	30.8	69.2
HS 1	17.6	82.4	39.2	60.8
HS 7	7.7	92.3	7.4	92.6
HS 17	0.0	100.0	6.3	93.7
Total	53.6	46.4	46.6	53.4

Note. Proportions of achievement within EL ($n = 1,696$) and Non-EL ($n = 54,086$) subgroups for AP exams completed. *Source.* Ceballos, 2016, p. 104.

Lastly, disaggregated descriptive analyses by former EL and current EL groups were conducted to determine levels of achievement by EL subgroup. First, descriptive analyses related to mean scores and standard deviations for each EL subgroup were completed. Descriptive analysis of means and standard deviations by EL subgroup revealed that both subgroups of ELs attained overall higher mean scores than non-EL groups school districtwide. Current ELs' achievement was higher ($M = 3.14$, $SD = 1.40$) than former ELs ($M = 2.53$, $SD = 1.44$). Non-EL achievement as measured was lower ($M = 2.49$, $SD = 1.24$) than EL achievement in both

subgroups. Mean AP scores and standard deviations for each of the 19 high schools are presented in Table 3.

Table 3

Advanced Placement Exam Mean Scores and Standard Deviations: Former ELs, Current ELs, and Non-ELs in 19 High Schools 2011-2014

High School	Former EL Score		Current EL Score		Non-EL Score	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
HS 15	3.35	1.52	4.08	0.95	2.87	1.24
HS 18	3.23	1.29	3.68	0.80	3.09	1.18
HS 12	3.08	1.38	4.09	0.94	3.04	1.16
HS 5	2.85	1.53	3.15	1.22	2.01	1.16
HS 4	2.74	1.55	3.65	1.30	1.84	1.03
HS 6	2.69	1.36	3.06	1.31	2.62	1.21
HS 10	2.63	1.44	3.09	1.33	2.37	1.23
HS 17	2.63	1.40	3.65	1.22	2.48	1.19
HS 11	2.50	1.48	3.32	1.34	2.39	1.21
HS 9	2.50	1.30	2.67	1.14	2.22	1.17
HS 13	2.43	1.70	3.42	1.44	2.39	1.27
HS 2	2.42	1.44	3.63	1.51	2.49	1.19
HS 8	2.36	1.26	2.25	1.45	2.83	1.23
HS 14	2.28	1.22	2.05	1.16	2.08	1.14
HS 16	2.24	1.45	3.12	1.41	2.36	1.15
HS 3	1.94	1.28	3.24	1.52	2.04	1.11
HS 7	1.77	0.73	2.00	0.82	2.30	1.15
HS 1	1.15	0.36	1.00	0.00	1.27	0.66
HS 19	1.08	0.29	1.36	0.93	1.35	0.69
Total	2.53	1.44	3.14	1.40	2.49	1.24

Note. Table is organized by Former EL mean scores. *Source.* Ceballos, 2016, p.187

Descriptive analysis by EL subgroup was conducted by courses that represented the highest frequency of enrollment and the highest level of achievement from 2011-2014. For both former ELs and current ELs, the highest frequency of enrollment and level of AP achievement was in an AP world language course. In this instance, both subgroups had the highest frequency of enrollment and highest level AP achievement in AP Spanish Language and Culture with the majority of current EL enrollment incidences in this course. AP achievement for both subgroups

in this heritage language was high, with the mean score exceeding a level 3. In AP Spanish Language and Literature, EL achievement varied by subgroup with former EL achievement ($M = 3.34$) being higher than current EL achievement in this course ($M = 2.95$). The results of this analysis for the five highest courses for each EL subgroup are shown in Table 4.

Table 4

Advanced Placement EL High Enrollment Courses and Achievement by EL Subgroup 2011-2014
N = 10

EL Subgroup	Advanced Placement Course Name	Advanced Placement Subject	Enrollment Frequency (<i>f</i>)	Advanced Placement Exam Score <i>M</i>
<u>Former EL</u>				
	AP Spanish Language and Culture	World Languages	249	3.91
	AP Psychology	Social Studies	106	1.90
	AP Human Geography	Social Studies	89	1.90
	AP Spanish Literature and Culture	World Languages	82	3.34
	AP U.S. Government and Politics	Social Studies	67	1.48
<u>Current EL</u>				
	AP Spanish Language and Culture	World Languages	328	3.83
	AP Spanish Literature and Culture	World Languages	65	2.95
	AP French Language and Culture	World Languages	34	2.79
	AP U.S. Government and Politics	Social Studies	16	1.00
	AP U.S. History	Social Studies	13	1.31

Note. Advanced Placement courses contained in the table represent the top five courses for enrollment and achievement in former and current EL students respectively from 2011-2014 as represented by *N*. *Source:* Ceballos, 2016, pp. 142-143

EL AP Participation and Achievement

Similar to other findings (Kanno & Kangas, 2014; U.S. Department of Education Office for Civil Rights, 2014; U.S. Department of Education Office of English Language Acquisition, 2015), overall EL AP participation in this study represented a low percentage of AP course enrollment incidences from 2011 to 2014. However, the findings of this study represented a slightly higher percentage of EL participation in AP coursework (3%) than the United States average (2%) (U.S. Department of Education Office for Civil Rights, 2014). There may be several reasons for the low participation of ELs. First, the low representation of ELs in AP courses may be due to ELs' academic trajectories in middle school rather than the high school AP course offerings at each high school (Malkus, 2016). Secondly, ELs' limited access to advanced courses in secondary settings may also be factor for the low EL AP participation rates (Callahan, 2005; Callahan & Humphries, 2016; Callahan & Shifrer, 2016; Callahan, Wilkinson, & Muller, 2010; Estrada, 2014; Robinson-Cimpian et al., 2016). Lastly, ELs' reduced AP participation may be tied to ELs' performance on standardized assessments (Callahan et al., 2010; Education Trust-West, 2018; Hill, 2018; Kanno & Kangas, 2014; Robinson-Cimpian et al., 2016), which may lead to their enrollment in remedial or standard-level courses.

While EL AP course enrollment incidences were low, the proportion of EL AP achievement was statistically significant, demonstrating that EL AP achievement was higher than the AP achievement of non-ELs in aggregate analysis of AP achievement. The findings of this study are in contrast to the EL AP achievement findings of U.S. Department of Education Office for Civil Rights (2014), where only one percent of ELs achieved a score of 3 or higher on an AP exam. In this study, 53.6% of ELs course incidences in AP coursework received a score of 3 or higher on an AP exam as compared to 46.6% of non-ELs. It is important to note that the majority

of ELs in this study were enrolled in AP world language courses, which is grounded in coursework that requires ELs to have high level of academic proficiency in their heritage language. Further analysis of individual high schools demonstrated a more nuanced picture of EL achievement. In seven of the 19 high schools, ELs again outperformed their non-EL counterparts on AP exams. In 11 of the 19 high schools, EL achievement and non-EL achievement on AP exams were comparable. In only one high school was non-EL achievement higher than EL achievement on AP exams.

Current EL and former EL AP achievement.

Descriptive analyses demonstrated that mean EL scores for both former and current ELs were higher than those of non-ELs. Overall former EL AP mean scores were slightly lower than those of current ELs. Both EL subgroups were more likely to enroll in AP world language courses such as AP French Language and Culture, AP Spanish Language and Culture, and AP Spanish and Literature, particularly if they were current ELs. This was similar to the findings of other research (Kanno & Kangas, 2014). ELs were also likely to enroll in AP social studies courses such as AP Psychology, AP U.S. History, and AP U.S. Government and Politics. While the average AP score on AP social studies courses was below a 2, mean scores on AP world language courses exceeded a 3 (e.g., AP Spanish Language and Culture and AP Spanish Literature and Culture) or were close to a mean of 3 (e.g., AP French Language and Culture), a different finding from that of other researchers (Judson & Hobson, 2015). Former ELs tended to score higher on AP world language courses, which was similar to other findings on former ELs' performance on standardized assessments (Education Trust-West, 2017; Education Trust-West, 2018; Hill, 2018). Current ELs' mean performance on AP Spanish Language and Literature courses was below the mean of score of 3. This finding on AP Spanish Language and Literature

could be due to the increased literacy demands of the course which requires rigorous literary analysis and college-level writing.

AP World Language Courses and English Learner College Preparation

ELs' high achievement in AP world language courses, particularly in the students' heritage language, positions AP world language courses as a possible lever for change in increasing ELs' college preparedness. Although not all ELs in United States are Spanish speakers, the majority (78.4%) are (Gándara & Mordechay, 2017; NCES, 2020). The ELs in this study were predominantly Hispanic. AP Spanish world language courses may contribute to Spanish-speaking ELs' college preparedness. Likewise, other AP world language courses may be used to advance college preparedness of ELs of other heritage languages. For example, Jang and Brutt-Griffler (2019) found that heritage language development for language minority students (i.e., students who speak a language other than English at home), which included using heritage language and developing heritage language literacy, lead to improved academic outcomes in high school and in higher education. Historically, ELs have been underprepared for higher education because of a lack of enrollment in advanced courses in high school, mainly in advanced high school English (Kanno & Varghese, 2010). Enrolling ELs in AP world language courses could allow ELs to accumulate advanced courses on their high school transcripts, which would serve as evidence to colleges and universities of ELs' college preparedness (Duncheon, 2018; Kanno & Varghese, 2010; Kolluri, 2018).

Furthermore, participation in AP world languages courses in ELs' heritage languages may assist ELs' literacy development in the ELs' heritage language, including development of general academic vocabulary and discipline-specific academic vocabulary (Taylor et al., 2014). Development of heritage language has been found to contribute to EL academic outcomes, a

finding that undergirds bilingual education (Collier & Thomas, 2004; 2017). In a study analyzing the contributions of heritage language ability to student achievement, Guglielmi (2012) found that heritage language ability was related to the development of English literacy skills, and later to student achievement in mathematics and science, particularly for Hispanic students. AP world language courses, such as AP Spanish Language and Culture, require students to acquire and apply heritage language literacy skills structured around themes such as global challenges, science and technology, and contemporary life (College Board, 2013, p. 35) each of which is comprised of discipline-specific language. AP Spanish Literature and Culture requires students to apply heritage language literacy skills by analyzing literary texts, using the academic language of literary analysis (College Board, 2014a). ELs, therefore, could acquire transferable high-level literacy and academic language skills in their heritage language that may help them as they continue to gain higher proficiency in the second language (Fumihiko, 2009; Haim, 2015; He, 2011). As ELs develop heritage academic language proficiency through an AP world language course, this may allow ELs to be successful in other high school advanced courses in science, social studies, mathematics, and English, leading to successful enrollment in college (Kanno & Varghese, 2010). Results of this study indicated that ELs tended to be enrolled in AP social studies courses, which may present an opportunity to couple AP world language courses and AP social studies courses by making intentional content connections for ELs between courses to improve AP EL outcomes in AP social studies courses.

To contribute to EL AP participation and achievement and college preparation outcomes, school leaders committed to EL social justice need to collaborate with teachers so that all teachers see themselves as language teachers of ELs who contribute to opening EL access to advanced curriculum (Scanlan & López, 2012). School leaders may create an EL social justice

orientation in their schools by fostering creativity among teachers in addressing ELs' needs, establishing an ethos of transcaring, and becoming steeped in research and theory supporting EL instruction (DeMatthews & Izquierdo, 2018; García et al., 2012; Wiemelt & Welton, 2015). To ensure proportionality and egalitarianism for ELs (Fraser, 2005; Rasinski, 1987), principals and other school leaders must ensure that ELs have access to advanced courses and AP courses and effective instructional support within each course. Participation in AP confers various benefits to students including favorable classroom environments, a sense of community among AP students, coursework that is more academically challenging, and economic benefits to students in the form of college credits earned prior to entering college, reducing the overall cost of higher education (Foust, Hertberg-Davis, & Callahan, 2009; Malkus, 2016).

Retooling Tracking

Committing to promoting an EL social justice environment may help to disrupt tracking mechanisms which have limited ELs' participation and achievement in AP. To ensure that ELs have access to AP coursework, current tracking mechanisms may be retooled by school leaders to provide expanded EL access to advanced courses which prepare them for AP to ensure their continued success in AP. Currently, the results of standardized tests, placement in an EL program, teachers' preparedness to teach ELs, and the mindset of school personnel hinder ELs' access to and participation in AP and other advanced courses in high school (Callahan, 2005; Callahan & Humphries, 2016; Callahan & Shifrer, 2016; Callahan et al., 2010; Estrada, 2014; Kanno & Kangas, 2014; Robinson-Cimpian et al., 2016). However, the results of this study may help to forge new advanced course-taking patterns for ELs informed by a social justice orientation as school leaders seek to increase AP EL participation and achievement.

School leaders can begin to shift the current tracking paradigm by clearly articulating a vision for ELs in advanced and AP courses to promote a growth mindset for ELs in AP among faculty and staff and by leading with EL instructional leadership practices (Theoharis & O'Toole, 2011). Further, school leaders may advance social justice for ELs by providing EL professional learning for all teachers and AP teachers in particular, distributing resources innovatively, and ensuring that AP teaching and learning lead to increased EL AP achievement (DeMatthews & Izquierdo, 2018; Scanlan & López, 2012; Wiemelt & Welton, 2015). Additionally, schools could make concerted efforts to enroll ELs who exit EL programs in advanced high school courses and AP courses that will allow ELs to accumulate AP and other advanced course credits on their transcripts (Duncheon, 2018; Kanno & Varghese, 2010; Kanno & Kangas, 2014; Kolluri, 2018). A key consideration in providing adequate supports for ELs is to ascertain whether ELs have continued opportunities to develop their heritage language proficiency. This type of course-taking pattern could guarantee continued development of ELs' academic language proficiency and literacy as they continue second language acquisition (Fumihiko, 2009; Haim, 2015; He, 2011). Additionally, teacher capacity to deliver AP instruction to all students but specifically to ELs could be impacted by preparing AP teachers to focus on ELs' academic language development (DiCerbo et al., 2014; Taylor et al., 2014). Likewise, teachers of advanced courses which lead to AP courses also need EL professional learning to contribute to ELs' preparation and achievement in AP.

Furthermore, school personnel such as guidance counselors, EL coordinators, and school administrators could use the course-taking patterns of ELs who participated and excelled in AP courses as a template. Based on individual EL needs and interests, schools could differentiate course-taking for ELs, placing them on course-taking tracks that would provide opportunities for

ELs to engage in advanced coursework, including coursework that helps ELs to develop their heritage language skills, in preparation for AP courses. This would include taking into account the course-taking patterns of ELs before they reach high school, so that ELs receive the necessary academic preparation for AP classes (Malkus, 2016). Heritage language proficiency and academic preparation vary among ELs with some ELs entering schools in the United States with higher levels of academic preparation, while others enter school with limited academic preparation (Walqui & Pease-Alvarez, 2012). The findings of this study suggested that ELs who participated in AP world language courses likely had developed higher levels of academic heritage language proficiency, which probably contributed to their success in AP world language courses. This may have been the case of former ELs who had higher mean scores in AP Spanish courses.

Conclusions

AP courses are used across the United States as a way to provide rigorous academic experiences for students in high school and to serve as an indication of college preparedness to colleges and universities. This is evidenced by the substantial growth of the program since the late 1990s. Due to AP's contributions to college preparedness, it is essential that school leaders advocate for ELs' participation and achievement in AP by adopting social justice as a lens for EL inclusion in AP. School leaders may consider utilizing AP world language courses as a vehicle to augment ELs' overall participation and achievement in rigorous AP courses and as one of multiple pathways to develop higher levels of EL academic preparation and proficiency. Furthermore, school leaders can further social justice for ELs by setting a vision of EL AP achievement within the school and by developing the capacity of all teachers within the school to

support EL outcomes, particularly in advanced courses which prepare students for AP and in AP courses themselves.

While the results of this research found that the proportion of EL achievement in AP courses was higher than non-EL achievement, there are limitations to these findings. First, the scope of this study was limited in that it was conducted as exploration of overall proportions of EL and non-EL AP achievement in a large urban school district located in a state with a high percentage of ELs. Therefore, findings from this study may not be representative of overall EL AP achievement in all AP courses across the United States and may not be generalizable to ELs in other states and in urban or rural contexts. Although there were statistically significant differences in proportions of achievement with ELs demonstrating higher achievement than non-ELs, the majority of ELs were enrolled in AP world language courses. Since the majority of ELs in this study were Hispanic, it is likely that they participated in an AP world language course in their heritage language. However, it is important to note that AP world language courses require that students enter the course with a higher degree of heritage academic language proficiency and continue to develop high-level academic literacy skills in the AP world language. As a result of these limitations, the findings from this study may be used as a starting point to examine EL AP achievement in other quantitative and qualitative ways in other large urban school districts and in rural school districts.

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