Investigating Advanced Placement Performance Gaps in the Social Sciences

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Abstract

This study identifies performance gaps in the Social Sciences Advanced Placement examinations based on student characteristics and high school campus environment. Data from over 13,000 exams were gathered from economically and ethnically diverse high schools to analyze discrepancies between passing rates using analysis of variance and post-hoc testing. Social Sciences examinations had the most participation of any academic category, but the least success in performance. Campus environment was determined to be the key indicator in student success, while gender, whether a student lives with both parents, and ethnicity also played a role in passing rates. Within the Social Sciences, Macroeconomics had the most performance gaps, while subjects like Psychology and Human Geography showed no significant differences in passing rates. Identifying performance gaps on subject-specific exams can aid in student preparation and provide insight into targeted intervention programs to close the college credit gap in the Social Sciences.

Keywords: Advanced Placement; Social Sciences; Performance Gaps; College Readiness

1. Introduction

College tuition costs have been rising faster than the cost of inflation, while student financial aid, education tax benefits, and wages have not kept up (Rose, 2017).In response to this, Advanced Placement (AP) exam participation has increased by over 65% in the last ten years (College Board, 2020). High school students have the opportunity toearn college credits by passing AP subject examinations administered worldwide through College Board. The test is made up of multiple choice (scored by computer) and free response (scored by college professors and AP teachers) to obtain a Composite Score. Students get a Composite Score that gets translated into an AP Score with a grade of 1-5 through equating, which is a statistical technique that relates an AP Exam from one year to an AP Exam from another year so that the two exams can be compared. Depending on the college and major, a 3 would represent a typical passing score, equivalent to a college course grade of "C" (College Board, 2020).

This rapid growth in participation has also increased the responsibilities of all parties involved. High school AP teachers, administrators, parents, and students are now under more pressure to prepare students for success on these examinations (Suldo et al., 2018; Shaw, Marini, & Mattern, 2013; Rodriguez and McGuire, 2019).Prior studies on AP examinations have focused on student participation rates, while fewer studies have focused on student performance (Kolluri, 2018). Within the performance-based studies, most have largely focused on AP examinations overall (Warne, 2017; Evans, 2019). In some cases, performance in specific subject areas such as Mathematics and Science have been studied more intensely (Judson 2017; Flowers & Banda, 2019), but studies lack when it comes to the Social Sciences.

There has also been much emphasis placed on ethnicity gaps in performance levels (Kettler & Hurst, 2017; Alvarado & Muniz, 2018; Graefe & Ritchotte, 2019; Rodriguez & McGuire, 2019; Judson 2017, Kang et al., 2018). However, other key indicators, such as campus and home environment have not been addressed. This study fills these holes by examining performance on AP examinations by individual student indicators and home and campus environmental influences within the Social Sciences disciplines.

AP single subject examinations can be grouped by category such as: Arts, English, History and Social Sciences, Math and Computer Science, Sciences, and World Languages and Cultures. Performance results within these categories may vary by participation and performance results as compared to overall AP results. Deeper analysis within these categories and into the subject specific exam is needed to determine gaps in participation and performance by student and campus characteristics. For example, a student taking an exam in the Sciences category, such as a Physics exam, as compared to an exam in the Social Sciences category, like an Arts History exam, may have a very different profile and probability of passing. This study compares overall AP performance to the History and Social Sciences category as this category has the highest participation rate of any category, but one of the lowest passing rates.

Further analysis is conducted on each subject exam within the History and Social Sciences category to determine where these differences lie. Determining these gaps can aid all stakeholders in AP preparation efforts to increase the success of high school students gaining college credits in Social Sciences.

2. Materials &Methods

Data was gathered from 8 high schools in a school district in the Southern United States over a 5-year period from 2015-2019. Average enrollment at these campuses was 2,886 students. The high schools were selected to capture a good range of ethnicities and economically diverse students. Data was gathered from 13,251 exams over this time period.

To measure the effect of campus environment on the AP pass rates, the high schools were grouped into 3 categories based on the percentage of economically disadvantaged students. Three high schools were considered economically advantaged campuses with <16% economically disadvantaged students. Three high schools were considered economically neutral campuses with >16% and <47% economically disadvantaged students. The remaining two High Schools were economically disadvantaged campuses with >47% economically disadvantaged students.

In addition to data on campus environment and pass rates by AP subject, data was gathered for each student based on ethnicity, gender, family economic status, gifted and talented (GT) status, and whether the student lives with both parents. AP exams were then categorized into Arts, English, History and Social Sciences, Math and Computer Science, Sciences, and World Languages and Cultures to determine differences between categories. Lastly, this study further broke down the specific category of History and Social Sciences into the subject exams, including Comparative Government and Politics, European History, Human Geography, Macroeconomics, Microeconomics, Psychology, U.S. Government and Politics, U.S. History, and World History.

Data was analyzed in SPSS using ANOVA to test for differences in passing rates based on student and campus environmental factors. Tukey's post hoc testing was then used to determine where those differences lie (IBM Corp, 2017).

3. Results

Results are presented for all categories of AP examinations and then divided into results by category (Arts, English, History and Social Sciences, Math and Computer Sciences, Sciences, and World Language and Cultures). The category History and Social Sciences was then further analyzed by specific subject for a detailed evaluation by discipline.

3.1.Results for AP Exams Overall

Campus Environment was found to be the single biggest influence on performance, most notably in the category of History and Social Sciences. Differences in Ethnicity for all AP exams found that Whites passed significantly more than Hispanics and African Americans. Results also pointed out that Hispanic students have more difficulties on English exams than Whites or African Americans, but African American lagged all ethnicities in Math and Computer Sciences. Whites and Asians outperformed both Hispanics and African Americans in History and Social Sciences.

Overall, across all exams, Males outperformed Females, with History and Social Sciences seeing the largest gap in performance. Whether or not a student lives with both parentsonly seemed to matter in History and Social Sciences with students living with both parents outperforming those who do not. Overall, the income status of the student's family did matter with respect to performance outcomes, with higher income households significantly passing exams more often. While the income status of the student's family was important with English and History and Social Sciences, it was not a major factor for Math and Computer Sciences or Sciences. GT status seemed to be important across subject categories as well, except for Math and Computer Science exams.

To get a better picture of passing performance within the fields of History and Social Sciences, the same analysis was performed for internal and external factors influencing student success for this category only.

3.2. Results for History and Social Science Category

History and Social Sciences was the most popular category of examinations with 8,309 students or 62.6% of all exams taken (Table 1). However, History and Social Sciences had the second lowest passing percent of any category, only higher than English passing rates (Table 2). Pass rates differences in History and Social Sciences were found for every student and campus indictor tested. The campus environment showed an approximate 7% increase in pass rates with students attending Advantaged Campuses over Neutral Campuses and a 7% increase in pass rates with students attending Neutral Campuses and Disadvantaged Campuses (Table 3). Ethnicity also showed significant differences with Whites and Asians passing at higher rates than Hispanics and African Americans (Table 4). Males outperformed females by almost 3%, making it statistically significant (Table 5). Some of the largest differences found were with the student's family income status, with over a 10% increase in pass rates for Economically Advantaged students (Table 6).

Students living with both parents and GT status showed significantly higher pass rates at an increase of 4.4% and over 11%, respectively (Tables 7 and 8).

Table 1.AP Exam Participation by Category

		Frequency	Percent
Valid	Arts	259	2.0
	English	2660	20.0
	HisSoc	8309	62.6
	MathComSci	480	3.6
	Sciences	1273	9.6
	WorldLangCult	270	2.0
	Total	13251	99.8
Total		13275	100.0

Table 2.Pass Rates by Exam Category

		APCategories						
		Arts	English	HisSoc	MathComSci	Sciences	WorldLangCult	Total
ExamPass	Fail Count	110_{a}	1499_{b}	4580_{b}	$254_{b, c}$	653_{c}	$129_{a, c}$	7225
	% within APCategories	42.5%	56.4%	55.1%	52.9%	51.3%	47.8%	54.5%
	Pass Count	149_{a}	1161_{b}	3729_{b}	$226_{b, c}$	620_{c}	$141_{a, c}$	6026
	% within APCategories	57.5%	43.6%	44.9%	47.1%	48.7%	52.2%	45.5%

Each subscript letter denotes a subset of AP Categories whose column proportions do not differ significantly from each other at the .05 level.

Table 3. History and Social Sciences Pass Rates by Campus Environment.

			Campus EnvAdva			
			Advantaged	Neutral	Disadvantaged	Total
ExamPass	Fail	Count	1405_{a}	2189_{b}	986_{c}	4580
		% within CampusEnvAdva	49.2%	56.6%	62.1%	55.1%
	Pass	Count	1448_{a}	1678_{b}	603_{c}	3729
		% within CampusEnvAdva	50.8%	43.4%	37.9%	44.9%

Each subscript letter denotes a subset of CampusEnvAdva categories whose column proportions do not differ significantly from each other at the .05 level.

Table 4. History and Social Sciences Pass Rates by Ethnicity.

			Ethnic					
			White	Hispanic	Afr.American	Asian	Other	Total
ExamPass	Fail	Count	1939_{a}	1975_{b}	222_{b}	282_{a}	162_{a}	4580
		% within Ethnic	51.0%	59.7%	60.8%	53.5%	52.3%	55.1%
	Pass	Count	1862_{a}	1331_{b}	143_{b}	245_{a}	148_{a}	3729
		% within Ethnic	49.0%	40.3%	39.2%	46.5%	47.7%	44.9%

Each subscript letter denotes a subset of Ethnic categories whose column proportions do not differ significantly from each other at the .05 level.

Table 5. History and Social Sciences Pass Rates by Gender.

			Gender		
			Female	Male	Total
ExamPass	Fail	Count	2444_{a}	2136_{b}	4580
		% within Gender	56.5%	53.6%	55.1%
	Pass	Count	1879_{a}	1850_{b}	3729
		% within Gender	43.5%	46.4%	44.9%

Each subscript letter denotes a subset of Gender categories whose column proportions do not differ significantly from each other at the .05 level.

Table 6. History and Social Sciences Pass Rates by Economically Disadvantaged Status.

			EcoDis		
			Not EcoDis	EcoDis	Total
ExamPass	Fail	Count	3703_a	877_b	4580
		% within EcoDis	53.3%	64.1%	55.1%
	Pass	Count	3238_a	491_b	3729
		% within EcoDis	46.7%	35.9%	44.9%

Each subscript letter denotes a subset of EcoDis categories whose column proportions do not differ significantly from each other at the .05 level.

Table 7. History and Social Sciences Pass Rates by Lives with Both Parents.

			LivesWithBoth		
			Other	BothParents	Total
ExamPass	Fail	Count	1471_a	3109_b	4580
		% within LivesWithBoth	58.2%	53.8%	55.1%
	Pass	Count	1056_a	2673_b	3729
		% within LivesWithBoth	41.8%	46.2%	44.9%

Each subscript letter denotes a subset of LivesWithBoth categories whose column proportions do not differ significantly from each other at the .05 level.

Table 8. History and Social Sciences Pass Rates by GT status.

			GT		
			Non-GT	GT	Total
ExamPass	Fail	Count	3663_a	917_b	4580
		% within GT	57.8%	46.5%	55.1%
	Pass	Count	2675_a	1054_b	3729
		% within GT	42.2%	53.5%	44.9%

Each subscript letter denotes a subset of GT categories whose column proportions do not differ significantly from each other at the .05 level.

The variability across internal and external factors prompted further investigation into the specific exams within the larger category of History and Social Sciences. Each exam falling in this category was investigated to determine where these differences were most prominent. Exams included: Macroeconomics, Microeconomics, Psychology, U.S. Government and Politics, U.S. History, World History, and Human Geography.

3.3. Results by Individual Subject

Specific exam results are shown in the following sections to determine performance gaps by discipline.

3.3.1. Macroeconomics

Gender played a major role in passing rates for Macroeconomics, with males outperforming females 41.1% to 23.9%, respectively (Table 9). Large differences were found for Advantaged Campuses over both Neutral and Disadvantaged Campuses with almost 50% passing in the Advantaged Campuses, as compared to 27.9% and 18.4% at the Neutral and Disadvantaged Campuses, respectively (Table 10). Larger family incomes contributed to an increase of over 17% as compared to passing rates for students in lower income households (Table 11), while GT status more than doubled the passing rates of non-GT students (Table 12). White ethnicities significantly outperformed all other ethnicities (Table 13). No significant differences were found for living with both parents for Macroeconomics exams.

Table 9. Macroeconomics Pass Rates by Gender

			Gender		
			Female	Male	Total
ExamPass	Fail	Count	118_a	96_b	214
		% within Gender	76.1%	58.9%	67.3%
	Pass	Count	37_a	67_b	104
		% within Gender	23.9%	41.1%	32.7%

Each subscript letter denotes a subset of Gender categories whose column proportions do not differ significantly from each other at the .05 level.

Table 10. Macroeconomics Pass Rates by Campus Environment

			CampusEnvAdva			
			Advantaged	Neutral	Disadvantaged	Total
ExamPass	Fail	Count	54_a	93_b	67_b	214
		% within CampusEnvAdva	50.5%	72.1%	81.7%	67.3%
	Pass	Count	53_a	36_b	15_b	104
		% within CampusEnvAdva	49.5%	27.9%	18.3%	32.7%

Each subscript letter denotes a subset of CampusEnvAdv categories whose column proportions do not differ significantly from each other at the .05 level.

Table 11. Macroeconomics Pass Rates by Economically Disadvantaged

			EcoDis		
			Not EcoDis	EcoDis	Total
ExamPass	Fail	Count	163_a	51_b	214
		% within EcoDis	63.9%	81.0%	67.3%
	Pass	Count	92_a	12_b	104
		% within EcoDis	36.1%	19.0%	32.7%

Each subscript letter denotes a subset of EcoDis categories whose column proportions do not differ significantly from each other at the .05 level.

Table 12. Macroeconomics Pass Rates by GT Status

			GT		
			Non-GT	GT	Total
ExamPass	Fail	Count	166_a	48_b	214
		% within GT	75.5%	49.0%	67.3%
	Pass	Count	54_a	50_b	104
		% within GT	24.5%	51.0%	32.7%

Each subscript letter denotes a subset of GT categories whose column proportions do not differ significantly from each other at the .05 level.

Table 13. Macroeconomics Pass Rates by Ethnicity

			Ethnic					
			White	Hispanic	Afr.American	Asian	Other	Total
ExamPass	Fail	Count	74_a	103_b	11_b	18_b	$8_{a, b}$	214
		% within Ethnic	54.4%	76.9%	84.6%	81.8%	61.5%	67.3%
	Pass	Count	62_a	31_b	2_b	4_b	$5_{a, b}$	104
		% within Ethnic	45.6%	23.1%	15.4%	18.2%	38.5%	32.7%

Each subscript letter denotes a subset of Ethnic categories whose column proportions do not differ significantly from each other at the .05 level.

3.3.2.Microeconomics

Microeconomics passing rates were not significant for Gender, Campus Environment, or GT status. However, higher family income did show passing rates of more than double that of students residing in lower family incomes household (Table 14). White ethnicities outperformed Hispanic ethnicities by over 13% but showed no difference in performance with African American or Asian ethnicities.

Table 14. Microeconomics Pass Rates by Economically Disadvantaged

			EcoDis		
			Not EcoDis	EcoDis	Total
ExamPass	Fail	Count	444_a	24_b	468
		% within EcoDis	52.2%	77.4%	53.1%
	Pass	Count	407_a	7_b	414
		% within EcoDis	47.8%	22.6%	46.9%

Each subscript letter denotes a subset of EcoDis categories whose column proportions do not differ significantly from each other at the .05 level.

Table 15. Microeconomics Pass Rates by Ethnicity

			Ethnic					
			White	Hispanic	Afr.American	Asian	Other	Total
ExamPass	Fail	Count	238_a	178_b	$13_{a, b}$	$29_{a, b}$	$10_{a, b}$	468
		% within Ethnic	48.5%	62.0%	44.8%	54.7%	45.5%	53.1%
	Pass	Count	253_a	109_b	$16_{a, b}$	$24_{a, b}$	$12_{a, b}$	414
		% within Ethnic	51.5%	38.0%	55.2%	45.3%	54.5%	46.9%

Each subscript letter denotes a subset of Ethnic categories whose column proportions do not differ significantly from each other at the .05 level.

3.3.3. Psychology

No statistical differences were found across any internal or external indicators for Psychology.

3.3.4. U.S. Government and Politics

No statistical differences were found across any internal or external indicators for U.S. Government and Politics.

3.3.5. U.S. History

Significant differences were found in U.S. History for every internal and external indicator. Gender was significantly significant for U.S. History with males outperforming females at 47.3% and 43.2%, respectively (Table 16). Campus environment also mattered at every level. Advantaged Campuses outperformed both NeutralCampuses by 8.5% and DisadvantagedCampuses by almost 15%. Neutral Campuses outperformed Disadvantaged Campuses by approximately 6% (Table 17). When students live with both parents, pass rates improved by 6%, which was a statistically significant difference (Table 18). Higher household income contributed a 12% gain over lower income household passing rates (Table 19), while GT students saw almost 13% higher passing rates than their non-GT counterparts (Table 20). There was no statistical difference in the performance of White or Asian ethnicities on U.S. History exams, but there were significant differences over Hispanic and African American ethnicities, by approximately 10% or more.

Table 16. U.S. History Pass Rates by Gender

			Gender		
			Female	Male	Total
ExamPass	Fail	Count	997_a	832_b	1829
		% within Gender	56.8%	52.7%	54.9%
	Pass	Count	757_a	746_b	1503
		% within Gender	43.2%	47.3%	45.1%

Each subscript letter denotes a subset of Gender categories whose column proportions do not differ significantly from each other at the .05 level.

Table 17. U.S. History Pass Rates by Campus Environment

			CampusEnvAdva			
			Advantaged	Neutral	Disadvantaged	Total
ExamPass	Fail	Count	520_a	838_b	471_c	1829
		% within CampusEnvAdva	47.8%	56.3%	62.5%	54.9%
	Pass	Count	569_a	651_b	283_c	1503
		% within CampusEnvAdva	52.2%	43.7%	37.5%	45.1%

Each subscript letter denotes a subset of CampusEnvAdv categories whose column proportions do not differ significantly from each other at the .05 level.

Table 18. U.S. History Pass Rates by Lives with Both Parents

			LivesWithBoth		
			Other	BothParents	Total
ExamPass	Fail	Count	633_a	1196_b	1829
		% within LivesWithBoth	58.8%	53.0%	54.9%
	Pass	Count	443_a	1060_b	1503
		% within LivesWithBoth	41.2%	47.0%	45.1%

Each subscript letter denotes a subset of LivesWithBoth categories whose column proportions do not differ significantly from each other at the .05 level.

Table 19. U.S. History Pass Rates by Economically Disadvantaged

			EcoDis		
			Not EcoDis	EcoDis	Total
ExamPass	Fail	Count	1432_a	397_b	1829
		% within EcoDis	52.7%	64.7%	54.9%
	Pass	Count	1286_a	217_b	1503
		% within EcoDis	47.3%	35.3%	45.1%

Each subscript letter denotes a subset of EcoDis categories whose column proportions do not differ significantly from each other at the .05 level.

Table 20. U.S. History Pass Rates by GT Status

			GT		
			Non-GT	GT	Total
ExamPass	Fail	Count	1514_a	315_b	1829
		% within GT	57.6%	44.8%	54.9%
	Pass	Count	1115_a	388_b	1503
		% within GT	42.4%	55.2%	45.1%

Each subscript letter denotes a subset of GT categories whose column proportions do not differ significantly from each other at the .05 level.

Table 21. U.S. History Pass Rates by Ethnicity

			Ethnic					
			White	Hispanic	Afr.American	Asian	Other	Total
ExamPass	Fail	Count	716_a	828_b	112_b	96_a	$77_{a, b}$	1829
		% within Ethnic	50.4%	59.4%	64.0%	47.5%	55.0%	54.9%
	Pass	Count	704_a	567_b	63_b	106_a	$63_{a, b}$	1503
		% within Ethnic	49.6%	40.6%	36.0%	52.5%	45.0%	45.1%

Each subscript letter denotes a subset of Ethnic categories whose column proportions do not differ significantly from each other at the .05 level.

3.3.6. World History

World History exams showed sizable passing rate differences for Advantaged Campuses over Neutral or Disadvantaged Campuses, by at least 8% (Table 22), while living with both parents was also significant in increasing passing rates, with an approximate gain of 5% over those not living with both parents (Table 23). Students from economically advantaged households showed approximately 8% higher passing rates than lower income households, which was statistically significant (Table 24). GT students had 14% higher passing rates than non-GT students (Table 25), while Hispanic ethnicities lagged all others for passing AP World History exams (Table 26). No significant differences were found for gender.

Table 22. World History Pass Rates by Campus Environment

			CampusEnvAdva			
			Advantaged	Neutral	Disadvantaged	Total
ExamPass	Fail	Count	463_a	865_b	355_b	1683
		% within CampusEnvAdva	49.0%	57.1%	60.3%	55.2%
	Pass	Count	481_a	649_b	234_b	1364
		% within CampusEnvAdva	51.0%	42.9%	39.7%	44.8%

Each subscript letter denotes a subset of CampusEnvAdv categories whose column proportions do not differ significantly from each other at the .05 level.

Table 23. World History Pass Rates by Lives with Both Parents

			LivesWithBoth		
			Other	BothParents	Total
ExamPass	Fail	Count	560_a	1123_b	1683
		% within LivesWithBoth	58.8%	53.6%	55.2%
	Pass	Count	392_a	972_b	1364
		% within LivesWithBoth	41.2%	46.4%	44.8%

Each subscript letter denotes a subset of LivesWithBoth categories whose column proportions do not differ significantly from each other at the .05 level.

Table 24. U.S. History Pass Rates by Economically Disadvantaged

			EcoDis		
			Not EcoDis	EcoDis	Total
ExamPass	Fail	Count	1319_a	364_b	1683
		% within EcoDis	53.7%	61.5%	55.2%
	Pass	Count	1136_a	228_b	1364
		% within EcoDis	46.3%	38.5%	44.8%

Each subscript letter denotes a subset of EcoDis categories whose column proportions do not differ significantly from each other at the .05 level.

Table 25. U.S. History Pass Rates by GT Status

			GT		
			Non-GT	GT	Total
ExamPass	Fail	Count	1347_a	336_b	1683
		% within GT	58.7%	44.7%	55.2%
	Pass	Count	949_a	415_b	1364
		% within GT	41.3%	55.3%	44.8%

Each subscript letter denotes a subset of GT categories whose column proportions do not differ significantly from each other at the .05 level.

Table 26. U.S. History Pass Rates by Ethnicity

			Ethnic					
			White	Hispanic	Afr.American	Asian	Other	Total
ExamPass	Fail	Count	707_a	742_b	$73_{a, b}$	$101_{a, b}$	$60_{a, b}$	1683
		% within Ethnic	51.1%	59.3%	60.3%	58.7%	50.4%	55.2%
	Pass	Count	677_a	509_b	$48_{a, b}$	$71_{a, b}$	$59_{a, b}$	1364
		% within Ethnic	48.9%	40.7%	39.7%	41.3%	49.6%	44.8%

Each subscript letter denotes a subset of Ethnic categories whose column proportions do not differ significantly from each other at the .05 level.

3.3.7. Human Geography

No statistical differences were found across any internal or external indicators for Human Geography. This could be because most Human Geography exams were taken at Advantaged Campuses by Freshman, making it the least diversified exam in terms of who was taking the exam and where the exam was taken.

3.4. Results by External and Internal Factors across History and Social Science Exams

When grouping results by internal and external factors, we can see than where the differences are most prominent. For example, while gender may be significant for History and Social Sciences exams overall, it is most prominent in Macroeconomics and U.S. History, where males outperform females. In the other subjects, gender is not statistically significant. Campus environment mattered most with Macroeconomics, U.S. History, and World History. Lives with both parents was significant only for U.S. History and World History. GT and Economically Disadvantaged only mattered for about half the exams. Ethnicity showed that Whites outperformed other ethnicities in over half of the subject exams, with Hispanic ethnicities lagging all other ethnicities in Microeconomics and World History.

Table 27. Performance Indictors by AP Exam Subject

	Gender	Campus Environment	Lives with Both	Eco.Dis.	GT	Ethnicity
Macroeconomics	M>F	Adv >Neut/Disadv.	X	O	O	White>all
Microeconomics	X	X	X	O	X	White>Hispanic
Psychology	X	X	X	X	X	X
U.S. Gov. & Politics	X	X	X	X	X	X
U.S. History	M>F	Adv>Neut>Disadv	O	O	O	White/Asian>Hispanic/Afr.Amer
World History	X	Adv >Neut/Disadv.	O	O	O	White>Hispanic
Human Geography	X	X	X	X	X	X

X represents not significant, while O and comments within table indicate significant differences at the .05 level.

4. Discussion

While overall passing rates showed Campus Environment to be the main indicator of performance, in the History and Social Sciences category, these results were more profound. Ethnicity performance disparities were found throughout all categories of exams, African Americans and Hispanic passing rates were lowest in the History and Social Sciences category. Gender was found to have the largest gaps in the History and Social Sciences, above all other discipline categories, with males outperforming females. The student's household income was also an important indicator within the History and Social Sciences category.

Macroeconomics, World History, and U.S. History had the largest number of performance gaps by subject. Microeconomics was only influenced by household income and Psychology, U.S. Government and Politics, and Human Geography had no significant differences in student or campus indicators on passing rates.

These findings can serve students, parents, teachers, and administrators in placing students in entry level examinations where they are most likely to succeed. Additionally, targeted intervention programs to address these differences can be specifically addressed by subject and student profile to begin to minimize these disparities in performance.

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