Educational Equity in the US

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Project 2 American Culture Presentation
ENGL 111 Spring 2024
Purdue University, West Lafayette, IN

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Research Questions

Do the actions the government and the universities take to apply the value of equality to education prevent the existence of "Matthew Effect" in education between races in US?
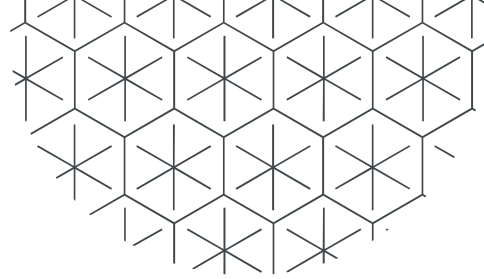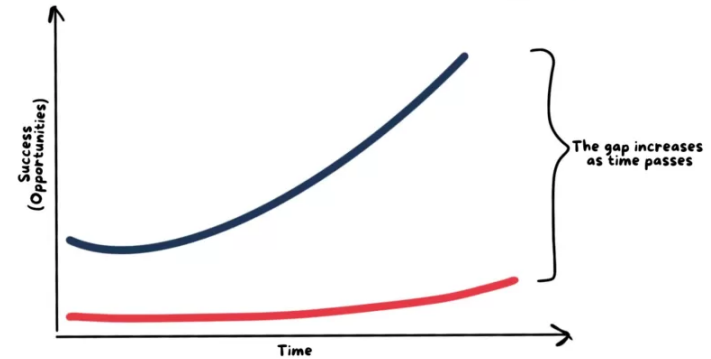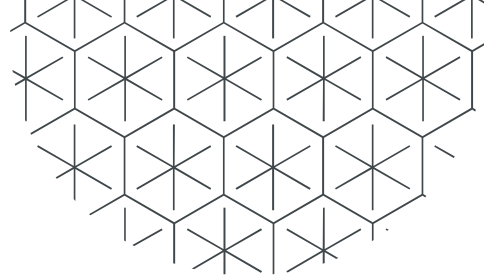
Introduction

Matthew Effect

- Definition : It's much easier for someone who already has initial advantages to have further achievements, while people with disadvantages tends to fail (Acar, 2011).

- Widely observed when analyzing Education and Economy

- Calls for government interventions to control the concequence of Matthew Effect and eliminate the inequality

Background

Sociology Background

1. **Social Capital Theory:** The aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance or recognition. (Pierre Bourdieu Richardson, J., Handbook of Theory and Research for the Sociology of Education (1986), Westport, CT: Greenwood, pp. 241–58)

2. **Structural Functionalism:** A framework for building theory that sees society as a complex system whose parts work together to promote solidarity and stability. (Macionis, John (1944–2011). Sociology. Gerber, Linda Marie (7th ed.). Toronto, Canada: Pearson Prentice Hall. ISBN 9780137001613. OCLC 652430995)

3. **Social Stratification:** a society's categorization of its people into rankings of socioeconomic tiers based on factors like wealth, income, race, education, and power.(What is social stratification?: Introduction to sociology)

Equality in Education

- **Inclusivity**

  - All individual from all backgrounds, no matter their religion or races should have equal access to educational opportunities.

- **Equity**

  - Every students should be given the same resources and opportunities to assist them for academic success.
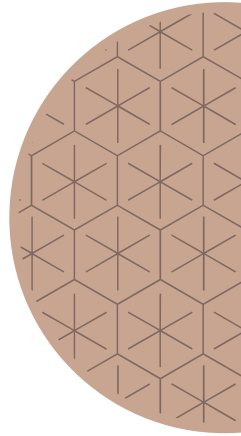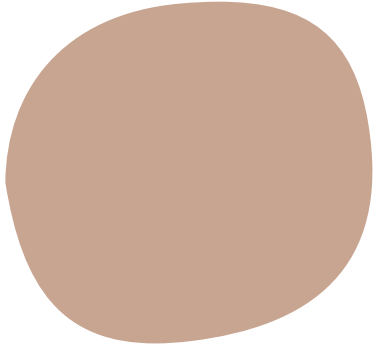
Data Presentation

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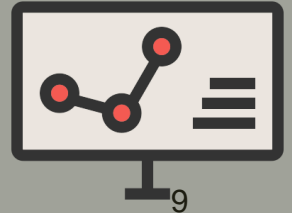
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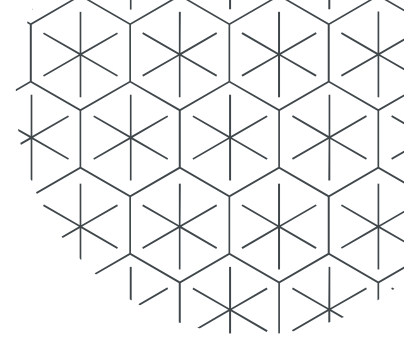
- Matthew effects in education. American educational research Journal

  - Test cumulative advantages of educative factors

  - 1,284 young adults aged 26 to 35

  - Regression analysis on three composite independent variables

    - Motivation, Prior educative experiences and Current educative experiences

- For Ferguson and nation: justice and education via anti-bias reform

  - The Matthew Effect

    - Influence on citizens' lives

  - Understanding the social outcomes

Walberg, H. J., & Tsai, S. L. (1983). Matthew effects in education. American educational research Journal, 20(3), 359-373.
Duff, D., Tomblin, J. B., & Catts, H. (2015). The influence of reading on vocabulary growth: A case for a Matthew effect. Journal of Speech, Language, and Hearing Research, 58(3), 853-864.

Prove of the Educational Inequality of Last Generation

TABLE 2—CHARACTERISTICS OF IMMIGRANTS IN 2000

|	Working age population (thousands)	Share of all immigrants (percent)	Fraction arrived		Educational attainment			
			After 1980	After 1990	Mean years completed	Dropouts	12–15 years	College or more
Natives	141,272	—	—	—	13.3	14.2	60.6	25.2
Immigrants	23,627	100.0	70.5	39.9	11.6	37.4	38.8	23.8
By country of origin								
Mexico	7,267	30.8	75.1	43.8	8.6	69.8	26.5	3.7
Philippines	1,078	4.6	66.1	31.5	14.1	9.2	43.7	47.0
India	838	3.5	78.4	51.4	15.6	9.6	20.2	70.2
Vietnam	806	3.4	75.3	39.7	11.7	34.6	45.8	19.6
China	715	3.0	82.0	50.1	13.6	24.2	29.2	46.7
El Salvador	698	3.0	85.1	37.0	8.9	65.0	30.6	4.4
Korea	664	2.8	66.4	33.1	14.0	10.6	45.8	43.6
Cuba	586	2.5	52.3	29.1	12.5	30.0	48.3	21.7
Dominican Republic	536	2.3	74.2	38.1	10.8	48.8	41.9	9.3
Canada	517	2.2	47.6	31.9	14.3	8.9	49.8	41.3
Germany	455	1.9	32.6	21.0	13.9	8.3	59.3	32.4
Jamaica	429	1.8	66.7	27.3	12.6	23.8	57.8	18.4
Columbia	400	1.7	71.9	40.5	12.5	24.7	53.3	21.9
Guatemala	400	1.7	84.0	45.9	8.8	64.5	30.4	5.1
Haiti	333	1.4	75.1	34.5	11.8	35.2	51.3	13.5
Poland	310	1.3	74.5	42.3	13.3	16.3	58.2	25.6

Notes: Based on tabulation of 2000 Census. Working age population includes people age 18 or older with 1–45 years of experience.

Douglas, P.H., & Card, D. RichaRd t . ELY LEctURE Immigration and Inequality
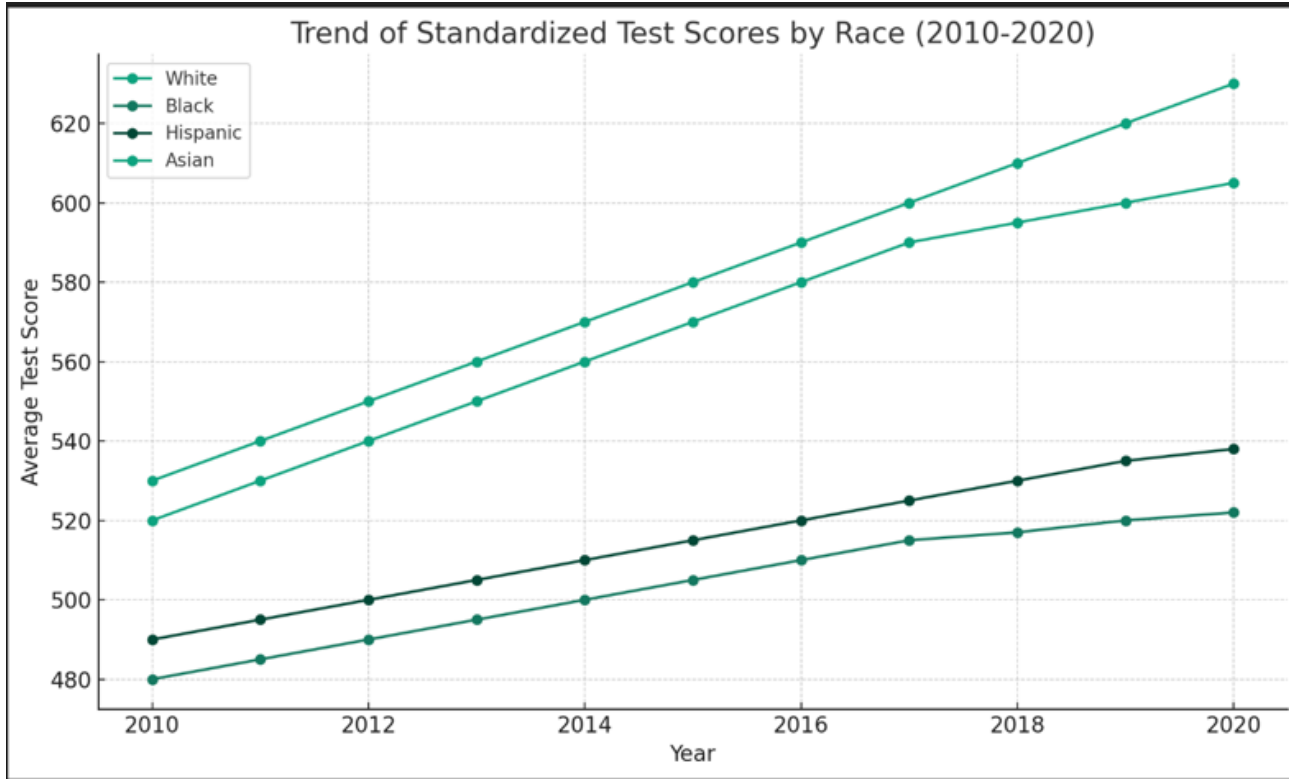
Data

Trend of Standardized Test Scores by Race (2010-2020)

Walberg, H. J., & Tsai, S. L. (1983). Matthew effects in education. American educational research Journal, 20(3), 359-373.

Measures to improve Matthew Effect

1. **Early Intervention Programs**: Implement programs that target children from disadvantaged backgrounds early in their education to prevent the achievement gap from widening.

2. **Equitable Funding**: Allocate educational resources in a way that provides more support to schools in under privileged areas to ensure all students have access to quality education.

3. **Personalized Learning**: Adopt teaching methods that cater to the individual needs of students, recognizing that students have different learning styles and paces.

Data
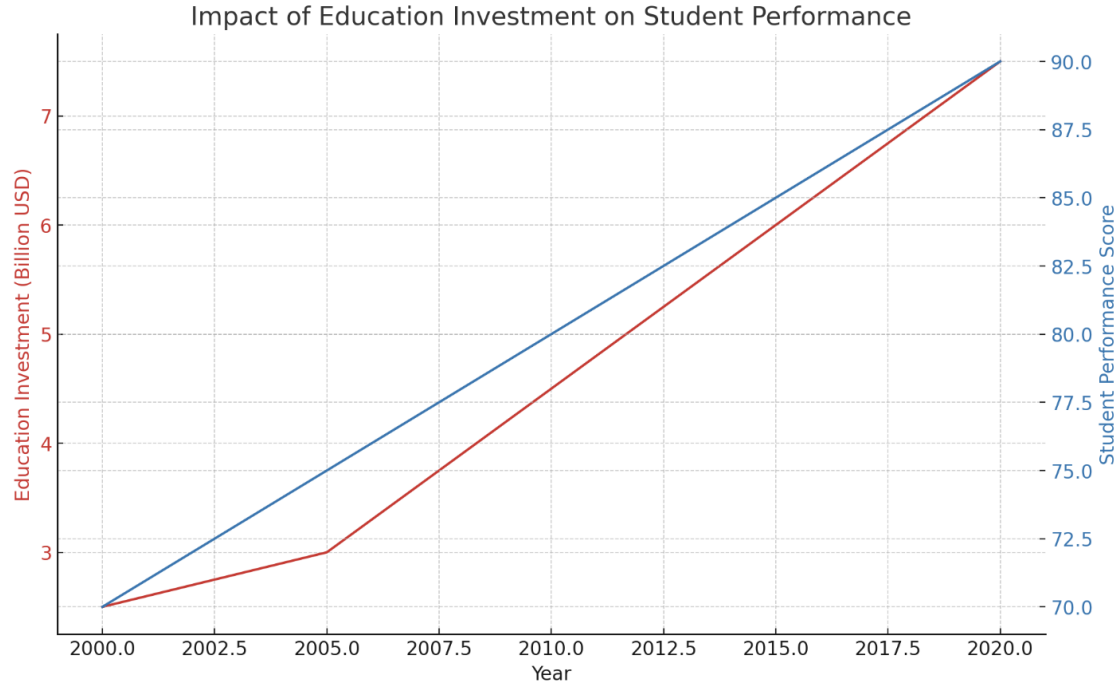
Impact of Education Investment on Student Performance

Duff, D., Tomblin, J. B., & Catts, H. (2015). The influence of reading on vocabulary growth: A case for a Matthew effect. Journal of Speech, Language, and Hearing Research, 58(3), 853-864.

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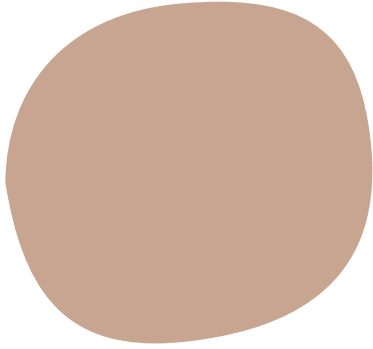
Data Presentation

Survey

Survey Overview

- Platform: Qualtrics

- Period: Mar. 3, 2024 – Mar. 12, 2024

- Target Respondents: Purdue students holding US citizenship

- Objective: This survey aims to collect data into the following areas:

    - Racial and citizenship background

    - College application

    - 1st generation or continuing-generation college students

    - Levels of family support and financial aid

    - Utilization of campus resources
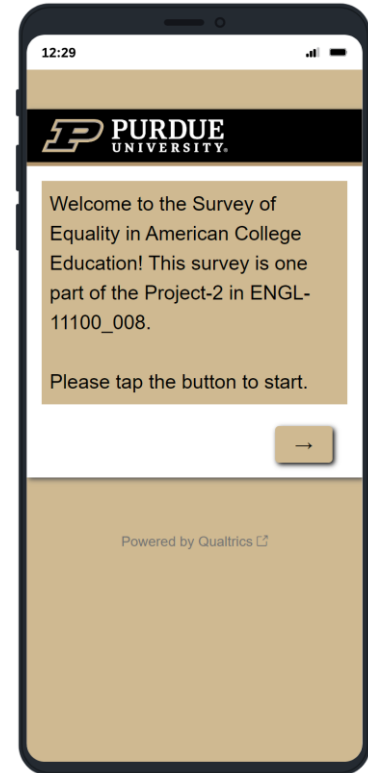
Survey Questions

- Are you Hispanic or Latino?

- **Which of the following best describes your race?**

- **What is your country of citizenship?**

- What type of educational institution did you attend before college?

- How did you learn about different universities?

- How did you apply to college? Is this method commonly used among your peers?

- **Are you the first in your family to attend college?**

- **How did your family view the importance of college education?**

- **To what extent did your family financially support your college education?**

- **Did you receive any scholarships for college?**

- Which of the following university resources have you accessed?

- Have you been able to fully utilize the resources offered by the university? If not, what barriers have you encountered?

- As a domestic student, do you believe international students face unique challenges studying in the United States that domestic students might not encounter?

Survey Questions

- **1st Generation College Students & Continuing-Generation College students**

- **Family Support**

- **Government Support**

- **Financial Support**

Survey Questions

- Are you the **first** in your family to **attend college**?

- How did your **family view** the **importance** of college education?

- To what extent did your **family financially support** your college education?

- Did you receive any **scholarships** for college?

Analysis: Racial & Citizenship Background

Which of the following best describes your race?

○ American Indian or Alaska Native
○ Asian
○ Black or African American
○ Native Hawaiian or Other Pacific Islander
○ White
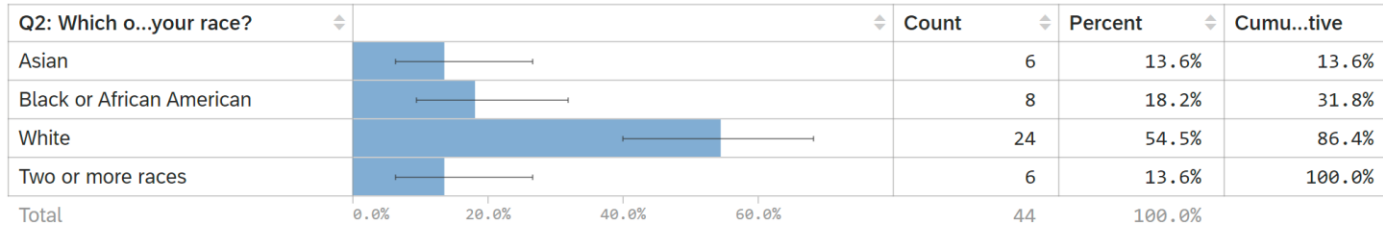○ Two or more races

What is your country of citizenship?

☐ United States
☐ Canada
☐ Mexico
☐ A country in South America (Please specify)
☐ A country in Europe (Please specify)
☐ A country in Asia (Please specify)
☐ A country in Africa (Please specify)
☐ A country in Australia/Oceania (Please specify)
☐ Other (Please specify)

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Analysis: Racial & Citizenship Background

Summary of **Q2: Which of the following best describes your race?**

Sample Size ⓘ	Number of Distinct Categories
44	4

Reorder/Recode | Bucketing

Q2: Which o...your race?		Count	Percent	Cumu...tive
Asian		6	13.6%	13.6%
Black or African American		8	18.2%	31.8%
White		24	54.5%	86.4%
Two or more races		6	13.6%	100.0%
Total		44	100.0%	

Summary of Q2: Which of the following best describes your race? vs ☑ Q3: What is your country of citizenship? - Selected Choice

Count | All % | Row % | ↻ | Reset

Q2: Which o...your race?	Q3: What is you...Selected Choice	Count	
Asian	United States	6	
Black or African American	United States	8	
White	United States	24	
Two or more races	United States	6	
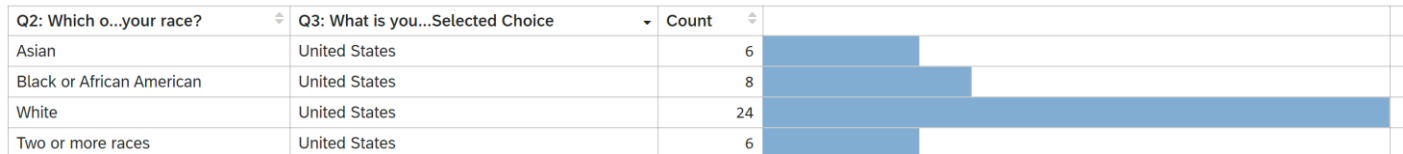
Analysis: 1st Generation College Students

Are you the first in your family to attend college?

○ Definitely not

○ Probably not

○ Might or might not

○ Probably yes

○ Definitely yes

Q2: Which of...es your race?	Q8: Are you the first in your family to attend college?				Total
	Definitely not	Probably not	Probably yes	Definitely yes	
Asian	83.3%	0.0%	16.7%	0.0%	100.0%
Black or African American	62.5%	12.5%	0.0%	25.0%	100.0%
White	87.5%	0.0%	4.2%	8.3%	100.0%
Two or more races	66.7%	0.0%	0.0%	33.3%	100.0%

Analysis: 1st Generation College Students VS. Races

Q2: Which of...es your race?	Q8: Are you the first in your family to attend college?				Total
	Definitely not	Probably not	Probably yes	Definitely yes	
Asian	83.3%	0.0%	16.7%	0.0%	100.0%
Black or African American	62.5%	12.5%	0.0%	25.0%	100.0%
White	87.5%	0.0%	4.2%	8.3%	100.0%
Two or more races	66.7%	0.0%	0.0%	33.3%	100.0%

Are you the first in your family to attend college?

Race	No (Continuing-Gen)	Yes (1st Gen)	Total
Asian	83.3%	16.7%	100.0%
Black or African American	75.0%	25.0%	100.0%
White	87.5%	12.5%	100.0%
Two or more races	66.7%	33.3%	100.0%

Analysis: Family Support

How did your family view the importance of college education?

○ Very important

○ Somewhat important

○ Neutral

○ Somewhat unimportant

○ Not important at all

○ Other (please specify) [   ]

Analysis: Family Support VS. Races

Q9: How did your family view the importance of college education? - Selected Choice

Q2: Which of...es your race?	Very important	Somewhat important	Neutral	Other (please specify)	Total
Asian	83.3%	0.0%	0.0%	16.7%	100.0%
Black or African American	50.0%	50.0%	0.0%	0.0%	100.0%
White	83.3%	16.7%	0.0%	0.0%	100.0%
Two or more races	66.7%	16.7%	16.7%	0.0%	100.0%
Total					

Q2 - Which of the following best describes your race?

Q3 - What is your country of citizenship?

Asian

United States   Canada

Q9 - How did your family view the importance of college education? - Other (please specify)

We encourage a university education but if you find a path that isn't university, we won't look down on you. Just have a plan you are working toward.

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Analysis: Family Support VS. 1st Gen

Q9: How did your family view the importance of college education? - Selected Choice

Q8: Are you t...tend college?	Very important	Somewhat important	Neutral	Other (please specify)	Total
Definitely not	80.0%	14.3%	2.9%	2.9%	100.0%
Probably not	0.0%	100.0%	0.0%	0.0%	100.0%
Probably yes	50.0%	50.0%	0.0%	0.0%	100.0%
Definitely yes	66.7%	33.3%	0.0%	0.0%	100.0%

How did your family view the importance of college education?

Generation	Very important	Somewhat important	Neutral	Other	Total
Continuing-Gen	80.0%	114.3%	2.9%	2.9%	200.0%
1st Gen	116.7%	83.3%	0.0%	0.0%	200.0%

Analysis: Family Support

To what extent did your family financially support your college education?

○ None at all

○ A little

○ A moderate amount

○ A lot

○ A great deal

○ Prefer not to answer

Analysis: Family Support VS. Races

Q10: To what extent did your family financially support your college education?

Q2: Which of...es your race?	None at all	A little	A moderate amount	A lot	A great deal	Total
Asian	0.0%	0.0%	16.7%	50.0%	33.3%	100.0%
Black or African American	12.5%	25.0%	0.0%	12.5%	50.0%	100.0%
White	12.5%	8.3%	16.7%	4.2%	58.3%	100.0%
Two or more races	0.0%	16.7%	0.0%	33.3%	50.0%	100.0%
Total						

To what extent did your family financially support your college education?

Race	None at all	A little & moderate	A lot & A great deal	Total
Asian	0.0%	16.7%	83.3%	100.0%
Black or African American	12.5%	25.0%	62.5%	100.0%
White	12.5%	25.0%	62.5%	100.0%
Two or more races	0.0%	16.7%	83.3%	100.0%

Analysis: Family Support VS. 1st Gen

Q10: To what extent did your family financially support your college education?

Q8: Are you t...tend college?	None at all	A little	A moderate amount	A lot	A great deal	Total
Definitely not	5.7%	8.6%	8.6%	17.1%	60.0%	100.0%
Probably not	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
Probably yes	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
Definitely yes	33.3%	33.3%	16.7%	0.0%	16.7%	100.0%

To what extent did your family financially support your college education?

Generation	None at all	A little & moderate	A lot & A great deal	Total
Continuing-Gen	5.7%	17.2%	177.1%	200.0%
1st Gen	33.3%	100.0%	66.7%	200.0%

Analysis: Scholarships

Did you receive any scholarships for college?

○ Yes

○ Maybe

○ No

○ Prefer not to answer

Analysis: Scholarships VS. Races

Q11: Did you receive any scholarships for college?

Q2: Which of...es your race?	Yes	Maybe	No	Prefer not to answer	Total
Asian	33.3%	0.0%	66.7%	0.0%	100.0%
Black or African American	75.0%	12.5%	12.5%	0.0%	100.0%
White	54.2%	8.3%	33.3%	4.2%	100.0%
Two or more races	50.0%	16.7%	33.3%	0.0%	100.0%
Total					

Did you receive any scholarships for college?

Race	Yes & Maybe	No	Prefer not to answer	Total
Asian	33.3%	66.7%	0.0%	100.0%
Black or African American	87.5%	12.5%	0.0%	100.0%
White	62.5%	33.3%	4.2%	100.0%
Two or more races	66.7%	33.3%	0.0%	100.0%

Analysis: Scholarships VS. 1st Gen

Q11: Did you receive any scholarships for college?

Q8: Are you t...tend college?	Yes	Maybe	No	Prefer not to answer	Total
Definitely not	51.4%	11.4%	34.3%	2.9%	100.0%
Probably not	0.0%	0.0%	100.0%	0.0%	100.0%
Probably yes	50.0%	0.0%	50.0%	0.0%	100.0%
Definitely yes	83.3%	0.0%	16.7%	0.0%	100.0%

Did you receive any scholarships for college?

Generation	Yes & Maybe	No	Prefer not to answer	Total
Continuing-Gen	62.8%	134.3%	2.9%	200.0%
1st Gen	133.3%	66.7%	0.0%	200.0%

Survey Summary

- Race and Equality:
  - Minimal correlation
- Generation Impact:
  - Significant

- 1st Generation College Students:
  - Higher emotional support from family
  - Lower financial support from family
  - Greater financial support from the government and university

Conclusion
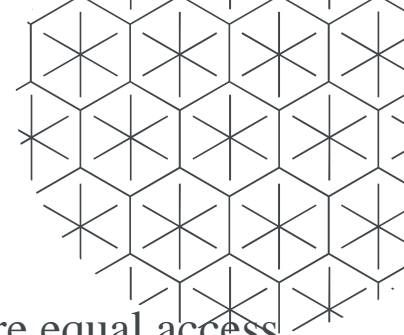
- Highlight the importance of continued advocacy and reform to ensure equal access to quality education for every student in the US

- Impact of government and university actions on promoting equality

- The Matthew effect is prevented by the actions taken by government and universities.

Resources

Acar, S. (2011). Matthew, Pygmalion, and Founder Effects. In Elsevier eBooks (pp. 75–81). https://doi.org/10.1016/b978-0-12-375038-9.00141-2

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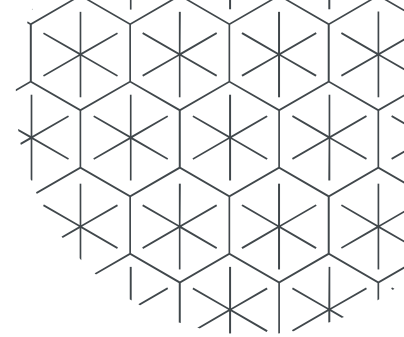
Kahoot Quiz!

Thank you!

Scan to access the slides
and survey data