

LOI R-2407-49802 for RSF’s Social, Political, and Economic Inequality Program:  
**“Parent’s Choice or School’s Choice? Discrimination Against Students in Admission to Private, Charter, and Traditional Public Schools”**

Research shows that education is strongly linked to labor market outcomes and economic mobility (Chetty et al., 2014, 2016). However, minoritized groups face significant barriers in access to education (e.g., Bergman & McFarlin, 2020; Bourabain et al., 2023), frustrating the ability of education to narrow existing socio-economic disparities. Discrimination in the school search and enrolment process is one of these barriers, especially given that existing research shows how important information and administrative support is in access to education (DeArmond et al., 2014; Harris, 2020). Discrimination is also more relevant in education since anti-discrimination laws, such as the Civil Rights Act and the Individuals with Disabilities in Education Act, only apply to schools that receive federal funding.

The educational landscape is also undergoing a significant transformation with the introduction of universal vouchers in eight states. These vouchers have the potential to fundamentally reshape education by providing parents with greater choice in selecting private schools for their children. However, this shift raises important questions about access and equity, particularly given that private schools are allowed to discriminate on any basis except race.

One potential reason for the current voucher push is that parents and schools want more flexibility to keep certain students out. The rise in vouchers coincides with recent increases in hate crimes and bias based on race, ethnicity, sexual orientation and gender identity (SOGI), and other factors (FBI, 2024). For example, hate crimes in schools based on SOGI reported to the FBI spiked at 251 in 2022 compared to a low of 70 in 2015 (FBI, 2024) and anti-Black hate crimes roughly doubled over this period (FBI, 2024; USAFacts, 2024). Hate crimes based on race, ethnicity, religion, and nationality have similarly increased (FBI, 2024). For hate and bias based on religion, there is overwhelming evidence of significant increases since the 2023 Hamas-Israel War began (e.g., Anti-Defamation League, 2023, 2024; Cotel-Altman & Lamba, 2024).

This increased bias and discrimination is on top of existing discrimination and bias that affects minoritized groups in nearly all facets of their life in the US (Bertrand & Duflo, 2017; Gaddis et al., 2021): such as in access to employment (e.g., Lippens, Vermeiren, & Baert, 2023; Neumark, 2018; Quillian, Lee, & Oliver, 2020), housing (e.g., Hanson & Hawley 2023; Schwegman, 2019), health care (e.g., Fumarco et al., 2024; Wisniewski & Walker, 2020), and public services (e.g., Beasley & Lahey, 2024; Giulietti et al., 20219).

Students have unfortunately been a focus of the recent increases in bias and discrimination, with the majority of recent anti-Black and anti-LGBTQIA+ legislation, executive orders, and policies targeting schools specifically. In 2022 there were 143 anti-trans bills considered (18 passed) by congress and state legislatures, rising sharply to 604 (87 passed) in 2023. 2024 has already (as of July 17, 2024) surpassed 2023 with 625 bills considered. The plurality of bills focus on education (193 of the 625 in 2024 thus far) but the vast majority in all other categories (e.g., bathrooms, sports, healthcare) target youth (Trans Legislation Tracker, 2024).

Anti-Black and related legislation affecting students has similarly increased rapidly, under the guise of stopping so-called “Critical Race Theory” (CRT) and diversity, equity, and inclusion (DEI) programming. Since June 2021, 44 states have introduced bills or used executive power to

ban or restrict teaching CRT or even how racism and sexism can be discussed. Seventeen states currently have these laws or executive orders (Schwartz, 2024; Stanford, 2024).

These state policies have concrete, negative impacts on students, such as being associated with increased bullying and worse mental health (Fields & Wotipka, 2022; Schanzle et al., 2023; Tawannah, 2020). They also directly affect school administrators and policies (Fields & Wotipka, 2022; Tawannah, 2020). The most notable example is the murder-suicide of Nex Benedict, a non-binary student at Owasso High School, after a flurry of anti-trans policies and actions from the Oklahoma State Department of Education, including appointing Chaya Raichik, who runs the “Libs of TikTok” hate account (and who had previously targeted the school) to the Department’s Library Media Advisory Committee (Witkowski, 2024).

Despite the stark rise in discrimination and bias, particularly affecting students, the discrimination against minoritized groups more broadly, and the fact that private schools can legally discriminate, there is little research on discrimination in access to education. We identified only seven studies in the US on discrimination in education that use the “gold standard” methodology of an audit field experiment (Bell & Jilke, 2023; Bergman & McFarlin, 2020; Gaddis et al., 2024; Janssen et al., 2022; Oberfield & Incantalupo, 2021; Pfaff et al., 2021; Rivera and Tilcsik, 2023). Of these seven, none include private schools, which can legally discriminate, and none include sexual orientation or gender identity (SOGI).

Therefore, we will conduct a nation-wide audit correspondence field experiment to quantify and compare discrimination in private, charter, and public schools, on the basis of SOGI (lesbian, gay, trans), race and ethnicity (White, Black, Hispanic), disability, and religion (Christian, Jewish, Muslim). Audit field experiments, a type of randomized control trial, are considered the “gold standard” because they allow researchers to observe real discriminatory decisions and control for all confounding factors other than minoritized status (Bertrand & Duflo, 2017; Gaddis, 2018; Neumark, 2018). In our experiment, we will email school administrators posing as a parent asking typical questions about school admission. We will randomly vary the background of the child and family, but otherwise emails are identical – allowing us to compare responses by group (e.g., Black vs. White) to get an unbiased estimate of discrimination. We can further explore the mechanisms behind this discrimination by testing how discrimination varies by factors such as state and district education policies, social attitudes, school or district characteristics, and the characteristics of school administrators (e.g., race, gender).

## Research Design

### Data and Sample of Schools

To create our sample of schools, we will merge two datasets:

1. **National Longitudinal School Database (NLSD)**, which provides detailed characteristics for a near census of all schools that were ever open since 1990. Our NLSD sample includes 91,487 public schools, 7,719 charter schools, and 24,636 private schools. We have extensive experience with this data set (e.g., Chen & Harris, 2023; Chen, Harris, & Penn, 2024; Harris & Martinez-Pabon, 2023), in addition to Harris having built it (Carroll et al., 2023a, 2023b).
2. **MDR Education’s contact data**, which provides validated contact information for schools.

We will additionally collect data from, e.g., American Community Survey, General Social Survey, and on state and district policies to elucidate *where* and *why* discrimination occurs.

## **Constructing Inquiry Emails**

We will measure discrimination by examining how school administrators respond (both in frequency and quality of response) to on-average identical inquiry emails sent from parents of prospective students. These emails will include questions about if they can apply for their child to attend and how they would go about doing so. Our emails will differ only in their signals of their child's characteristics. Our main treatment arms are:

1. **Race and ethnicity**, using names that signal the child is either White (non-Hispanic)-, African American-, or Hispanic.
2. **Sexual orientation or gender identity (SOGI)**, by mentioning that the child is either lesbian, gay, or transgender, or including no mention of SOGI.
3. **Gender**, through feminine- or masculine-coded first names.
4. **Religion**, by mentioning that the family is Christian, Jewish, Muslim, or no mention.
5. **Disability**, by mentioning that the child has an Individualized Education Program (IEP) vs. no mention.

## **Pairing and Sending Inquiry Emails**

In most cases, these signals (treatment arms) are independently assigned. However, we only include either SOGI or religion, since including more than one highly minoritized status significantly increases the risk of detection (e.g., Balfe et al., 2023). We will send each school administrator two emails as matched pairs, where race and ethnicity, SOGI or religion, and IEP vary within the pair. That is, we will not repeat a signal within a pair of emails going to the same administrator (e.g., both emails would not be from White families, both would not mention IEPs). We will send emails in random order, with the second being one month later.

## **Data Analysis Methodology**

Since our audit field experiment is a randomized control trial, we can simply compare school administrator response rates and quality by group to get unbiased estimates of discrimination. We then build on this difference-in-means analysis by running regressions which include control variables (which are not needed given randomization, but increase precision) and, more importantly, interactions to capture intersectional discrimination and to test key hypotheses. For example, to test if discrimination against, e.g., Black students, is higher in private schools, we would include the interaction "Black x Private" in the regression.

## **Power Analysis and Pre-Analysis Plan**

We conducted a power analysis using input values from a prior study (Bergman & McFarlin, 2020). Assuming only 100,000 schools (our NLS data has 123,842) and assuming standard, but more conservative, values for statistical significance, power, and inter-correlation between clusters ( $\alpha = 0.05$ ,  $\beta = 0.95$ ,  $ICC=0.2$ ), we can detect differences in response rates of as low as 0.88 to 1.19 percentage points for treatment arms that are included in the entire sample (race and ethnicity, disability). For SOGI and religion, which do not occur together, this is 1.25 assuming half the sample is used. We are also interested in interaction effects, such as if racial discrimination differs by school type or gender. Using similar input values, and assuming two samples of equal size (e.g., girls vs. boys), we can detect a difference in discrimination of at least 2 to 3 percentage points between samples. We will file a pre-analysis plan in the AEA Registry, following best practices in pre-analysis plan construction (Duflo et al., 2020).

## Qualifications and Responsibilities of Key Investigators

Patrick Button (Co-PI; they/he) is an Associate Professor of Economics at Tulane University and a Faculty Research Fellow at the NBER. They are a leading expert on discrimination and audit field experiments, with 12 peer-reviewed publications on these topics. Button will manage the experimental design and the writing and filing of the pre-analysis plan.

Douglas Harris (Co-PI) is chair of the Department of Economics and the Schlieder Foundation Chair in Public Education at Tulane University. He is a non-resident Senior Fellow at the Brookings Institution and the founding Director of both the Education Research Alliance for New Orleans and the National Center for Research on Education Access and Choice (REACH). Harris will help refine the experimental design and manage the writing of the paper.

Hussain Hadah (Co-Investigator) is a post-doctoral fellow in economics at Tulane University. Hussain is a labor economist with research on discrimination, racial and ethnic identities, and audit field experiments. Hadah will manage data collection and analysis.

Barbara Lundebjerg (Co-Investigator) is a Ph.D. candidate in economics at Tulane University with expertise in experimental design and audit field experiments management. Lundebjerg will assist with the experimental design, data analysis, and data collection.

### Budget

Patrick Button: \$23,479, calculated as one month summer salary for year 1 and half a month for year 2. This is inclusive of 6.0% fringe and a 3% salary increase in year 2.

Barbara Lundebjerg: \$19,081, calculated as 5 hours per week in the 24-25 and 25-26 academic years (18 months) and 15 hours per week in Summer 2025 at a rate of \$32.34 (incl. of fringe).

(We are not requesting salary for Harris or Hadah as both have existing support.)

Research Assistants (RAs): \$46,350, calculated as 500 hours each for graduate (\$26.95) and undergraduate (\$19.40) RAs (incl. of fringe). This is about 10 hours per week for each RA type.

Data: \$16,000 for purchase of MDR Education dataset.

Total Direct (Indirect) Costs: \$104,910 (\$15,737)      Grand Total: \$120,647

### Project Timeline

Date	Milestone
May 2025	Grant period begins. Purchase MDR Education data.
July 2025	Finalize design and file pre-analysis plan.
Dec. 2025 – May 2026	Send emails to schools.
Jan. 2026 – July 2026	Process and code response data.
July 2026 – Aug. 2026	Conduct analysis of main results. Start writing working paper.
Sept. 2026 – Oct. 2026	Merge in secondary data for analysis (e.g., NLSD, Census).
Oct. 2026 – Nov. 2026	Present early results at fall conferences (e.g., APPAM).
Nov. 2026 – Jan. 2027	Conduct secondary analysis, robustness checks.
Feb. 2027	Finalize and distribute working paper (via NBER, others).
Apr. 2027	Submit paper for peer-review.

## References

- Anti-Defamation League. (2023, December 7). Anti-Muslim Hate Surfaces Nationwide as Israel-Hamas War Continues. *ADL Blog*. <https://www.adl.org/resources/blog/anti-muslim-hate-surfaces-nationwide-israel-hamas-war-continues>.
- Anti-Defamation League. (2024, July 11). “Time to Escalate”: Anti-Israel Activists Intensify Protests with Violent, Direct Actions. *ADL Blog*. <https://www.adl.org/resources/blog/time-escalate-anti-israel-activists-intensify-protests-violent-direct-actions>.
- Balfe, C., Button, P., Penn, M., & Schwegman, D. J. (2023). Infrequent Identity Signals, Multiple Correspondence, and Detection Risks in Audit Correspondence Studies. *Field Methods*, 35(1), 3–17. <https://doi.org/10.1177/1525822X211057623>.
- Beasley, R. A., & Lahey, J. (2024). Correspondence Audit Studies in Public Administration: A Systematic Review with Commentary. *Journal of Behavioral Public Administration*, 6, 1–30. <https://doi.org/10.2139/ssrn.4489724>
- Bell, E., & Jilke, S. (2024). Racial Discrimination and Administrative Burden in Access to Public Services. *Scientific Reports*, 14(1), 1071. <https://doi.org/10.1038/s41598-023-50936-1>.
- Bergman, P., & McFarlin, Jr., I. (2018). Education for All? A Nationwide Audit Study of School Choice. *National Bureau of Economic Research Working Paper*, 25396. <https://doi.org/10.3386/w25396>.
- Bertrand, M., & Duflo, E. (2017). Field Experiments on Discrimination. *Handbook of Economic Field Experiments*, 1, 309-293. <https://doi.org/10.1016/bs.hefe.2016.08.004>.
- Bourabain, D., Verhaeghe, P.-P., & Stevens, P. A. J. (2023). School of choice or schools’ choice? Intersectional correspondence testing on ethnic and class discrimination in the enrolment procedure to Flemish kindergarten. *Race, Ethnicity and Education*, 26(2), 184–204. <https://doi.org/10.1080/13613324.2020.1798379>.
- Carroll, J. M., Harris, D. N., Nair, A., Nordgren, E. (2023a.) Introducing the National Longitudinal School Database. *National Center for Research on Education Access and Choice (REACH)*. <https://reachcentered.org/uploads/policybrief/NLSD-Summary.pdf>
- Carroll, J. M., Harris, D. N., Nair, A., Nordgren, E. (2023b.) National Longitudinal School Database (NLSD) Data Description. *National Center for Research on Education Access and Choice (REACH)*. <https://reachcentered.org/uploads/technicalreport/NLSD-Data-Description.pdf>.
- Chen, F., Harris, D. N., & Penn, M. (2024). The Effects of Charter School Entry on the Supply of Teachers from University-Based Education Programs. *Economics of Education Review*, 99, 102520. <https://doi.org/10.1016/j.econedurev.2024.102520>.
- Chen, F. & Harris, D. N. (2023). The Market-Level Effects of Charter Schools on Student Outcomes: A National Analysis of School Districts, *Journal of Public Economics* 228, 105015. <https://doi.org/10.1016/j.jpubeco.2023.105015>.
- Chetty, R., Hendren, N., Kline, P., & Saez, E. (2014). Where is the land of Opportunity? The Geography of Intergenerational Mobility in the United States. *The Quarterly Journal of Economics*, 129(4), 1553-1623. <https://doi.org/10.1093/qje/qju022>.
- Chetty, R., Hendren, N., & Katz, L. F. (2016). The Effects of Exposure to Better Neighborhoods on Children: New Evidence from the Moving to Opportunity Experiment. *American Economic Review*, 106(4), 855-902. <https://doi.org/10.1257/aer.20150572>.
- Cotel-Altman, A., & Lamba, A. (2024, February 7) ‘An incredible sense of uneasiness’: Israel-Hamas war sparks wave of hate crimes in U.S. *Spectrum News*,

- <https://spectrumlocalnews.com/nys/central-ny/news/2024/02/02/rise-in-antisemitism-and-islamophobia-since-israel-hamas-war>.
- DeArmond, M., Jochim, A., & Lake, R. (2014). *Making School Choice Work*. Center on Reinventing Public Education. [https://crpe.org/wp-content/uploads/CRPE\\_MakingSchoolChoiceWork\\_Report.pdf](https://crpe.org/wp-content/uploads/CRPE_MakingSchoolChoiceWork_Report.pdf).
- Duflo, E., Banerjee, A., Finkelstein, A., Katz, L.F., Olken, B.A., & Sautmann, A. (2020). In Praise of Moderation: Suggestions for the Scope and Use of Pre-Analysis Plans for RCTs in Economics. *National Bureau of Economic Research Working Paper*, 26993. <https://doi.org/10.3386/w26993>.
- Federal Bureau of Investigations (FBI). (2024) Federal Bureau of Investigation Crime Data Explorer: Hate Crime in the United States Incident Analysis. Retrieved July 22, 2024 from <https://cde.ucr.cjis.gov/LATEST/webapp/#/pages/explorer/crime/hate-crime>.
- Fields, X., & Wotipka, C. M. (2022). Effect of LGBT Anti-Discrimination Laws on School Climate and Outcomes for Lesbian, Gay, and Bisexual High School Students. *Journal of LGBT Youth*, 19(3), 307–329. <https://doi.org/10.1080/19361653.2020.1821276>.
- Fumarco, L., Harrell, B. J., Button, P., Schwegman, D. J., & Dils, E. (2024). Gender Identity-, Race-, and Ethnicity-Based Discrimination in Access to Mental Health Care: Evidence from an Audit Correspondence Field Experiment. *American Journal of Health Economics*, 10(2), 182–214. <https://doi.org/10.1086/728931>.
- Gaddis, S. M. (2015). Discrimination in the Credential Society: An Audit Study of Race and College Selectivity in the Labor Market. *Social Forces* 93(4), 1451–1459. <https://doi.org/10.1093/sf/sou111>.
- Gaddis, S. M. (2018). An Introduction to Audit Studies in the Social Sciences. In S. M. Gaddis (Ed.), *Audit Studies: Behind the Scenes with Theory, Method, and Nuance*. Springer.
- Gaddis, S. M., Larsen, E. N., Crabtree, C., & Holbein, J. B. (2021). Discrimination Against Black and Hispanic Americans Is Highest in Hiring and Housing Contexts: A Meta-Analysis of Correspondence Audits. *SSRN Working Paper*. <https://dx.doi.org/10.2139/ssrn.3975770>.
- Gaddis, S. M., Crabtree, C., Holbein, J. B., & Pfaff, S. (2024). Racial/Ethnic Discrimination and Heterogeneity Across Schools in the U.S. Public Education System: A Correspondence Audit of Principals. *SocArXiv Papers*. <https://doi.org/10.31235/osf.io/zq4hn>.
- Giulietti, C., Tonin, M., & Vlassopoulos, M. (2019). Racial Discrimination in Local Public Services: A Field Experiment in the US. *Journal of the European Economic Association*, 17(1), 165–204. <https://doi.org/10.1093/jeea/jvx045>.
- Hanson, A., & Hawley, Z. (2023). Restricted Access: Real Estate Agent Response to Client Race, Ethnicity, Gender, and Side of Market. *Real Estate Economics*, 1-36. <https://doi.org/10.1111/1540-6229.12438>.
- Harris, D. N. & Martinez-Pabon, V. (2023). Extreme Measures: A National Descriptive Analysis of Closure and Restructuring of Traditional Public, Charter, and Private Schools. *Education Finance and Policy*, 19(1), 1-29. [https://doi.org/10.1162/edfp\\_a\\_00386](https://doi.org/10.1162/edfp_a_00386).
- Harris, D. N. (2020). *Charter School City: What the End of Traditional Public Schools in New Orleans Means for American Education*. University of Chicago Press.
- Janssen, J., Seaton, E., Jager, J., & Miller, C. F. (2022). Guidance or Gatekeeping: An Audit Examination of Racial Discrimination in Leading STEM High Schools. *Journal of Research on Adolescence*, 32(2), 625–635. <https://doi.org/10.1111/jora.12722>.

- Lippens, L., Vermeiren, S., & Baert, S. (2023). The state of hiring discrimination: A meta-analysis of (almost) all recent correspondence experiments. *European Economic Review*, 151, 104315. <https://doi.org/10.1016/j.euroecorev.2022.104315>.
- Neumark, D. (2018). Experimental Research on Labor Market Discrimination. *Journal of Economic Literature*, 56(3), 799–866. <https://doi.org/10.1257/jel.20161309>.
- Oberfield, Z. W., & Incantalupo, M. B. (2021). Racial Discrimination and Street-Level Managers: Performance, Publicness, and Group Bias. *Public Administration Review*, 81(6), 1055–1070. <https://doi.org/10.1111/puar.13376>.
- Pfaff, S., Crabtree, C., Kern, H. L., & Holbein, J. B. (2021). Do Street-Level Bureaucrats Discriminate Based on Religion? A Large-Scale Correspondence Experiment among American Public School Principals.” *Public Administration Review* 81(2), 244–259. <https://doi.org/10.1111/puar.13235>.
- Quillian, L., Lee, J. J., & Oliver, M. (2020). Evidence from Field Experiments in Hiring Shows Substantial Additional Racial Discrimination after the Callback. *Social Forces*, 1–28. <https://doi.org/10.1093/sf/soaa026>.
- Rivera, L. A., & Tilcsik, A. (2023). Not in My Schoolyard: Disability Discrimination in Educational Access. *American Sociological Review*, 88(2), 284–321. <https://doi.org/10.1177/00031224221150433>.
- Schanzle, J., Kennedy, J., Rahman, F., & Hill, S. (2023). Anti-Trans Legislation in the US: Potential Implications on Self-Reported Victimization and Suicidality among Trans Youth. *Journal of Adolescent Health* 72(3), S17–S18. <https://doi.org/10.1016/j.jadohealth.2022.11.018>.
- Schwartz, S. (2024, June 6). Map: Where Critical Race Theory Is Under Attack. *EducationWeek*. <https://www.edweek.org/policy-politics/map-where-critical-race-theory-is-under-attack/2021/06>.
- Schwegman, D. J. (2019). Rental Market Discrimination Against Same-Sex Couples: Evidence from a Pairwise-Matched Email Correspondence Test. *Housing Policy Debate* 29(2), 250–272. <https://doi.org/10.1080/10511482.2018.1512005>.
- Stanford, L. (2024, January 10). A Side Effect of Anti-CRT Campaigns? Reduced Trust in Local Schools. *EducationWeek*. <https://www.edweek.org/leadership/a-side-effect-of-anti-crt-campaigns-reduced-trust-in-local-schools/2024/01>.
- Tawannah, G. A. (2020). Effect of Anti-Immigration and Anti-LGBT Policies on K-12 Students. In Papa, R. (Ed.) *Handbook on Promoting Social Justice in Education*. Springer International Publishing. <https://doi.org/10.1007/978-3-030-14625-2>.
- USAFacts. (2024, February 15). What are hate crimes, and what are the facts behind them? 2022 had the highest number of reported hate crimes since the FBI began tracking them in 1991. *USAFacts*, <https://usafacts.org/articles/hate-crime-data-value-expanding-our-sources/>.
- Wisniewski, J. M., & Walker, B. (2020). Association of Simulated Patient Race/Ethnicity with Scheduling of Primary Care Appointments. *JAMA Network Open*, 3(1), e1920010. <https://doi.org/10.1001/jamanetworkopen.2019.20010>.
- Witkowski, D. (2024, March 5). Death of Nex Benedict Shines Spotlight on Oklahoma’s Anti-LGBTQ+ Agenda. *Pride Source*. <https://web.archive.org/web/20240305225304/https://pridesource.com/article/death-of-nex-benedict-shines-spotlight-on-oklahomas-anti-lgbtq-agenda>.