

# Reconsidering the Use of the Graduate Record Examination (GRE) in Graduate School Admissions Decisions

To address the social, economic, and environmental challenges facing our nation and our broader global community, we must produce and apply new knowledge and understandings of the world. High-quality graduate education is an essential training ground for the discovery, critical analysis, and experimentation necessary to achieve this goal.

The American Sociological Association is committed to fostering engaged and productive intellectual communities in graduate programs across the nation to ensure strong scholarly advancement. To that end, we urge graduate programs to reconsider their use of the Graduate Record Examination (GRE) in decisions about admissions and graduate student funding. There is substantial evidence to demonstrate that use of the GRE reproduces patterns of inequality rather than serving the intended function of standardizing information across applicants from different backgrounds (Alon and Tienda 2007; Blau, Moller, and Jones 2004; Crouse and Trusheim 1988; Lutz, Bennett and Wang 2018; Posselt 2016; Sacks 2000; Wood and Wong 1992). The reproduction of inequality, we know as sociologists, has serious consequences. In the case of graduate admissions, it damages the quality of graduate cohorts, graduate education, and knowledge production more broadly. We make the following recommendations:

Recommendation #1: End the GRE requirement as part of the graduate admissions process.

Studies conducted across a wide range of disciplines show that the power of GRE scores to predict success in and after graduate school is limited, with higher scores somewhat correlated with first-year graduate school grades or passing comprehensive examinations, and not correlated with other outcomes such as degree completion and publication rates (Hall, O'Connell, and Cook 2017; Kuncel and Hezlett 2007; Kuncel, Hezlett, and Ones 2001; Moneta-Kohler et al. 2017; Posselt 2016: 8; 195n30).

Further, the predictive power of GRE scores is highly variable across demographic groups (Jones, Combs, and Skidmore 2019; Lightfoot and Doerner 2008; Oldfield and Hutchinson 1996; Stack and Kelly 2002). GRE scores are less effective in predicting outcomes for women than men (House 1994; Sampson and Boyer 2001; Sternberg and Williams 1997), for older students than younger students (House 1998), for international students than non-international students (Feeley, Williams, and Wise 2005), and for Black students than White or Asian students (Dunlap et al. 1998; Hall et al. 2017; Scott and Shaw 1985; Sealy et al. 2019). It is difficult for low-income students to afford the registration fees for standardized tests, let alone pay additional fees to take prep courses or retake the test, options that can improve performance (Buchmann, Condron, and Roscigno 2011).

The variation in GRE scores across demographic groups and the lack of evidence for the overall predictive power of the GRE leads to the formation of graduate school cohorts—and eventually to populations of advanced degree holders—that lack diversity. This dearth undermines the potential of the educational system, and the people and ideas it produces. Diversity has tangible benefits for the progress of knowledge (Page 2008). There is evidence, for example, that doctoral student researchers from underrepresented backgrounds innovate at higher rates than majority-group students (Hofstra et al. 2020). Studies have also shown that networks with diverse subgroups perform better than those with homogeneous subgroups, and diverse learning teams work better than non-diverse teams (Maroulis, Diermeier, and Nisar 2020; Watson, Johnson, and Zgourides 2002).

Because of the disparities in GRE scores across groups, the common practice of using minimum scores as a cut-off, though expedient, keeps many underrepresented applicants from being seriously considered during the admissions process (Miller and Stassun 2014). As sociologists Alon and Tienda (2007) have argued, "the apparent tension between merit and diversity exists only when merit is narrowly defined by test scores." Imposing GRE cut-off scores to winnow the field of applicants is sure to remove qualified candidates from consideration, and directly undermines institutional goals related to increasing diversity (Miller et al. 2019; Posselt 2016).

The current pandemic has caused many programs and institutions to eliminate the GRE and other standardized testing requirements, speeding up a previously slow movement under way since the 1990s (Furuta 2017; Hu 2020; Jaschik 2018; Langin 2019a). We encourage higher education leaders to make these changes permanent.

Recommendation #2: Do not allow prospective students the option of submitting GRE scores with their applications.

"Test-optional" policies, which are increasingly popular (Furuta 2017), may not—at least on their own—solve the problem. When standardized test score submission is optional, high scorers have been shown to be more likely to submit (Belasco, Rosinger, and Hearn 2015). And once reviewers of an application see information such as a test score, even if they are told to disregard it, we know that they will likely still use that information in making decisions (Biernat et al. 2018; Miron-Shatz and Ben-Shakhar 2008). If a program is serious about increasing the number of applicants from underrepresented racial backgrounds, it should consider the signaling effect of requiring test scores in a context where many programs are making principled moves away from it (Langin, 2019b).

## Recommended Alternatives

We recommend that graduate schools and programs base admissions decisions on more reliable predictors of graduate school success, many of which are already being used. These include, for example, undergraduate coursework and grades (Feeley et al. 2005; McKee, Mallory, and Campbell 2001; Reisig and DeJong 2005) and recommendations from previous mentors (Hall et al. 2017). Admissions processes that do not rely on standardized tests may also place value on personal statements, writing samples, or previous experience (Furuta 2017).

Because no single element of an application is immune from bias, holistic review principles should guide committees' processes and ultimate decisions (Bastedo et al. 2018; Hossler et al. 2019; Kent and McCarthy 2016). Committees and individual reviewers should take into account multiple elements of the application from the beginning of the review process. Within the application, they should review for a comprehensive set of student qualities and recognize them through contextualized, systematic analysis (Posselt 2020). As holistic review becomes more common, we encourage admissions committees to engage in continued self-scrutiny. We also need more research on the mechanics and outcomes of holistic review.

If programs decide to continue using GRE scores among their admission criteria, we recommend that they not include GRE scores in early stages of evaluating applicants nor impose cut-off scores, that they not use scores as the sole criterion, and that they contextualize GRE scores by training admissions committee members on score disparities across demographic groups (Posselt 2016; Posselt and Miller 2018).

#### What is at Stake?

We are committed to policies that are rooted in evidence and the pursuit of equity. In this case, the evidence does not support admissions officials' reliance on GRE scores. Such reliance unnecessarily decreases the diversity of the applicant pool and introduces an avoidable element of bias into the selection process. Discontinuing use of the GRE in graduate admissions decisions will ensure a fairer admissions process for all prospective graduate students, broaden access for underrepresented groups in graduate education, and strengthen the educational enterprise for all.

## **Endorsements:**

American Anthropological Association

### References:

Alon, Sigal, and Marta Tienda. 2007. "Diversity, Opportunity, and the Shifting Meritocracy in Higher Education." *American Sociological Review* 72(4):487-511.

Bastedo, Michael N., Nicholas A. Bowman, Kristen M. Glasener, and Jandi L. Kelly. 2018. "What are we talking about when we talk about holistic review? Selective college admissions and its effects on low-SES students." *The Journal of Higher Education* 89(5):782-805.

Belasco, Andrew S., Kelly O. Rosinger, and James C. Hearn. 2015. "The test-optional movement at America's selective liberal arts colleges: A boon for equity or something else?" *Educational Evaluation and Policy Analysis* 37(2):206-223.

Biernat, Monica, Adrian J. Villicana, Amanda K. Sesko, and Xian Zhao. 2018. "Effects of dyadic communication on race-based impressions and

memory." *Group Process and Intergroup Relations* 21(2):302-318.

Blau, Judith R., Stephanie Moller, and Lyle V. Jones. 2004. "Why Test? Talent Loss and Enrollment Loss." *Social Science Research* 33:409-434.

Buchmann, Claudia, Dennis J. Condron, and Vincent J. Roscigno. 2011. "Shadow Education: Theory, Analysis, and Future Directions." *Social Forces* 89(2): 483-490.

Crouse, James, and Dale Trusheim. 1988. *The Case Against the SAT*. Chicago: The University of Chicago Press.

Dunlap, Katherine M., H. Carl Henley, Jr., and Mark W. Fraser. 1998. "The Relationship Between Admissions Criteria and Academic Performance in an MSW Program." *Journal of Social Work Education* 34(3):455-462.

Feeley, Thomas Hugh, Vivian M. Williams, and Timothy J. Wise. 2005. "Testing the Predictive Validity of the GRE Exam on Communication Graduate Student Success: A Case Study at University at Buffalo." *Communication Quarterly* 53(2):229-245.

Furuta, Jared. 2017. "Rationalization and Student/School Personhood in U.S. College Admissions: The Rise of Test-optional Policies, 1987-2015. Sociology of Education 90(3):236-254.

Hall, Joshua D., Anna B. O'Connell, and Jeanette G. Cook. 2017. "Predictors of Student Productivity in Biomedical Graduate School Applications. *PLoS ONE* 12(1).

Hofstra, Bas, Vivek K. Kulkarni, Sebastian Muñoz-Najar Galvez, Bryan He, Dan Jurafsky, and Daniel A. McFarland. 2020. "The Diversity-Innovation Paradox in Science." *PNAS* 117(17):9284-9291.

Hossler, Don, Emily Chung, Jihye Kwon, Jerry Lucido, Nicholas Bowman, and Michael Bastedo. 2019. "A Study of the Use of Nonacademic Factors in Holistic Undergraduate Admissions Reviews." *The Journal of Higher Education* 90(6):833-859.

House, J. Daniel. 1998. "Age Differences in Prediction of Student Achievement from Graduate Record Examination Scores." *The Journal of Genetic Psychology* 159(3):379-382.

House, J. Daniel. 1994. "Gender Differences in Prediction of Grade Performance from Graduate Record Examination Scores." *The Journal of Psychology* 128(6):695-697.

Hu, Jane C. 2020. "Graduate programs drop GRE after online version raises concerns about fairness." *Science* June 24, 2020. Retrieved January 5, 2021. https://www.sciencemag.org/careers/2020/06/graduat e-programs-drop-gre-after-online-version-raises-concerns-about-fairness.

Jaschik, Scott. 2018. "Decision by Penn's philosophy department renews debate about GRE." *InsideHigherEd.Com* September 17, 2018. Retrieved January 6, 2021.

https://www.insidehighered.com/print/admissions/article/2018/09/17/decision-penns-philosophy-department-renews-debate-about-gre.

Jones, Brandolyn E., Julie Peterson Combs, and Susan Troncoso Skidmore. 2019. "Admission Criteria for Educational Leadership Doctoral Students in One U.S. Doctoral Program."

International Journal of Doctoral Studies 14:351-365

Kent, Julia D., and Maureen Terese McCarthy. 2016. Holistic Review in Graduate Admissions: A Report from the Council of Graduate Schools. Washington, DC: Council of Graduate Schools

Kuncel, Nathan R., and Sarah A. Hezlett. 2007. "Standardized Tests Predict Graduate Students' Performance." *Science* 315:1080-1081.

Kuncel, Nathan R., Sarah A. Hezlett, and Deniz S. Ones. 2001. "A Comprehensive Meta-Analysis of the Predictive Validity of the Graduate Record Examinations: Implications for Graduate Student Selection and Performance." *Psychological Bulletin* 127(1): 162-181.

Langin, Katie. 2019a. "A wave of graduate programs drops the GRE application requirement." *Science* May 29, 2019. Retrieved January 5, 2021. https://www.sciencemag.org/careers/2019/05/wave-graduate-programs-drop-gre-application-requirement.

Langin, Katie. 2019b. "Ph.D. programs drop standardized exam." *Science* May 31, 2019. Retrieved January 19, 2021. https://science.sciencemag.org/content/364/6443/816. summary.

Lightfoot, Robert C., and William G. Doerner. 2008. "Student Success and Failure in a Graduate Criminology/Criminal Justice Program." *American Journal of Criminal Justice* 33:113-129.

Lutz, Amy, Pamela R. Bennett, and Rebecca Wang. 2018. "Mismatch and Academic Performance at America's Selective Colleges and Universities." *Ethnic and Racial Studies* 41(14):2599-2614.

Maroulis, Spiro, Daniel Diermeier, and Muhammad Azfar Nisar. 2020. "Discovery, dissemination, and information diversity in networked groups." *Social Networks* 61:67-77.

McKee, Adam J., Stephen L. Mallory, and Julie Campbell. 2001. "The Graduate Record Examination and Undergraduate Grade Point Average: Predicting Graduate Grade Point Averages in a Criminal Justice Graduate Program." *Journal of Criminal Justice Education* 12(2):311-317.

Miller, Casey, Benjamin M. Zwickl, Julie R. Posselt, Rachel T. Silvestrini, and Theodore Hodapp. 2019.

"Typical physics Ph.D. admissions criteria limit access to underrepresented groups but fail to predict doctoral completion." *Science Advances* 5(1). Retrieved January 12, 2021. https://advances.sciencemag.org/content/5/1/eaat755 0?fbclid=IwAR2LHtx1J7XkAieS3sLFFztz\_ClvUqE AWwWcZYsEn4mCi8wLPbFatIRZ7ik

Miller, Casey, and Keivan Stassun. 2014. "A Test That Fails." *Nature* 510:303-304.

Miron-Shatz, Talya, and Gershon Ben-Shakhar. 2008. "Disregarding Preliminary Information When Rating Job Applicants' Performance: Mission Impossible?" *Journal of Applied Social Psychology* 38(5):1271-1294.

Moneta-Koehler, Liane, Abigail M. Brown, Kimberly A. Petrie, Brent J. Evans, and Roger Chalkley. 2017. "The Limitations of the GRE in Predicting Success in Biomedical Graduate School." *PLoS ONE* 12(1).

Oldfield, Kenneth, and Janet R. Hutchinson. 1996. "Predictive Validity of the Graduate Record Examination with and without Range Restraints." *Psychological Reports* 81(1):211-220.

Page, Scott E. 2018. The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Society. Princeton, NJ: Princeton University Press.

Posselt, Julie R. 2020. Equity in Science: Representation, Culture, and the Dynamics of Change in Graduate Education. Redwood City, CA: Stanford University Press.

Posselt, Julie R. 2016. *Inside Graduate Admissions: Merit, Diversity, and Faculty Gatekeeping.* Cambridge, MA: Harvard University Press.

Posselt, Julie R., and Casey W. Miller. 2018. "It's Time for the Talk." *InsideHigherEd.com* May 7, 2018. Retrieved January 13, 2021. https://www.insidehighered.com/admissions/views/2 018/05/07/doctoral-programs-need-rethink-their-use-standardized-tests-opinion.

Reisig, Michael D., and Christina DeJong. 2005. "Using GRE Scores and Prior GPA to Predict Academic Performance among Criminal Justice Graduate Students." *Journal of Criminal Justice Education* 16(1):37-59.

Sacks, Peter. 2000. Standardized Minds: The High Price of America's Testing Culture and What We Can Do to Change It. Cambridge, MA: Perseus Books.

Sampson, Charles, and Patricia G. Boyer. 2001. "GRE Scores as Predictors of Minority Students' Success in Graduate Study: An Argument for Change." *College Student Journal* 35(2):271-279.

Scott, Richard R., and Marvin E. Shaw. 1985. "Black and White Performance in Graduate School and Policy Implications of the Use of Graduate Record Examination Scores in Admissions." *The Journal of Negro Education* 54(1):14-23.

Sealy, Linda, Christina Saunders, Jeffrey Blume, and Roger Chalkley. 2019. "The GRE over the entire range of scores lacks predictive ability for PhD outcomes in the biomedical sciences." *PLoS ONE* 14(3).

Stack, Steven, and Thomas Kelly. 2002. "The Graduate Record Examination as Predictor of Graduate Student Performance: The Case of Criminal Justice." *Journal of Criminal Justice Education* 13(2):335-349.

Sternberg, Robert J., and Wendy M. Williams. 1997. "Does the Graduate Record Examination Predict Meaningful Success in the Graduate Training of Psychologists?" *American Psychologist* 52(6):630-641.

Watson, Warren E., Lynn Johnson, and George D. Zgourides. 2002. "The influence of ethnic diversity on leadership, group process, and performance: an examination of learning teams." *International Journal of Intercultural Relations* 26:1-16.

Wood, James L., and Amy C. Wong. 1992. "GRE Scores and Graduate School Success." *Footnotes* [ASA Publication] November 1992:6.