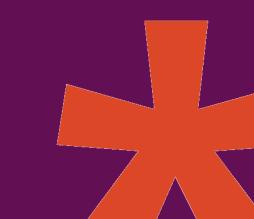
ETS and the GRE® Program

Supporting the Graduate Community





What's in this slide deck

- Introduction to the program team and the GRE® Board
- The value of the GRE tests and validity evidence
- Using GRE scores as part of a holistic process
- Increasing access and equity for applicants
- Additional resources for graduate programs
- About ETS and our commitment to diversity

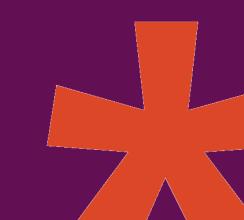




Introduction

to the program team and the GRE® Board





Welcome from the *GRE*® Program team

As your partner in supporting program and student potential, nonprofit ETS, the independent GRE Board of your peers and the GRE Program team are committed to providing information and guidance to help you achieve your goals, including increasing campus diversity. GRE tests and services help you advise prospective students, create smart recruitment strategies, and evaluate and compare applicants. We hope that the slides that follow provide information that is useful to you as you consider evolving your admissions process.

ETS also has engaged five **graduate education advisors**, who are available for consultation, discussion and group presentations. They are:



Terry Ackerman
Distinguished Professor
Educational Measurement
University of Iowa



Bill Andrefsky Professor Emeritus Former Graduate Dean Washington State



John Augusto
Associate Dean
Strategic Initiatives
Georgia State



Maureen Grasso
Prof., Textile Sciences
Former Graduate Dean
North Carolina State



Steve Matson
Biology Professor
Former Graduate Dean
UNC – Chapel Hill



The GRE® Board

The Board is an independent board with members appointed by the Association of Graduate Schools and the Council of Graduate Schools. It oversees GRE tests, services and research in consultation with its committees, and establishes all policies for the GRE Program, which ETS administers. Its standing committees are:

- Diversity, Equity and Inclusion
- Executive
- Finance
- Research
- Services

Board Leadership



Mark J T Smith University of Texas at Austin Board Chair



Michael Cunningham Tulane University Services Committee Chair



Wojtek Chodzko-Zajko University of Illinois, Urbana-Champaign Board Chair-elect and Finance Committee Chair



William Karpus
University of Wisconsin –
Madison
Diversity, Equity and
Inclusion Committee Chair



Frances Leslie University of California, Irvine Board Past Chair



Barbara Knuth Cornell University Research Committee Chair



Suzanne Ortega Council of Graduate Schools Ex Officio Member of Board



Brian French
Washington State University
Technical Advisory
Committee Chair



Resource: GRE Board and Advisory Councils

The GRE® Board and committee members



Gino Aisenberg University of Washington



Charles Ambler CGS



Alfredo Artiles Arizona State University



Suzanne Barbour University of North Carolina



Li Cai University of California



JoAnn Canales CGS



Julie Coonrod University of New Mexico



Robin Garrell University of California



Andrés Gil Florida International Univ.



Kent Holsinger
University of Connecticut



David Jackson Florida A&M University



Thomas Jeitschko Michigan State University



Ranjit Koodali Western Kentucky University



Barbara Krauthamer University of Massachusetts



Jerry Kukor Rutgers University



Kim Needy University of Arkansas



erry Pogatshnik astern Kentucky University



Susan Porter
University of British Columbia



nne Romagni versity of Tennessee



Sheila Thomas Harvard University



Mark Wallace Vanderbilt University

In 2019, the GRE Program expanded expertise on diversity, equity and Inclusion



Anthony DePass Long Island University



Fred Oswald Rice University



Maurice Taylor Morgan State University



The GRE® Technical Advisory Committee

The TAC advises the GRE Program and GRE Research Committee on the technical quality of GRE research, the long-range GRE research agenda, and on technical and measurement issues.

Members include:

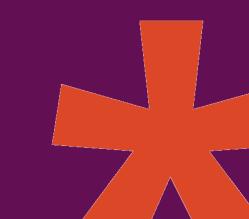
- Keena Arbuthnot Louisiana State University
- Victor Borden Indiana University
- Ying (Alison) Cheng University of Notre Dame
- Brian F. French (Chair) Washington State University
- Barbara A. Knuth Cornell University
- Joni M. Lakin Auburn University
- Kimberly Nehls University of Nevada, Las Vegas
- Frederick Oswald Rice University



The value of the GRE® tests

validity evidence and other research





Benefits and limitations of using GRE® scores

To understand the true value of the *GRE*[®] General Test and *GRE*[®] Subject Tests, it helps to understand their benefits and limitations, including what the tests were designed to measure and predict, and what the tests were never designed to predict.

Benefits:

- GRE scores support institutions' efforts to identify which applicants are academically prepared for graduate-level study. Because the tests are standardized and administered in a secure environment, these measures are not affected by grade inflation, and GRE® Analytical Writing samples are not subject to editing by parents or mentors, unlike other samples submitted with the application. It's this standardization and objectivity that helps programs fairly compare students from different backgrounds. Resource: Four Facts about the GRE® General Test
- When used as part of a holistic admissions process which means evaluating all information about applicants, including test scores GRE scores balance out more subjective components of the application. Scores also enable applicants who come from lower socioeconomic backgrounds to be seen among their better-resourced peers. It is this role as a leveler of the playing field that enables programs that review applications holistically to achieve their enrollment goals, including increasing diversity. Resource: Navigating Holistic Admissions



Benefits and limitations of using *GRE*® scores (continued)

Limitations:

- Test scores cannot offer insight about all of the qualities that are important in predicting
 academic or career success, which are more often influenced by variables such as changes in
 job, family status and satisfaction with the program, variables that cannot be measured by
 tests of academic skills. Resource: Understanding and Improving Graduate Program
 Retention Rates
- No single measure can completely represent a person's potential. The GRE Program has long discouraged graduate programs from using GRE scores as the sole factor for making any decision, as doing so lessens the importance of other components of a candidate's application such as indicators of desirable attributes like grit and conscientiousness and can result in a less diverse student body. Resource: GRE® Guide to the Use of Scores
- On average, members of different socioeconomic, racial and ethnic backgrounds perform
 differently on standardized tests. Group score differences do not mean that tests are biased.
 Extensive research has shown that performance differences can be attributed to a number of
 factors, including social, economic and educational disparities. It's important for us all to
 learn how to better use the information, rather than throw it out because we don't like
 what it's telling us. A holistic admissions approach, in which all information is considered, is
 the best way to mitigate this limitation. Resource: Test Takers From Underrepresented Groups



Measurement nonprofit addresses misconceptions

NATIONAL COUNCIL ON MEASUREMENT IN EDUCATION

Misconceptions about Group Differences in Average Test Scores

Posted: November 22, 2019

The recent request to the Regents of the University of California to stop using college admissions test scores pointed out the troubling reality that there are large score differences across racial/ethnic groups on college admissions tests. However, the letter reinforced two misconceptions about tests that need to be corrected. First, the letter claimed that differences across racial/ethnic groups in test performance signify test bias. Second, the letter claimed that the typical finding that students from high-income families obtain higher test scores, on average, than students from low-income families constitutes proof of test bias. These erroneous claims confuse correlation with causality. Differences in socioeconomic status and quality of education exist across racial/ethnic groups in this country. Criticizing test results for reflecting these inequities is like blaming a thermometer for global warming. For this reason, the Standards for Educational and Psychological Testing (American Educational Research Association, American Psychological Association, and National Council on Measurement in Education, 2014) explicitly point out that test fairness does not require equality of outcomes. As the Standards state "...group differences in testing outcomes should trigger heightened scrutiny for possible sources of test bias ... However, group differences in outcomes do not in themselves indicate that a testing application is biased or unfair" (p. 54). Some examples of factors that may contribute to average score differences across racial/ethnic groups are disparities in school and community resources, teacher quality, course offerings, and access to cultural activities. The National Council on Measurement in Education is troubled by these inequities and would like to see educational assessments be part of the solution in resolving them. However, we note the disparities in test performance are caused by disparities in educational opportunities, and that group differences in college admissions tests do not equate to test bias. Rather than limiting the types of information college admissions officers can use, we encourage proper use and interpretation of all data associated with college readiness, and we acknowledge the importance of the information provided by college admissions test scores.



Resource: NCME Statements

The case for using *GRE*® scores

- The benefits of having a standard measure that helps to level the playing field and provides evidence of
 academic skills and graduate readiness outweigh the limitations of the tests, which can be overcome by
 adopting a holistic admission process that balances the limitations of any one part of the
 application. Resource: Reviewer Diligence and Responsibility in the Graduate Admissions Process
- Every component of a student's application is subject to bias. For example, a committee could be influenced by the status or eloquence of the person who wrote a recommendation letter. Or the reputation of the undergraduate institution. Or that an applicant had less available time to do research or take unpaid internships due to the need to work. Resource: Gradeinflation.com
- The GRE tests are the only part of the admissions file that regularly go through rigorous fairness reviews. They are overseen by the GRE Board and GRE Technical Advisory Committee (a group of external psychometric experts), and meet psychometric standards published by the American Psychological Association (APA), the American Educational Research Association (AERA), and the National Council on Measurement in Education (NCME). Resource: Test Fairness and Validity
- Without GRE scores as a normalizing factor, what other measure will programs use that is common and objective, undergoes a rigorous fairness review process and yields comparative data? How will applicants be fairly compared, especially those from underrepresented groups and other countries?

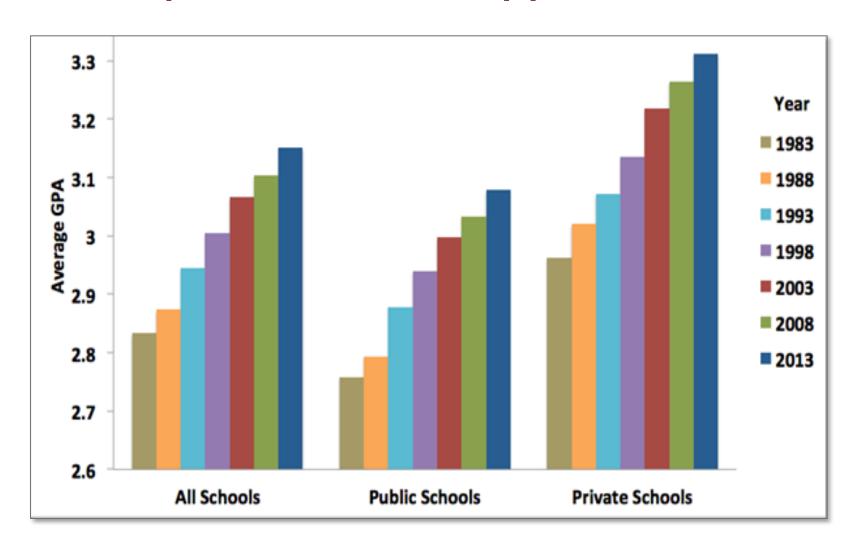


New research provides a blueprint for holistic review using *GRE*® scores

- A 2019 report by Marenda Wilson and other researchers at The University of Texas MD
 Anderson Cancer Center UTHealth Graduate School of Biomedical Sciences concluded that:
 - It is the practice of using cut scores, not the GRE test itself, that disproportionately affects doctoral applicants from underrepresented groups
 - An admissions committee can mitigate GRE score variances between demographic groups
 - A multitiered holistic applicant review process can increase the diversity of the applicant pool without increasing the workload of the admissions committee
- The report also provides a blueprint for institutions that want to implement a data-driven approach to assess applicants in a manner that uses GRE scores as part of the process.
- Resource: A Model for Holistic Review in Graduate Admissions That Decouples the GRE from Race, Ethnicity, and Gender



All components of the application have imperfections ...



Educational opportunities and life circumstances can have a substantial influence on all components of an application.

- Reputation of the undergraduate institution
- Personal statements
- Letters of recommendation
- Undergraduate GPA

Resource: gradeinflation.com



but only the GRE® tests have processes to minimize bias

All components of the application are subject to bias, but only the GRE tests have checks and balances to ensure they are as fair and unbiased as possible:

- Training staff on the ETS Standards for Quality and Fairness, which are aligned with AERA/NCME/APA professional standards
- Forming diverse teams to review test questions
- Removing questions that seem to disadvantage any one group

Without GRE scores, students who attended lesser-known institutions are less able to demonstrate their academic capabilities.

Resources: ETS Fairness and GRE Test Fairness and Validity





Predictive validity of the *GRE*® General Test

Of the many studies that show that the GRE General Test is a valid measure, some of the most often-referenced are:

- Research shows that Analytical Writing scores are the best or second-best predictors of future GPA, across master's and doctoral programs.
- New Perspectives on the Validity of the GRE® General Test for Predicting Graduate School Grades by D. Klieger et al., shows the predictive validity of the GRE General Test by section across multiple disciplines for master's and doctoral programs (Tables 13 and 14), and the value of the test in identifying students likely to struggle.
- Various published works that confirm the validity of the GRE General Test; find them at <u>GRE Validity Resources</u>.

Resources: <u>If You're Not Using GRE Analytical Writing Scores, You Might Be Missing Out and GRE Test Validity: Putting It In Perspective</u>



A meta-analysis of 82,659 students by University of Minnesota found that ...

- GRE General Test is a valid predictor of:
 - Overall graduate GPA
 - Comprehensive exam scores
 - Publication citation counts
 - Faculty ratings
- Positive correlation with:
 - Degree attainment
 - Research productivity
- Better predictive validity than UGPA and letters of recommendation
- Findings applied across master's and doctoral programs

<u>The Validity of the Graduate Record Examination for Master's and Doctoral Programs: A Meta-analytic Investigation</u>

Predictive validity of the *GRE*® Subject Tests

- The GRE Subject Tests measure achievement in a particular field of study and help departments evaluate applicants' readiness for graduate school.
- A <u>meta-analysis</u> by Nathan R. Kuncel, Sarah A. Hezlett and Deniz S. Ones showed that GRE Subject Test scores are better predictors of graduate school success then GRE® General Test scores or undergraduate grade point average.



Some reports claiming the tests are not valid predictors of success in graduate school have made headlines in the past year. However, most of those studies have serious flaws. Be cautious of studies that show the following four conditions:

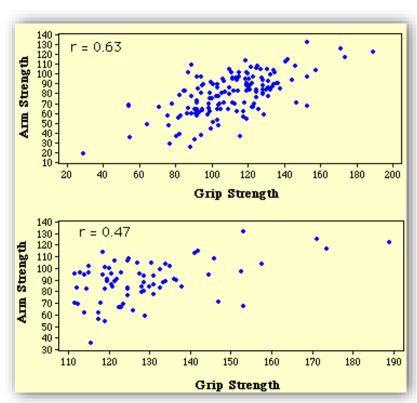


Insufficient sample sizes, which can lead to incorrect conclusions.

Most of the research unfavorable toward the *GRE*[®] tests rely upon small sample sizes, leading to incorrect conclusions. A sample size of 75 is generally accepted as the threshold for doing this kind of analysis, and the more variables researchers want to include, the larger the sample size should be.

The University of Minnesota meta-analysis referenced on slide 14 used a sample size of more than 82,000 students. The quality of research always matters. And when analyzing the value of standardized testing, quantity matters as well.





This chart shows correlation between arm strength and grip strength for 147 people working in physically demanding job. The upper portion shows the scatterplot for all 147 workers. The lower portion shows the scatterplot for the 73 workers who scored highest on grip strength. It's clear how restricting the range can heavily skew the results. **Source:** davidmlane.com

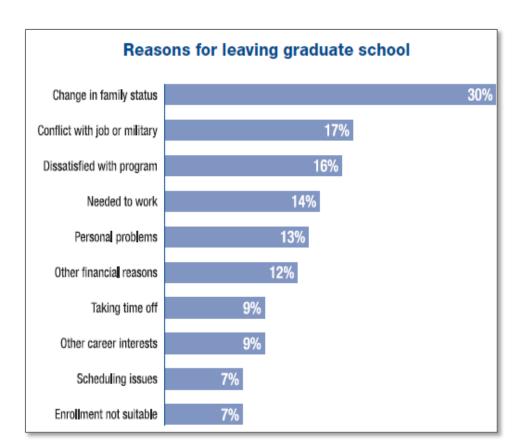


Restricted range and failure to account for it, which skews the results, leading to incorrect conclusions.

Recently published research has based conclusions on a restricted range of *GRE*® test takers — those who have already gotten in — but not accounted for that range restriction in the analysis. As a result, the samples used in these studies are skewed toward individuals who scored high on the GRE, making inferences about individuals who scored lower on the test suspect, due to their relative scarcity. The ideal study would include data about <u>all</u> applicants to a particular program, including those who were not accepted.

- By only including those accepted, researchers are only considering those who were at the top of the total potential population, and therefore, are more likely to succeed. Range restriction skews the results.
- Good research accounts for range restriction so that if the entire population is not available, at least that weakness has been factored into the analysis.





Source: The Path Through Graduate School: A Longitudinal Examination 10 Years After Bachelor's Degree



Erroneous attribution.

Some studies appear to show that *GRE*® scores do not predict program completion. That's not surprising. Graduate students leave their programs for many reasons, most often because of changes in their life circumstances or for personal reasons. These are factors the *GRE*® General Test does not measure or predict.

The GRE General Test remains a valuable measure of important knowledge and skills related to success in graduate education. And as shown on slide 14, GRE General Test scores correlate positively with program completion, though admittedly not as strongly as scores correlate with other outcomes the test can predict, such as graduate GPA.





Lack of a true "control" in the study.

Some programs that drop the *GRE*[®] test requirement do so while they are making many other changes, such as offering more financial support, beginning a mentoring program, and working on making their environments more inclusive.

Those are all great things to do.

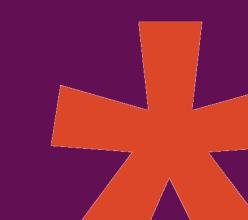
But note that making several changes at once and then drawing the conclusion that dropping the GRE test requirement is what produced an increase in program completion may not be accurate.



Using GRE® scores

as part of a holistic process





What is "holistic admissions"?

At its core, holistic admissions is about considering **all information** to get the fullest picture of everything that an applicant can bring to a program.

But it's not just about <u>what</u> information is considered, but <u>how</u>. Programs that are <u>advanced</u> in their holistic admissions practice typically:

- Avoid using threshold (or cutoff) scores that are determined using only undergraduate GPA and GRE® scores, as that may prevent candidates with other desirable qualities from being considered.
- Give thought to the weighting of various components of the application and the order in which those components are reviewed to consider all information about an applicant in a fair and equitable way.

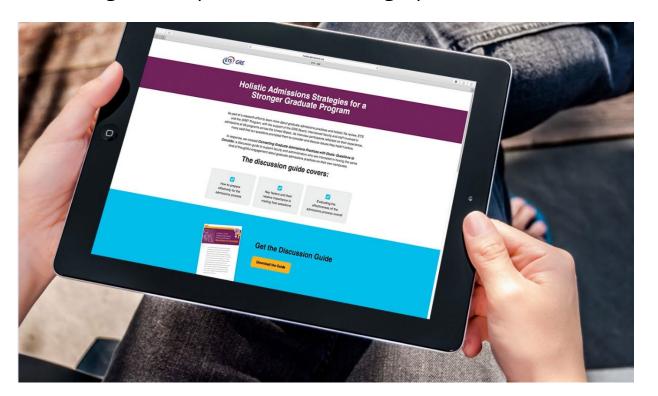
Information typically considered in holistic review

- Undergraduate record, including grades, transcript and reputation of undergraduate program
- Standardized test scores that provide evidence of graduate readiness, such as GRE scores, and English-language proficiency (as needed), such as TOEFL® scores
- Recommendations
- Personal statement or statement of purpose
- Internship and work experience
- Research experience
- Demographics, such as gender and ethnicity



HolisticAdmissions.org

ETS created this website to help institutions as they consider how to structure their admissions processes and policies to achieve their goals. It offers downloadable resources, including videos, presentations, infographics and articles.







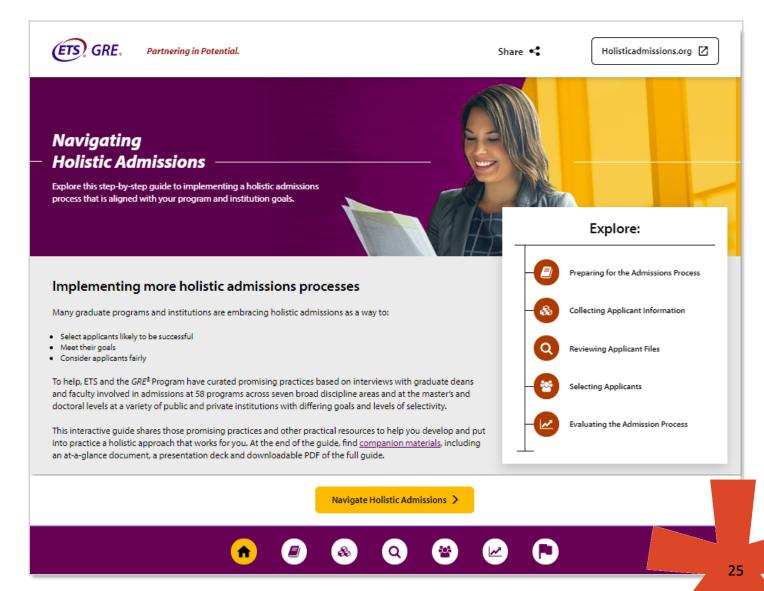






"Navigating Holistic Admissions" digital guide

- After gathering input from deans, faculty, enrollment managers and diversity officers from more than a dozen institutions, the GRE® Program launched a digital guide to offer clarity around what types of questions and issues programs and institutions should consider at various stages of the admissions process.
- Topics include preparing for the admissions process, considering the composition of the faculty committee, ensuring the application instructions are written to yield the information needed to make decisions, mitigating unconscious bias and more.





"Navigating Holistic Admissions" digital guide

This robust resource provides research-based guidance, examples from programs, and **downloadable content** that can be emailed, printed and shared.

Resource: Navigating Holistic Admissions Digital Guide

At-a-Glance Infographic



Guide PDF



PowerPoint® with Talking Points

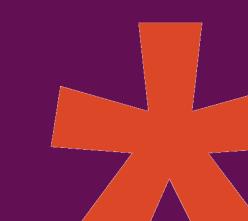




Increasing access and equity

for applicants





Reducing barriers for applicants

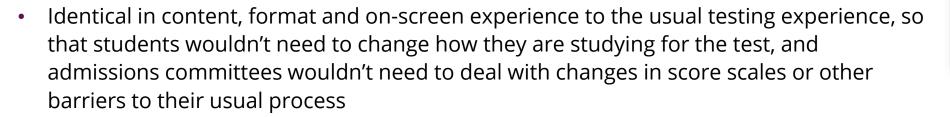
The *GRE*® Program works to increase access, affordability and equity through five significant offerings:

- The GRE® General Test at home
- The GRE Fee Reduction Program
- The availability of excellent free test prep
- Industry-leading accommodations for people with disabilities and health-related needs
- Feedback on test performance



Taking the *GRE*® General Test from the safety of home

Just six weeks after the coronavirus began shuttering test centers in Asia, ETS launched the GRE General Test at home so students could continue their educational journeys without delay ... and without sacrificing their safety. The GRE General Test at home is:





- Offered at the same price; ETS is not passing along the cost of the remote proctoring services to students
- Accessible, with extended time, extra breaks, screen magnification, selectable colors and many other accommodations available

Resources: <u>GRE® Test at Home and Other COVID-19 Updates</u> for institutions and the <u>GRE® General Test at Home</u> student microsite



Applicants can pay less — or nothing — to take a *GRE*® test

There are <u>three ways</u> for applicants to pay less — or nothing — to take the *GRE*® General Test and/or a *GRE*® Subject Test:

- 1) Apply for a **50% fee reduction voucher**, which is available for individuals who can demonstrate financial need and for those who are unemployed and receiving unemployment compensation
- Receive a 50% fee reduction voucher from one of a dozen programs that serve students from underrepresented groups, first-generation college students, and students with financial need
- Receive a full or partial pre-paid voucher from any sponsoring program, organization or individual

Resources: GRE® Fee Reduction Program and GRE® Prepaid Voucher Service



Fee Reduction Program

- This program was started in 1971.
- In the past six years, over 31,000 *GRE*® Fee Reduction Vouchers were used, with ETS contributing over \$3.2 million to the effort.
- Year-over-year usage has increased as ETS has made vouchers available to more programs.
- Those who qualify for a fee reduction also get free access to additional test prep (\$100 value).



Two POWERPREP PLUS® Online Practice Tests



ScoreltNow!™ Online Writing Practice



Programs that receive fee reduction vouchers annually from ETS

- EducationUSA Opportunity Fund Program
- Gates Millennium Scholars Program
- Institute for Recruitment of Teachers (IRT)
- Management Leaders of Tomorrow
- Maximizing Access to Research Careers (MARC)
 Undergraduate Student Training in Academic Research (U-STAR) Program
- National Consortium for Graduate Degrees for Minorities in Engineering and Science Program (GEM)
- NSF Louis Stokes Alliance for Minority Participation (LSAMP) Program
- Postbaccalaureate Research Education Program (PREP)
- Research Initiative for Scientific Enhancement (RISE)
 Program
- Society for the Advancement of Chicanos and Native Americans in Science (SACNAS)
- TheDream.US
- TRIO Ronald E. McNair Postbaccalaureate Achievement Program
- TRIO Student Support Services (SSS) Program

Resource: www.ets.org/gre/grefeereduction

Excellent, free test prep



POWERPREP® Online simulates the *GRE®* General Test. Two practice tests are designed to help test takers understand what's being tested, gain familiarity with question types and the functionality of the test, and practice taking the test under timed conditions. Test takers with disabilities or health-related needs can also practice with the following accommodations: extended time, extra breaks, screen magnification, selectable colors, and screen reader and refreshable braille compatibility.

- Math Review 100-page math refresher that includes definitions, properties, examples and a set of exercises with answers.
- Khan Academy® For each Math Review topic, there are links to instructional videos available at the Khan Academy.

- Math Conventions Mathematical notations, symbols, terminology and guidelines.
- Subject Test Practice Books Each practice book contains a full-length test and answer key, test-taking strategies and more.

Resource: Prepare for the *GRE*[®] General Test



Accommodations

- The *GRE*® Program offers the most advanced accessibility features and support of any testing program worldwide and is the first testing program to provide this level of accessibility to test takers.
 - The entire GRE test taker experience is fully accessible from registration through score reporting.
 - Many accommodations are available such as extended testing time, extra breaks, alternate test formats, assistance (i.e., human reader), screen magnification, selectable colors, JAWS and refreshable braille compatibility.
 - Test preparation materials are also available in accessible formats.
- ETS's goal is to meet or exceed *W3C*[®] WCAG* 2.1 and section 508 requirements and ETS staff actively participate in W3C standards development to address the unique challenges of assessment accessibility.
- Working closely with the National Federation of the Blind (NFB), the ETS Accessibility Standards & Inclusive Technology team developed and launched new accessibility features in the *GRE*® General Test in November 2017, which allowed test takers with visual impairments to use *JAWS*® and refreshable braille.

Resource: Accommodations for Test Takers with Disabilities or Health-Related Needs



Performance feedback

The free *GRE*[®] Diagnostic Service provides insight into the test taker's performance on the test questions in the Verbal Reasoning and Quantitative Reasoning sections of the *GRE*[®] General Test.

The service includes:

- a description of the types of questions the test taker answered right and wrong
- the difficulty level of each question
- the time spent on each question

It is available for all test takers who take the computer-based test, including those who take the test at home.

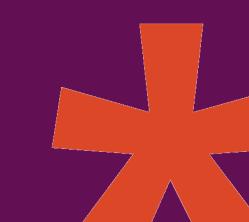
Resource: GRE Diagnostic Service



Additional resources

for graduate programs





Help finding your future students



The *GRE*® Search Service is a robust database of 500,000+ individuals who want to pursue an advanced degree and want to hear from programs like yours

- 30 versatile search criteria, so you can segment your mailings to reach specific prospects with tailored messages
- Receive freshest names weekly or monthly; database is updated twice weekly
- Delegate full-access ordering privileges
- No annual participation fee, you pay only for the names you need
- Send subsequent emails to same names at no additional cost
- **Resource:** Elevate your outreach with the *GRE*® Search Service



HigherYield® recruitment + enrollment management



Brought to you by ETS and Liaison International, the *HigherYield®* solution can help you seamlessly find your ideal pool of applicants and develop, launch and manage dynamic multichannel communication plans that will encourage those prospects to engage.

Resource: <u>HigherYield.org</u> website



GRE® Advisor Kit



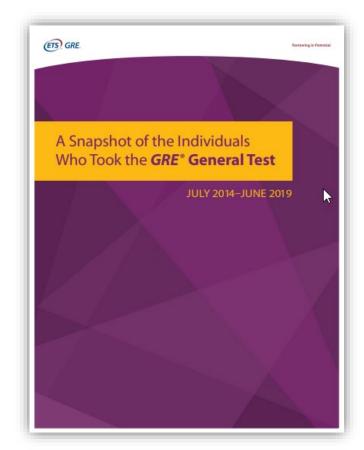
- Designed to help advisors and educators give students everything they need to know about:
 - test registration
 - preparation
 - sending scores
 - much more!
- Includes easy-access student presentation with script, printable flyers, helpful links and more.
- Some materials available in multiple languages.

Resource: The Official GRE® Advisor Kit



Links and tools to help increase understanding and promote appropriate use of *GRE*® scores

- Planning for the Admissions Process
 - Benefits of Using GRE Scores in Admissions Decision Making
 - Using GRE Scores as Part of Holistic Admissions
 - Promising Practices Graduate Programs are Using
- Using GRE Scores
 - GRE Guidelines for Using Scores
 - Test Takers from Underrepresented Groups
 - Test Takers Who Are Nonnative English Speakers
 - Test Takers with Disabilities or Health-related Needs
 - Reviewing Essay Reponses on the Analytical Writing Section
- GRE Score Interpretation Resources
 - GRE Interpretive Data and Information
 - Viewing Scores in the ETS® Data Manager
 - GRE Comparison Tool for Business Schools
 - GRE Comparison Tool for Law Schools



Resource: GRE Snapshot report



The GRE® Score Use Guidelines support holistic file review

The <u>GRE Score Use Guidelines</u> recommend the following:

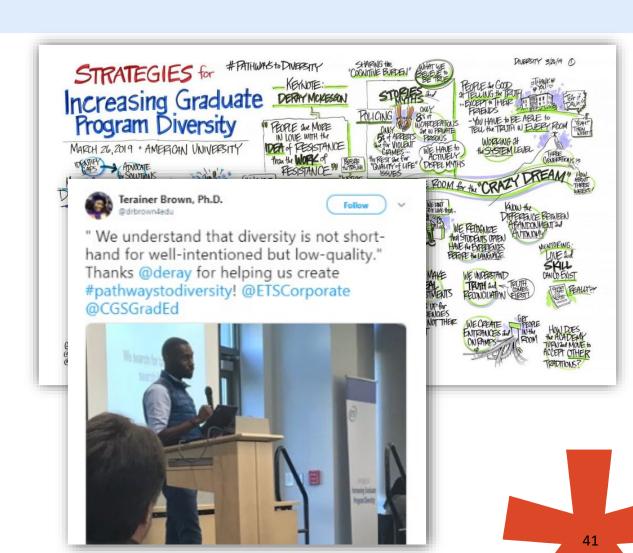
- Multiple sources of information should be used to ensure fairness and to balance the limitations of any single measure of knowledge, skills and abilities
- Use of multiple criteria is particularly important when assessing the abilities of educationally disadvantaged applicants, applicants whose primary language is not English and applicants who are returning to school after an extended absence
- A cut score should never be used as the only criterion for denial of admission or awarding of a fellowship
- Small differences in GRE scores should not be used to make distinctions among test takers
- Verbal Reasoning, Quantitative Reasoning and Analytical Writing scores should be considered as three separate and independent measures; scores should not be added to create a composite score



Strategies for increasing graduate program diversity

- In March 2019, more than 120 graduate deans, diversity officers and faculty attended a symposium cohosted by ETS and the Council of Graduate Schools to discuss diversity and inclusion.
- DeRay Mckesson, a leader in the Black Lives Matter movement and former school administrator, was the keynote speaker.
- Panelists represented many kinds of institutions; some shared research that showed that the GRE® test had a positive influence on their program's holistic admissions practices. See slide 13.
- <u>Diverse Issues in Higher Education</u> covered the event.
- Find a recap of the day, slides and a link to a highlight video on the <u>ETS website</u>.





Selected ongoing ETS research

- Academic Cohort Optimization (ACO) is an operations research technique that can be used in the
 graduate admissions process to optimize an academic cohort to select a diverse class of incoming
 students, while simultaneously enforcing academic standards. It
 - focuses selection on the class, rather than on the individual applicants
 - maximizes academic performance measures, such as undergraduate grades, admissions test scores, or a composite, while also considering the desired class composition
 - allows institutions to incorporate academic requirements into the admissions decision process while also considering diversity goals
- ACO emerged from work done by Rebecca Zwick and other ETS researchers and was initially applied
 to historical admissions data at the undergraduate level. Recently, ETS research has expanded this
 effort to analyzing historical admissions data with multiple graduate programs to evaluate cohort
 differences.

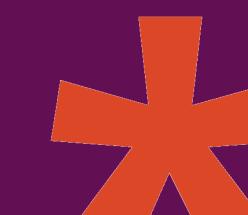
Resource: <u>Using Constrained Optimization to Increase the Representation of Students from Low-Income Neighborhoods</u>



About ETS

and our commitment to diversity





About ETS



ETS is a nonprofit, 501(c)(3) organization



Develops, administers and scores 50 million tests annually in more than 180 countries



World's largest private educational assessment and research organization



Mission: to help advance quality and equity in education



Significant annual investment in researching solutions to 9 big educational challenges



About our nonprofit status

As a nonprofit educational research organization, ETS must continuously prove that it operates for the advantage of public, rather than commercial, interests. It does so in several ways:

- Research investment: ETS invests over \$100 million dollars annually on research that addresses
 educational challenges in order to improve teaching and learning, expand opportunities for individual
 learners, and inform education policy and assessment.
 - ETS's Research & Development Division, including the the new Fairness & Equity Research
 Methodologies Institute
 - The ETS Policy & Evaluation Research Center
 - The ETS Center for Research on Human Capital and Education
- **Public information:** Anyone can search the ETS <u>ReSEARCHER database</u> of 10,000+ ETS-authored or published works.
- ETS Center for Advocacy & Philanthropy: A center of ETS focused on advocating for important educational issues and managing ETS's philanthropic activities including grants and scholarships that support education and local communities.



The 9 big education challenges that ETS aims to help solve

- Increase sustainable access to a diverse, high-quality teaching pool
- Improve science, technology, engineering, arts and mathematics pathways
- Raise U.S. literacy levels
- Support U.S. English learners' development of language proficiency
- Raise global English-language proficiency
- Increase the diversity and quality of admissions to higher education
- Promote assessment & development of critical competencies in a global context
- Increase workplace preparedness and success
- Support underserved learners and those who teach them



Resource: ETS Research Website

New Fairness and Equity Institute

ETS has launched a new research methodologies institute to investigate issues that affect inequality in educational outcomes, including:

- poverty
- structural stigma
- inequities in educational resources

This work will help to inform the educational community in developing strategies making education equitable for all.

Resource: <u>ETS Launches Institute Focused on Fairness and Equity in Education</u>



"This Institute will serve to highlight and reinforce the historical focus on fairness and equity in education that continues to be at the core of ETS's mission."

 Michael Walker, Director of the Fairness and Equity Research Methodologies Institute, ETS



ETS Center for Research on Human Capital and Education

Also part of R&D, this team manages global assessments on behalf of the Organisation for Economic Co-operation and Development (OECD) and produces policy reports related to access, skills and opportunity. Recent reports:

- Too Big To Fail: Millennials on the Margins
- Skills and Earnings in the Full-Time Labor Market
- Choosing Our Future: A Story of Opportunity in America

Resource: Policy Evaluation and Research Center

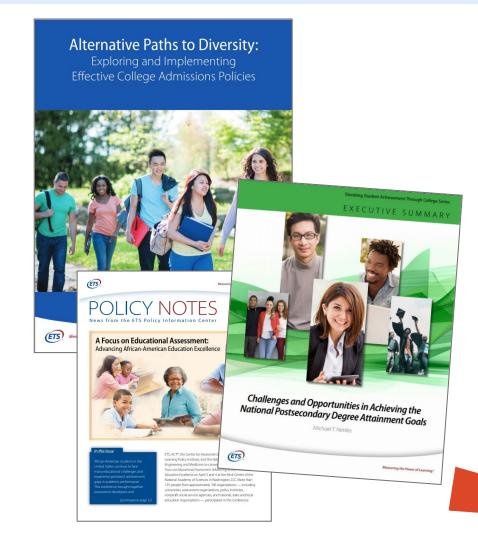




ETS Policy Evaluation and Research Center (PERC)

- Conducts and disseminates research on educational issues related to public policy that spans a continuum from childhood through graduate education and early career.
- Focuses on improving the quality of instruction in schools, closing achievements gaps for underrepresented populations and investigating factors that adversely affect student progress at all levels.

Resource: Policy Evaluation and Research Center





ETS Center for Advocacy & Philanthropy (CAAP)

The mission of CAAP is to:

- Act as an educational advocate by helping to raise awareness on those issues in education that impact disadvantaged groups
- Advance education goals in local communities through identifying, supporting and helping to replicate programs that achieve results
- Provide philanthropic support to organizations whose goals and missions align with ETS's mission

Merit-based ETS Presidential Scholarships for HBCU students are awarded annually.

- Applicants are eligible to apply for their junior or senior year of undergraduate study
- Eight HBCU Students (chosen from four public and four private HBCUs) are awarded full-tuition scholarships





Resource: CAAP Website