Should We Be Using GREs In PhD Admissions?

Patricia B. Campbell, PhD, Campbell-Kibler Associates, Inc.
Sandra L. Petersen, PhD, University of Massachusetts, Amherst

We don't use quantitative measures in our admissions procedures. We're mathematicians, we understand when numbers have meaning and when they don't.
> Phil Kutzko, University of Iowa mathematician and Math Alliance co-founder,

GREs don't predict STEM PhD attainment.

- In 2005, ETS researchers Burton and Wang[i] found the GRE: Quantitative (GRE:Q) scores of Biology, Chemistry and Psychology students who received their PhDs were significantly lower than those who didn't complete their degree(676 vs 697). Their GRE: Verbal (GRE:V) scores were slightly lower (567 vs 578).
- In 2016, in a much larger study of STEM PhD students, Campbell and Petersen[ii] found that women who left the PhD program had approximately the same GRE: Q scores as women who received the PhD (670 vs 664). Men who received the PhD had lower GRE: Q scores than those who left their PhD program (697 vs 729). The GRE: V scores of women and of men who received the PhD were not significantly different from those who left their programs.

Federal agencies are increasingly not requiring student GRE scores.

- NIH does not require standardized test scores, including the GRE, for training grants[iii], for individual fellowship applications[iv] or for NIH's National Institute of Nursing Research programs[v]. GRE scores are not part of the NSF's Graduate Research Fellowship Program application[vi].

Some universities are no longer requiring the GRE for PhD admission.

- The University of Michigan's biomedical sciences graduate program recently announced that it no longer requires GRE scores for its Ph.D. admissions[vii]. The website, "What You Make of it. PhD Programs- No GRE Required" provides a list of PhD programs that do not require GRE scores[viii].

GRE scores in the sciences don't impact US News and World Report's rankings.

- US News and World Report graduate school rankings, in business, education, engineering, law, medicine and nursing, are based on two types of data: 1) expert opinions about program excellence and 2) statistical indicators, including the GRE, that measure the quality of a school's faculty, research and students. US News and World Report rankings in other areas, including science, computer science and mathematics, are based on expert opinions about program excellence. The GRE scores are not used in rankings in these areas. (Morse, 2017[ix]).

[i] https://www.ets.org/Media/Research/pdf/RR-05-03.pdf

[ii] http://www.campbell-kibler.com/Campbell%20and%20Petersen%20Sept%202017%20GRE%20study.pdf

[iii] https://www.rsp.wisc.edu/training/NIH_Files/New_2015_2016_NIH_Training_Grant_Table_Formats.pdf

[iv] https://grants.nih.gov/grants/guide/notice-files/NOT-OD-15-120.html

[v] https://www.ninr.nih.gov/researchandfunding/dir/sgifaq

[vi] https://www.nsf.gov/pubs/2017/nsf17123/nsf17123.jsp#q40

[vii] http://www.sciencemag.org/careers/2017/08/biomedical-phd-program-major-research-university-drops-gre-requirement-admission

[viii] https://ainsleydiduca.com/phd-programs-no-gre-required/

[ix] https://www.usnews.com/education/best-graduate-schools/articles/how-us-news-calculated-the-rankings