A Comprehensive Review of Published GRE® Validity Data

The *Graduate Record Examinations*® (GRE®) *General Test* measures skills that faculty and graduate deans have consistently said are essential to graduate school success. These skills of verbal reasoning, quantitative reasoning, and critical thinking and analytical writing are foundational skills for applicants to a U.S. graduate program, regardless of educational or linguistic background or country of origin.
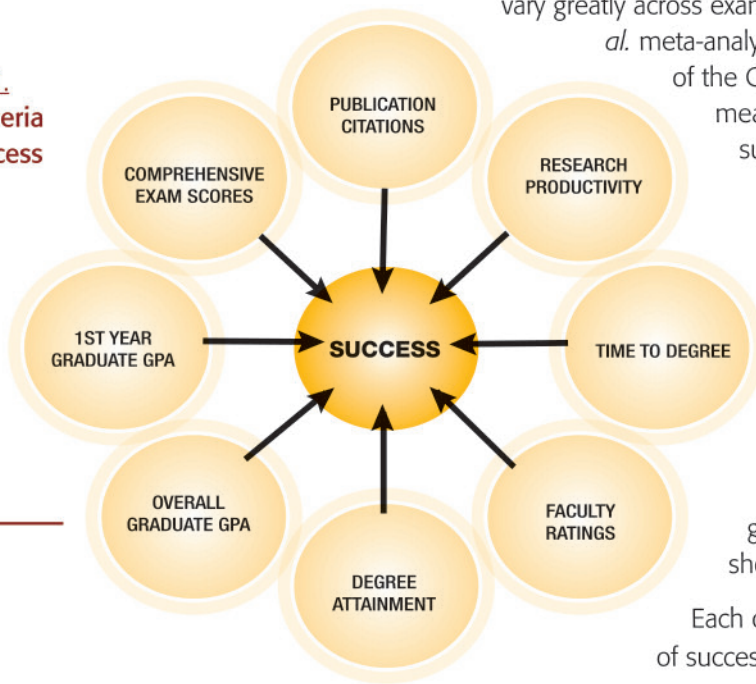
Although the GRE Program has many studies of the predictive validity of the GRE *General Test* (which are available on the GRE website: **www.ets.org/gre**), a recent meta-analysis by non-ETS researchers Nathan Kuncel, Sarah Hezlett and Deniz Ones provides additional positive evidence of the relationship of the GRE *General Test* to various criteria of graduate school success.[1] This meta-analysis is important because predictive validity studies are often difficult to conduct for a variety of reasons (e.g., insufficient data, test scores or predictors of success that do not vary greatly across examinees). Compared with earlier research, the Kuncel *et al.* meta-analysis improved on these studies by examining the validity of the GRE *General Test* for multiple disciplines using multiple measures of success, and by addressing statistical artifacts such as range restriction.

Figure 1.
The criteria for success

One strength of the Kuncel *et al.* research is that the meta-analysis analyzed data from a very large data set involving more than 1,753 independent samples based on a pool of more than 80,000 students. In addition, the study looked at five predictors of success and eight criteria for success. The predictors included the three measures of the GRE *General Test* (verbal reasoning, quantitative reasoning and analytical reasoning), GRE *Subject Test* scores and undergraduate grade point average (UGPA). The criteria for success are shown in the figure to the left.

Each of these criteria can be considered a different dimension of successful performance in graduate school.

Results of the Kuncel *et al.* study

Results from this study show that:

1. The GRE *General Test* is a "generalizably valid predictor of first-year graduate GPA, overall graduate GPA, comprehensive exam scores, publication citation counts and faculty ratings."

2. The GRE *General Test* also correlates positively with degree attainment and research productivity.

3. The GRE *General Test* has better predictive validity than undergraduate grades or letters of recommendation.

4. The GRE *Subject Tests* are better predictors of success than either the GRE *General Test* or undergraduate GPA.

This meta-analysis study is important because these results apply across a range of intended academic majors, across native speakers of English and nonnative speakers of English, across traditional and nontraditional students and across master's and doctoral programs.[2]

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1   Kuncel, N. R., Hezlett, S. A. and Ones, D. S. (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.

2   The master's analyses can be found in "The Validity of the *Graduate Record Examination* for Master's and Doctoral Programs: A Meta-Analytic Investigation" by Kuncel, N.R., Wee, S., Serafin, S. and Hezlett, S.A. (In press) GRE Research Report. Princeton, NJ: ETS.