GRADUATE CURRICULUM CHANGE MEMO

Date: 08/19/22

From: Dr. Katie Serafine, Grad Program Director, Psychology

Through: Dr. Wendy Francis, Chair, Psychology

Through: Dr. Anadeli Bencomo, Dean, College of Liberal Arts

To: Chair, Graduate Council

Proposal Title: Revision to Psychology Graduate Admissions Criteria

---

The UTEP Department of Psychology proposes to revise (and simplify) the Psychology Graduate Program Admissions Criteria for our Doctoral and Masters degrees. The primary changes outlined in this proposal are to make the GRE optional instead of required for admissions, based on national and within-program data collected during the COVID-19 pandemic, and to formalize interviews as a component of our admissions process.

Some brief justification for each of these changes are as follows:

During the 2020 admission cycle, GRE was waived due to the COVID-19 pandemic. The Psychology Grad Programming Committee (hereafter "GPC) does not find any significant differences regarding GPA between cohorts admitted with and those without a GRE score. Additionally, the GPC evaluated peer programs across the country and determined that the majority have waived or made optional the GRE. The GPC has also reviewed national data from the Educational Testing Service which suggests that the GRE is moderately correlated to first year GPA averages, but not with scholarly and professional competence measured by other admissions criteria. We believe the implentation of an interview (something our peer-programs include) combined with other admissions materials will sufficiently replace the GRE as an informational aspect of the admissions process. As such, in order to improve our ability to recruit highly competitive prospective students, we would like to remove the GRE as a mandatory requirement, and make it optional, and formalize an interview component of our admissions criteria.

Form for Proposed Changes to Graduate Admission Criteria

Institution: The University of Texas at El Paso

Program Name: Psychology Doctoral Program and Psychology Masters Program

Degree Level (Master's, Doctoral): Masters and doctoral

Institutional Contact:

Name: Dr. Katherine Serafine

E-mail: kmserafine2@utep.edu

Phone: 915-747-6566

A. Summary: Describe the proposed changes to graduate admission criteria and the rationale for making the changes. As part of the rationale, provide information on how the decision to change the admissions criteria was made, e.g., analysis of predictors of graduate student success, identification of "best" or "promising" practices, etc.

The UTEP Department of Psychology proposes to revise (and clarify) the Psychology Graduate Program Admissions Criteria for our Doctoral and Masters degrees. The primary change outlined in this proposal to make the GRE optional instead of required for admissions, based on national and within-program data collected during the COVID-19 pandemic. We will also implement an interview as a part of our admissions process.

Some brief justification for each of these changes are as follows:

During the 2020 admission cycle, GRE was waived due to the COVID-19 pandemic. The Psychology Grad Programming Committee (hereafter "GPC) does not find any significant differences between cohorts admitted with and those without a GRE score (see Addendum A). Additionally, the GPC evaluated peer programs across the country during the COVID-19 pandemic and determined that the majority have waived or made the GRE optional for admissions, including policies that carry past the pandemic (see Addendum B). The GPC has also reviewed national data from the Educational Testing Service which suggests that the GRE is moderately correlated to first year GPA averages, but not with scholarly and professional competence measured by other admissions criteria. There is also growing national move to remove GRE as part of admissions criteria for graduate programs (citations available upon request). Based on peer-programs, and evidence regarding GPA comparisons from students that had GRE waivers for our program during the pandemic to students who were admitted with the GRE in the past, we believe information gained from an interview in combination with other admissions criteria are more indicative of student success metrics and general fit in our program than the GRE. As such, in order to improve our ability to recruit highly competitive prospective students, we would like to remove the GRE as a mandatory requirement and make it optional, and include an interview as part of our admissions process.

Form for Proposed Changes to Graduate Admission Criteria

After several years of providing an on campus visit day (after students were admitted, they were invited to campus before accepting/declining admission), we have learned that other programs conduct a formal interview (in person or via electronic platforms) to occur prior to official admissions decisions. We believe interviews will allow us to determine more accurately fit of prospective students for individual mentoring style, laboratory, and Departmental environment, which could also yield improved lab and department culture. As such, we would like to formalize an interview component of our admissions review process and publish this on our website as an aspect of admissions criteria.

B. Details: Use the template below to create a side-by-side table showing the current graduate admission criteria and the proposed graduate admission criteria.

Current Unconditional Admission Criteria	Proposed Unconditional Admission Criteria
Official transcripts for all academic work (no GPA minimum)	No change
A two- to three- page personal statement.	No change
Three letters of recommendation	No change
Application Processing Fee	No change
Official GRE General Test Scores from ETS within the last 5 years.	Change: GRE scores are optional.
Official TOEFL Scores for international students.	No change
	Change: Virtual and In person interview performance will also be a contributing criteria for admissions decisions (in part replacing the GRE score information)

Addendum B. Peer Program GRE Information Collected by the Psychology Graduate Program Committee during the COVID-19 Pandemic

Of the 43 programs we evaluated 8 require the GRE, and 8 have completely removed it. Of the remaining programs, 14 have been waiving It during the pandemic and are considering permanent removal, and the remaining schools either have no doctoral program comparison (n = 1) or have changed the GRE to recommended but not required (n = 10). Based on these data our Department would like to make the GRE an optional application component (not required) moving forward.

Individual comparison programs are listed below along with GRE requirement information obtained between 2020-2022 from program websites.

School	Doctoral Programs	GRE Requirement
Arizona State University	6 Doctoral Psych programs (Cognitive Science, Behavioral Neuro & Comparative Psych, Developmental, Social, Quantitative, Clinical)	Required (but only for Social and Quantitative programs)
Binghamton University	3 doctoral psych programs (Behavioral Neuroscience, Clinical Science, Cognitive)	GRE not required for any doctoral program in psychology (cognitive program accepts but does not require GRE scores)
Boston College	5 concentration areas in psychology (Behavioral Neuroscience, Cognitive neuroscience, developmental psychology, quantitative and computational psych, social psychology)	Not required in 2020
Brandeis University	PhD in "brain body and behavior across lifespan".	waived during covid year, Now recommended but not required

Colorado School of Mines	No psychology Doctoral program.	
CUNY Graduate School and University Center	10 areas (basic/applied, behav/cog neurosci, clinical, cognitive/comparative, social/personality, developmental ,health and clinical, I/O, Psych & law	waived during covid, considering removing for good - note on website says 4 of the 10 concentrations have already decided not to use GREs for admissions decisions at all.
Dartmouth College	PhD in Psychological and Brain Sciences	waived forever - website specifically cites rationale is related to increasing BIPOC applications by reducing barriers. Also removed application fee
Drexel University	3 programs - clinical, applied cognitive and brain sciences, and a JD/PhD Psych and Law	GRE required for Clinical, optional for the other two at least during covid (but unclear about the future)
Kent State University at Kent	6 areas (behavioral neuro, clinical, cognitive, developmental, health and social)	GRE waived during covid, including this year. Students can upload If they want to though.
Mississippi State University	2 areas: clinical and cognitive science	GRE typically required, but waived during covid, unclear about 2021
Montana State University	psychological science	Historically has required GRE but does not appear on this list: https://www.montana.edu/psychology/gradprogram/application.html
New Jersey Institute of Technology	No psychology Doctoral program.	note that waived GRE for other programs during COVID-19
North Dakota State University-Main Campus	PhD in Psychology	waived during covid year, optional now. will be required again after 2022.
Northeastern University	Four areas: behavioral neuroscience, cognition,	GRE optional

	perception and personality/social.	
Old Dominion University	Four areas: Health, Clinical, Human Factors, I/O	GRE required (waived only during covid through 2022)
Oregon State University	Concentrations: Engineering psych, health, applied cognition	waived during covid then removed and make optional.
Rensselaer Polytechnic Institute	PhD in cognitive science	GRE waived during covid, and through spring 2022, not clear about after
Saint Louis University	3 areas: clinical, experimental, and I/O	Gre not required but optional to submit
Syracuse University	4 areas: clinical, cognitive, school, and social	GRE waived during covid, through 2022. unclear for after.
The University of Alabama	2 areas: clinical and experimental	GRE optional during covid, through 2022. unclear for after.
Tufts University	PhD in Psychology	GRE optional (seems permanent)
Tulane University of Louisiana	PhD in school psychology, cognitive/behavi neuro, developmental psych, health, social.	No mention of GRE on admissions requirements.
University of Alabama at Birmingham	3 areas: behavioral neuro, developmental, medical/clinical	GRE waived during covid, through 2022. unclear for after.
University of Alabama in Huntsville	MA psychology only	GRE is required and there is a minimum score.
University of Arkansas	clinical and experimental psychology programs (area: cognitive, developmental, social or neuroscience)	GRE required and even has a statement acknowledging this is a barrier for URMs, but still requires it.

University of California-Santa Cruz	3 areas: cognitive, developmental and social	unclear from website (at least seems optional if not required)
University of Colorado Denver/Anschutz Medical Campus	clinical health psychology	Removed GRE after pandemic. No longer required.
University of Dayton	Ma programs in psychology only	GRE waived during covid, but is required now.
University of Delaware	Beh. Neuroscience, Clinical Science, Cognitive psych, and Social Psych	GRE waived during covid, including this year. Not clear about future.
University of Louisville	Clinical PhD and Experimental Psych PhD	GRE waived during covid, and through spring 2022. future unclear.
University of Memphis	Clinical ,Experimental (areas of cognitive, Beh neruo) , School	GRE Not required and are not evaluated even if they submit.
University of Mississippi	Clinical and Experimental	GRE waived during covid, through 2022. unclear for after.
University of Nevada-Las Vegas	Clinical or Psychological & Brain Sciences (areas: cognitive, developmental, neuro, quant/social/community)	GRE waived during covid, through 2022. unclear for after.
University of Nevada-Reno	Clinical, Behavior Analysis, Cog.& brain Sci, social psych, neuro	Recommended but not required
University of New Hampshire-Main Campus	3 areas: brain, behavior & cognition; developmental psych; social/personality	Recommended but not required
University of New Mexico-Main Campus	4 areas: clinical, cognition brain and behavior; evolution; developmental)	waived through fall 2022 admissions due to COVID.

University of Southern Mississippi	Clinical; Brain & Behavior PhD	GRE waived during covid, back to being required.
University of Wisconsin-Milwaukee	clinical, health and neuroscience programs	waived forever (started during covid, but permeant)
Utah State University	clinical/counseling, Behavior analysis, brain & cognition, quantitative psych programs	GRE required and must be 40th percentile or above
Virginia Commonwealth University	clinical; counseling; developmental; health; social	waived forever
Yeshiva University	a few clinical/clinical + health programs	Recommended but not required

Analysis of GRE Scores and Measures of Doctoral Student Success at UTEP

Center for Institutional Evaluation, Research and Planning (CIERP)
The University of Texas at El Paso
November 2020

Introduction

Questions about the usefulness of GRE scores in predicting doctoral student success have been raised across institutions of higher education in the country over that last few years. Some institutions, or specific programs at institutions, have chosen to eliminate the GRE as an admissions requirement. Interest in understanding how the GRE is associated with doctoral student success at The University of Texas at El Paso (UTEP) motivated the analyses described here. To explore whether GRE scores are associated with measures of student success at UTEP, the Center for Institutional Evaluation, Research, and Planning (CIERP) conducted a two-part exploratory analysis to examine the relationship between GRE-Quantitative (GRE-Q) and GRE-Verbal (GRE-V) scores and indicators of doctoral student success.

While most doctoral degree programs at UTEP require scores from the Graduate Record Exam (GRE) as one part of a student's application for admission, there is no minimum GRE score required. The Graduate School states that performance on the GRE may not be used as the sole criterion for consideration of an applicant's admission[1]. In this project, we analyzed data to examine the relationship between GRE-Quantitative (GRE-Q) and GRE-Verbal (GRE-V) scores and indicators of doctoral student success. We focused on students who began their doctoral program between 1999 and 2018 and organized the findings in two parts. Analysis 1 presents descriptive statistics about GRE scores and: 1) first-year GPA, 2) first-year retention, and 3) graduation within ten years by students' field of study. In Analysis 2, we standardized scores from the GRE due to changes made by publisher, Educational Testing Service (ETS), over that period of time. We also examined the relationship between standardized GRE scores and the measures that were included in the first part, as well as: 1) third year retention, 2) fourth-year retention, and 3) graduation within five years. Finally, we also conducted a statistical regression in Analysis 2 to determine if GRE-Q and GRE-V predicted any of the outcome measures.

Data from first-year doctoral students at UTEP in selected majors were organized according to the fields of study (FOS) identified by ETS. The ETS/GRE fields of Education,

[1] https://www.utep.edu/education/te/academic-programs/phd-in-tlc/admission-process-and-requirements.html

Engineering, Humanities and Arts, Life Sciences, Physical Sciences, and Social Sciences were included, and Table 1 shows the corresponding major programs at UTEP.

Table 1: Crosswalk from ETS/GRE Field of Study (FOS) to UTEP Majors

ETS/GRE FOS	UTEP Doctoral Majors and Major Codes
Education	Educational Leadership (EDLA) and Teaching, Learning & Culture (TLC)
Engineering	Biomedical Engineering (BME), Civil Engineering (CENG), Electrical & Computer Engineering (ELCE), Material Science and Engineering (MASE), and Mechanical Engineering (ME)
Humanities and Arts	Borderlands History (BLHI), History (HIST),
Life Sciences	Biological Sciences (BIOL), Biological Sciences-Pathobiology (BIPA), Ecology and Evolutionary Biology (EEB), and Interdisciplinary Health Sciences (INHS)
Physical Sciences	Chemistry (CHEM), Computational Science (CPS), and Computer Science (CSCI)
Social Sciences	General Psychology (GPSY), Psychology-Human Behavior in Organizations (HUBO), and Psychology & Health (PSHT)

Analysis 1. Descriptive Statistics of GRE Scores and Measures of Doctoral Student Success

We examined descriptive statistics including means of the GRE-Quantitative (GRE-Q) and GRE-Verbal (GRE-V) scores and first year GPA (FYGPA), the 1-year retention rate, and the 10-year graduation rate.

Subjects and Methods

Data from records of 1,636 first-year doctoral students who entered doctoral programs in the ten years from 1999 to 2018 at UTEP were included in the analyses.

Analysis 1. Descriptive Statistics

Table 2 shows a summary of the mean GRE-Q, GRE-V, and the mean and standard deviation of the first-year GPA (FYGPA) for first-year doctoral students by FOS. Only those students who had earned credits during their first year at UTEP and continued at UTEP the following year were included in Table 2 (n = 1,361). The highest and lowest mean FYGPA belonged to students majoring in Mechanical Engineering ($M = 3.90, SD = 0.18$) and Biomedical Engineering ($M = 3.63, SD = 0.54$), respectively.

Table 2: Summary of Mean GRE-Q, Mean GRE-V, Mean First-Year GPA (FYGPA) and FYGAP Standard Deviation by FOS

Field of Study	Major	n	Mean GRE-Q	Mean GRE-V	Mean FYGPA	SD FYGPA
Education						
	EDLA	169	142.10	148.62	3.78	0.31
	TLC	105	142.91	146.79	3.75	0.34
Engineering						
	BME	29	151.54	147.55	3.63	0.54
	CENG	72	155.14	144.56	3.75	0.34
	ELCE	141	153.21	144.51	3.76	0.29
	MASE	108	151.51	145.97	3.82	0.28
	ME	37	153.84	146.30	3.90	0.18
Humanities and Arts						
	BLHI	70	143.14	153.03	3.87	0.23
	HIST	12	144.42	156.42	3.68	0.35
Life Sciences						
	BIOL	6	151.00	153.17	3.72	0.10
	BIPA	153	147.63	147.97	3.80	0.24
	EEB	32	149.47	153.75	3.88	0.19
	INHS	79	143.32	147.63	3.79	0.25
Physical Sciences						
	CHEM	78	152.31	147.25	3.77	0.28
	CPS	63	156.14	145.46	3.77	0.28
	CSCI	66	154.61	148.68	3.71	0.35
Social Sciences						
	GPSY	117	147.97	152.32	3.73	0.36
	HUBO	11	150.18	156.18	3.82	0.16
	PSHT	13	146.46	153.85	3.73	0.24
Grand Total		**1361**				

First Year Retention

Table 3 shows the number and percentage of first-year doctoral students by FOS who were not retained after one year (n = 271) or were retained (n = 1,365). Overall, 83.4% of first-year doctoral students were retained. The highest and lowest FY retention rates belong to the fields of Social Sciences (87.6%) and Education (80.2%), respectively.

Table 3: First-Year Retention Rates by Field of Study

Field of Study	Not Retained		Retained		Total
	f	%	*f*	%	
Education	68	19.8%	276	80.2%	344
Engineering	88	18.4%	389	81.6%	477
Humanities and Arts	15	15.5%	82	84.5%	97
Life Sciences	44	14.0%	270	86.0%	314
Physical Sciences	36	14.8%	207	85.2%	243
Social Sciences	20	12.4%	141	87.6%	161
Total	**271**	**16.6%**	**1365**	**83.4%**	**1636**

Ten Year Graduation Rates

Table 4 displays 10-year graduation rates by FOS for 571 students who were enrolled in their doctoral program and could be tracked over a ten-year period. Students in the table are grouped by whether they did not graduate (n = 257 Graduated-No) or graduated from their program (n = 314 Graduated-Yes) within the ten years. Students pursuing a major in the field of Social Sciences had the highest 10-year graduation rate, with 70.1% of students completing their degree within 10 years ($n = 47$). Conversely, students pursuing a major in the field of Humanities and Arts had the lowest 10-year graduation rate, with 38.8% of students completing their degree within 10 years ($n = 19$).

Table 4. Ten-Year Graduation Rates by Field of Study

Field of Study	Graduated (N)		Graduated (Y)		Total
	f	%	*f*	%	
Education	58	44.3%	73	55.7%	131
Engineering	76	50.7%	74	49.3%	150
Humanities and Arts	30	61.2%	19	38.8%	49
Life Sciences	56	43.8%	72	56.3%	128
Physical Sciences	17	37.0%	29	63.0%	46
Social Sciences	20	29.9%	47	70.1%	67
Total	**257**	**45.0%**	**314**	**55.0%**	**571**

Analysis 2. Correlation, Independent t-tests, and Regression Using Standardized GRE Scores

Over time, ETS has implemented many changes to the GRE that are summarized in Table 5. In Analysis 2, students were categorized into one of six groups based on when they took the exam. Then, GRE scores were standardized using the average and standard deviations of scores within each group and FOS. In addition to the variables examined in the first analysis, Analysis 2 also included: 1) third-year retention, 2) fourth-year retention, and 3) graduation within five years. Finally, we conducted a regression analysis to determine if GRE-Q and GRE-V predicted any of the outcome measures.

Table 5. Changes to the GRE Exam by Year and Groups Used in Analysis 2

	Groups
Before October 2002 • GRE tested only for Verbal and Quantitative abilities and had a separate Analytical ability section	Group 1
October 2002 • Analytical Writing Assessment was added • Scored in 10-point increments (max of 1600 points) • Lowest and highest possible scores for the Verbal and Quantitative sections were 200 and 800 points	Group 2
November 2007 • Replaced multiple-choice response options with fill-in-the-blank in Quantitative sections January 2008 • Reformatted the reading comprehension questions to introduce highlighting in reading passages instead of presenting line numbers	Group 3
August 2011 • Changed test name from "General GRE Test" to "Revised GRE General Test" • Allowed students to go back to questions previously skipped or change answers • Allowed students to select more than one answer if the test question indicated to do so • All sections of the test now on a scale from 130 to 170 points, with 1-point increments (except for the analytical writing section)	Group 4
July 2012 • Introduced *ScoreSelect*, an option where testers could choose to send their most recent scores or all of their test scores to colleges and universities where they applied for admission • If students chose to send just one set of scores (*ScoreSelect*), institutions receiving them would not know whether the test-taker had sat for the GRE once or more than once	Group 5

2015

- Changed test name from "Revised GRE General Test" back to "General GRE Test" — Group 6

Table 6 displays the frequency distributions of doctoral students by Group and FOS (n = 1,636). In Education, for example, 125 students took the pre-October 2002 version of the GRE. Most notably, more students took the pre-October 2002 version of the GRE (Group 1) compared to any other version of the GRE across all FOS except for those in Physical Sciences and Social Sciences. Conversely, the August 2011 version (Group 4) of the GRE was taken by the fewest number of students in total, as well as by FOS, with the exception of Education.

Table 6. Group Membership by Field of Study

Field of Study	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Total
Education	125	51	86	21	42	19	344
Engineering	116	74	86	19	105	77	477
Humanities and Arts	35	22	9	5	15	11	97
Life Sciences	74	57	60	11	70	42	314
Physical Sciences	22	42	57	20	56	46	243
Social Sciences	35	36	37	7	31	15	161
Total	**407**	**282**	**335**	**83**	**319**	**210**	**1636**

Correlations

Table 7 displays correlations between mean FYGPA and standardized scores for GRE-Q and GRE-V for all students. Standardized GRE-Q scores were positively associated with FYGPA for students in: a) Education ($r = 0.22, p < 0.01$), b) Engineering ($r = 0.22, p < 0.001$), c) Life Sciences ($r = 0.20, p < 0.01$), and d) Physical Sciences ($r = 0.22, p < 0.01$). Additionally, standardized GRE-V scores were positively associated with FYGPA for students in: a) Education ($r = 0.31, p < 0.001$), b) Humanities and Arts ($r = 0.24, p < 0.05$), and c) Life Sciences ($r = 0.19, p < 0.01$).

Table 7. Correlations between GRE and Mean First-Year (FY) GPA by Field of Study

Field of Study	Mean FY GPA	GRE-Q	GRE-V
Education	3.77	0.22***	0.31****
Engineering	3.78	0.22****	0.09
Humanities and Arts	3.84	0.03	0.24**
Life Sciences	3.80	0.20***	0.19***
Physical Sciences	3.75	0.22***	0.02
Social Sciences	3.74	0.15	0.13

** Significant at 0.05 level

*** Significant at 0.01 level

**** Significant < 0.001 level

For students in the fields of Education, Engineering, Life Sciences, and Physical Sciences, those with higher standardized GRE-Q scores tend to have a higher FYGPA. Similarly, students in Education, Humanities and Arts, and Life Sciences with higher standardized GRE-V scores tend to have a higher first-year GPA. Although significant, the correlations are weak, with ranges from 0.20 to 0.22 for GRE-Q and 0.19 to 0.31 for GRE-V.

Independent Samples T-Tests: First Year Retention

Table 8 shows results of independent samples t-tests conducted to determine if there is a statistically significant difference in standardized GRE scores based on whether or not first-year students continued at UTEP the following year (one-year retention). No significant results were found.

Table 8. Independent Samples T-Tests by First-year Retention Status

Field of Study	GRE Section	Retained (N)	Retained (Y)	t-value	p
Education					
	GRE-Q	-0.12	0.03	-1.07	0.29
	GRE-V	-0.06	0.02	-0.58	0.56
Engineering					
	GRE-Q	0.09	-0.02	0.91	0.37
	GRE-V	0.14	-0.03	1.5	0.13
Humanities and Arts					
	GRE-Q	-0.06	0.01	-0.25	0.81
	GRE-V	-0.11	0.02	-0.48	0.63
Life Sciences					
	GRE-Q	-0.1	0.02	-0.75	0.45
	GRE-V	0.14	-0.02	0.99	0.32
Physical Sciences					
	GRE-Q	0.03	-0.01	0.22	0.83
	GRE-V	-0.01	0	-0.04	0.97
Social Sciences					
	GRE-Q	-0.2	0.03	-0.98	0.33
	GRE-V	0.11	-0.02	0.52	0.65

Independent Samples T-Tests: Ten Year Graduation Rates

Independent samples t-tests were conducted to determine if there was a statistically significant difference in standardized GRE scores between students who graduated or did not graduate within ten years after beginning their program. Table 9 shows that for students in Engineering, the standardized GRE-V scores were significantly different between those who graduated in ten years and those who did not, but in an unexpected direction; $t = 2.36$, $p = 0.02$. That is, students who graduated within ten years had *lower* standardized GRE-V scores ($z = -0.18$), compared with students who did not graduate within ten years ($z = 0.2$). Similarly, the standardized GRE-V scores for Life Sciences were significantly different between those who graduated in ten years and those who did not, again in an unexpected direction; $t = 2.36$, $p = 0.02$. Students who graduated within ten years had a *lower* standardized GRE-V score ($z = -0.16$) compared with students who did not graduate within ten years ($z = 0.22$). No other significant results were found.

Table 9. Independent Samples t-test by Graduation Status

Field of Study	GRE Section	Graduated (N)	Graduated (Y)	t-value	p
Education					
	GRE-Q	0.04	-0.07	0.61	0.54
	GRE-V	0.13	0.11	0.12	0.90
Engineering					
	GRE-Q	0.14	-0.06	1.29	0.2
	GRE-V	0.20	-0.18	2.36	0.02**
Humanities and Arts					
	GRE-Q	0.04	-0.01	0.18	0.86
	GRE-V	0.06	0.12	-0.24	0.81
Life Sciences					
	GRE-Q	-0.08	0.06	-0.77	0.44
	GRE-V	0.22	-0.16	2.36	0.02**
Physical Sciences					
	GRE-Q	0.03	0.01	0.09	0.93
	GRE-V	0.19	-0.26	1.66	0.10
Social Sciences					
	GRE-Q	-0.32	0.08	-1.39	0.17
	GRE-V	0.08	-0.15	0.89	0.38

** Significant at 0.05 level

Regression Analysis

Regression analyses were conducted with models that included GRE-Q and GRE-V as predictors. For the outcome of first year GPA, GRE scores were statistically significant in all fields (at 5%), except Social Sciences. Although the analysis showed significant findings, the models explained 10% or less of the variability in first year GPA.

On the graduation measures, GRE scores were significant for Life Sciences and Social Sciences on the model that examined graduation within five years. We found no significant results in the model examining graduation within ten years. Finally, for retention, we found significant results for students in Life Sciences when we modeled retention at the third year and fourth years; however, we did not find evidence of a relationship between GRE scores and first-year retention.

Table 10. Summary of Statistically Significant Regression Results (at 5% level): Positive Predictors of GRE Scores on Doctoral Student Measures of Success.

Field of Study	FY GPA	1-year Retention	3-year Retention	4-year Retention	Graduation by Year 5	Graduation by Year 10
Education	GRE-V	None	None	None	None	None
Engineering	GRE-Q	None	None	None	None	None
Humanities and Arts	GRE-V	None	None	None	None	None
Life Sciences	GRE-Q & GRE-V	None	GRE-Q	GRE-Q	GRE-Q & GRE-V	None
Physical Sciences	GRE-Q	None	None	None	None	None
Social Sciences	None	None	None	None	GRE-Q	None

Overall Findings

The analyses showed that the relationship between GRE scores and measures of success for doctoral students largely depended on the students' field of study. We found, for example, significant evidence of a positive relationship between of GRE scores and first-year GPA in all fields except Social Sciences. GRE scores do not appear to predict one-year retention or graduation within ten years. In the field of Life Sciences, however, GRE scores were a significant predictor for 3rd and 4th year retention. GRE scores for students in Social and Life Sciences showed a positive association with graduation within five years. In general, the GRE is a weak predictor for these measures of student success: first year GPA, retention, and graduation. These findings were expected because admission decisions are not based on the GRE as the sole criteria. A summary of findings by field of study appears below.

- **Education.** The correlations between GRE Scores and first year GPA were statistically significant. The GRE-V correlation (r=0.31) was higher than the GRE-Q correlation (r=0.22). When both scores are included in a regression model, only GRE-V remained a significant factor; and, the model explained 10% of the variability. No evidence was found of a relationship between GRE scores and retention or graduation.
- **Engineering.** GRE-Q scores were correlated at a statistically significant level with first year GPA ($r = 0.22$, $p < 0.001$). When both scores were included in a regression model, GRE Q was still a significant factor, and the model explained 5% of the variability. No evidence was found of a relationship between GRE scores and retention or graduation.

- **Humanities and Arts.** GRE-V scores were correlated at a statistically significant level with first year GPA ($r = 0.24$, $p < 0.05$). When both scores were included in a regression model, GRE V was still a significant factor, and the model explained 5% of the variability. No evidence was found of a relationship between GRE scores and retention or graduation.
- **Life Sciences.** GRE scores were correlated at a statistically significant level with first year GPA, with the GRE-Q correlation ($r=0.20$, $p < 0.01$) similar to the GRE-V correlation ($r=0.19$, $p < 0.01$). When both scores are included in a regression model, they remained significant factors and the model explained 6% of the variability. GRE-Q scores were a statistically significant factor in predicting 3rd year retention, but the improvement in odds ratio[2] is low (1.03, 0.78 to 1.33, 95% CI). For 4th year retention, a one standard deviation increase on the GRE-Q improved the odds ratios by 1.6 times (1.12 to 2.17, 95% CI). Finally, on the measure of graduation within five years, a one standard deviation increase on the GRE-Q improved odd ratios by 1.5 times (1.08 to 2.17, 95% CI).
- **Physical Sciences.** GRE-Q scores correlated at a statistically significant level with first year GPA ($r=0.22$, $p < 0.01$). When both scores were included in a regression model, the GRE-Q score remained a significant factor, and the model explained 5% of the variability. No evidence was found of a relationship between GRE scores and retention or graduation.
- **Social Sciences.** Among the outcome measures, GRE scores were a statistically significant factor for graduation within five years only. A one standard deviation increase on the GRE-Q improved the odd ratios by 1.7 times (1.11 to 2.65, 95% CI).

[2] Odds ratio is the probability of being retained/graduated over the probability of not being graduated/retained.

References

Conrad, L. (Ed.). (1977). Graduate Record Examinations. Technical Manual. Retrieved from https://eric.ed.gov/?id=ED163085

Educational Testing Association. (2017). A snapshot of the individuals who took the GRE general test. Retrieved from https://www.ets.org/s/gre/pdf/snapshot_test_taker_data_2018.pdf

Hall, J. D., O'Connell, A. B., & Cook, J. G. (2017). Predictors of Student Productivity in Biomedical Graduate School Applications. PLOS ONE, 12(1), e0169121. https://doi.org/10.1371/journal.pone.0169121

Kuncel, N. R., Hezlett, S. A., & 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. https://doi.org/10.1037/0033-2909.127.1.162

Langin, K. (2019). A wave of graduate programs drops the GRE application requirement. Science. https://doi.org/10.1126/science.caredit.aay2093

Michel, R. S., Belur, V., Naemi, B., & Kell, H. J. (2019). Graduate admissions practices: A targeted review of the literature. ETS Research Report Series, 0(0). https://doi.org/10.1002/ets2.12271

Miller, C. W., Zwickl, B. M., Posselt, J. R., Silvestrini, R. T., & Hodapp, T. (2019). Typical physics Ph.D. admissions criteria limit access to underrepresented groups but fail to predict doctoral completion. Science Advances, 5(1), eaat7550. https://doi.org/10.1126/sciadv.aat7550

Moneta-Koehler, L., Brown, A. M., Petrie, K. A., Evans, B. J., & Chalkley, R. (2017). The limitations of the GRE in predicting success in biomedical graduate school. PLOS ONE, 12(1), e0166742. https://doi.org/10.1371/journal.pone.0166742

Analysis of GRE Scores and Measures of Masters and Doctoral Student Success at UTEP Specific for Psychology Students

Data collected by Psychology GPC
The University of Texas at El Paso
Fall 2022

Introduction

Building off the CIERP data in Addendum A, here are data specific to the Psychology graduate students who were admitted without a GRE score during the pandemic for comparison. In general, groups of students admitted without a GRE requirement have GPAs that are either similar to, or higher than students admitted when the GRE was required. Data shown below are for students who were admitted with a GRE waiver (in the 2021 cycle) as compared to students in our programs admitted with GRE a previous cycle (when the GRE was required).

Table 1. Students in the Clinical MA program. Note that due to the smaller numbers in this program we included together students who were admitted before 2021 (ranging in date of admission) in the same group to compare to students admitted in 2021 (when the GRE was waived).

Admission year, n	GRE Requirement	First year GPA Average (StDev)
Before 2021, n = 3	Required	3.46 (0.417)
2021 n= 2	Not Required (application waived GRE due to the pandemic)	3.92 (0.120)

Table 2. Students in our Psychology PhD Program. Comparison is between students admitted in 2020 (when the GRE was required) versus 2021 (when the GRE was waived).

Admission year, n	GRE Requirement	First year GPA Average (StDev)
2020, n = 10	Required	3.84 (0.128)
2021 n= 8	Not Required (application waived GRE due to the pandemic)	3.81 (0.364)