

GRADUATE CURRICULUM CHANGE MEMO

Date: February 19, 2024

From: Dr. Charles Boehmer

Through: Dr. Egbert Zavala, Chair, Department of Criminal Justice and Security Studies

Through: Dean Anadeli Bencomo, College of Liberal Arts

To: Selfa A. Chew-Melendez, Chair, Liberal Arts Curriculum Committee



Proposal Title: INSS MS Admissions Changes

We propose one change to the Intelligence and National Security Studies (INSS) MS degree. We would like to drop the standardized test requirement. We currently accept either the Graduate Record Examination (GRE) or the Miller Analogies Test (MAT). We have provide an analysis showing that these standardized tests do not provide predictive power on students' cumulative GPAs or whether they graduate or not. See the document that includes a discussion of the literature and our empirical results. Moreover, it appears that the MAT is no longer available. We have found students' statements of purpose useful as a means of assessing aptitude and fit for graduate work, and a writing sample would provide additional evidence. Although the GRE did not provide overall good predictive power of student success, the verbal component of the GRE weakly predicts student graduation in the INSS MS program.

Institution: The University of Texas at El Paso
Program Name: Intelligence and National Security Studies
Degree Level: Master's
Institutional Contact:
Name: Dr. Charles Boehmer
Email: crboehmer@utep.edu
Phone: 915-747-5752

The University of Texas at El Paso requests approval to change the admission criteria for their MS in Intelligence and National Security (INSS) within the College of Liberal Arts as follows:

Description of Change.

- Remove standardized test admissions requirement, the Graduate Record Examination (GRE) and the Miller Analogies Test (MAT).

Rationale for Change

There is a trend of graduate programs removing standardized tests as admission requirements (Langin, 2019). A growing literature shows that such tests may serve as ineffective or only limited predictors of student success (Sternbergh & Williams, 1997; Kuncel et al., 2001; Orlando, 2005; Smith et al., 2006; Miller & Staussen, 2014; Lieff Benderly, 2017; Montera-Koehler et al., 2018; Peterson et al., 2018; Sealy et al., 2019; Langin, 2019). One study as far back as 1984 by Tift found that the GRE and MAT had limited predictive power on student GPA. A study by House et al. (1993) found that while the MAT predicted performance in some courses, it did not predict overall graduation and underpredicted female performance while over predicting male performance. Many older studies dating back decades showed the MAT predicted various types of performance. Still, Pearson discontinued the MAT in November, 2023.¹ Studies are finding that standardized tests such as the GRE may be unfair to students of various demographics, such as by race and ethnicity, low-income, gender, or first-generation students (Hirshfield et al., 2001; Perez, 2011; Miller & Staussen 2014; Cheng, 2022). The Boston University School of Public Health (2022) reports that applications increased from Black and Hispanic students after the GRE requirement was removed after concluding it did not affect student success.² Hence, using standardized tests to evaluate graduate applications may contradict the UTEP mission.

We seek to make our admission process easier so prospective students will avoid the cost of taking an exam that data show is biased in favor of students of more affluence and family education, which correlates with other factors such as race and ethnicity. Moreover, the GRE exam is a financial burden that deters students from applying to programs or delays the

¹ <https://www.pearsonassessments.com/graduate-admissions/mat/mat-scores.html>

² <https://www.bu.edu/sph/news/articles/2022/removing-the-gre-requirement-does-not-affect-student-success/>

admissions process. Numerous UTEP graduate programs have removed, or are in the process of removing, their standardized test admission requirements, including similar programs to the INSS MS program in the social sciences, and other programs in the humanities, including: Sociology, Defense and Strategic Studies, Criminology and Criminal Justice, Political Science, Public Administration, Economics, Latin American & Border Studies, Linguistics, Philosophy, and the graduate programs in the departments of History and English. As for the nationwide trend, an increasing number of universities (including those with R1 designation, and particularly minority-serving institutions) are no longer requiring the GRE or leave it to departmental discretion. For instance, the faculty senate of Stanford University replaced the university-wide requirement with school-by-school discretion.³ As for Hispanic-serving institutions, several have dropped the GRE requirement, such as The University of Texas at Arlington, MA in Political Science where GRE is not listed as part of the application materials.⁴ Another example to minority-serving institutions is the University of Hawaii, Manoa, MA in Political Science. According to their website:

Our department DOES NOT require the GRE for admission. We removed the requirement because we found the GRE to be a poor predictor of graduate student aptitude for our program. Some students who had very low scores on the GRE went on to stellar success in our program and the academic world after that, while others who came in with very high scores found themselves unable to cope with the rigors of graduate school. There is ample evidence of racial, gender and other biases in aptitude tests, and the GRE is no exception. In our view, the GRE seemed to correlate best with the socioeconomic status of the applicants and did little to inform us of the aptitude of the candidate for graduate work in our program.

Removing the GRE from the evaluation process has meant that our assessment of candidates has focused primarily on (a) the quality of their research sample, (b) their statement of intent, (c) the quality and depth of their reference letters, (d) their prior academic record, and (e) the strength of the case they make in their cover letter, especially with regard to the fit between their needs and the department's resources. We feel these are far better instruments through which to assess the potential of a particular student than a multiple-choice test ostensibly measuring aptitude for graduate work in some generic sense. Successful applications provide the admissions committee with a qualitative account of a candidate's academic past and their goals once admitted to our program.⁵

Our analysis of student performance in the MS INSS program since 2009 shows that the standardized Graduate Record Examination GRE (GRE) and the Miller Analogies Test (MAT) do

³ <https://news.stanford.edu/2018/04/13/faculty-senate-graduate-education/>

⁴ <https://www.uta.edu/pols/graduate-program/admissions-and-advising.php>

⁵ <http://www.politicalscience.hawaii.edu/graduate/admissions.html>

not predict cumulative student GPA or graduation. The data in our analysis was obtained from CIERP and ranges from 2009 to 2021, but we do not include data on students currently active in the program. Table 1 includes the statistical regression results for cumulative GPA. To avoid using a combined GRE score that would mask the individual effects of the verbal and the quantitative tests, these are treated separately as independent variables. CIERP stopped collecting scores for the analytical component of the GRE after a few years, which was replaced by the writing component that is missing from the dataset. The models tested in Table 1 are bivariate OLS regression analysis results. The first model treats the quantitative GRE score as a predictor of cumulative GPA. The second model uses the verbal component of the GRE. Neither the GRE quantitative or verbal component variables attain statistical significance at the 0.05 level. Thus, student performance on the GRE does not predict student grades within the INSS program. Similarly, the MAT test is also statistically insignificant and does not predict student GPA. The last model tests for a statistical difference between those students who took either the GRE or the MAT tests and those who CIERP did not report test scores. Some of these students received test waivers, such as during the COVID-19 pandemic. CIERP did not explain why some students did not have test scores in their data. The effect of not taking a test on cumulative GPA is statistically null. Students that did not take a standardized test as part of the admissions application performed no better nor worse than students who did take a standardized test when applying to the program.

Table 1 : Predicting Cumulative GPA using OLS Regression

Y= Cumulative GPA

Predictor Variables	Quantitative GRE	Verbal GRE	MAT	No Test
Slope	0.0067	0.0066	0.0028	0.0779
SE	0.0132	0.0098	0.0031	0.0927
Prob (T)	0.6140	0.5020	0.3660	0.4010
Constant (Slope)	2.5612	2.5406	2.1873	3.4569
SE	1.8927	1.4539	1.1964	0.0308
Prob (T)	0.1810	<i>0.0850</i>	<i>0.0700</i>	0.0000
N	65	65	117	262
F	0.26	0.46	0.82	0.71
Prob F	0.614	0.502	0.366	0.401
R Squared	0.004	0.007	0.007	0.003
adj R Squared	-0.008	-0.009	-0.002	-0.001

Bold= Statistically significant at the 0.05 level

italics = statistically significant at the 0.10 level

Table 2 includes the analysis on whether student performance on the standardized tests predicts graduation from the INSS MS program. Because the dependent variable is binary and “1” equals a student graduated, zero otherwise, a logit regression is an appropriate estimator. The logit regression shows that the quantitative GRE score’s effect on whether a student graduates or not is statistically insignificant. However, the effect of the verbal component of the GRE is positive and statistically significant at below the 0.05 level. Performance on the MAT did not significantly predict graduation. Finally, whether students took a standardized test or not had no statistically significant effect on whether they graduated. Students who did not take a standardized test as part of their application were no more nor no less likely to graduate than those students who did so. Our faculty also inferred that students who received a test waiver during the pandemic did not show any lower performance than students who took the standardized tests.

Table 2 : Predicting Graduation using Logit Estimation

Y= Graduation (1) or not (0)

Predictor Variables	Quantitative GRE	Verbal GRE	MAT	No Test
Slope	0.0499	0.0958	-0.0006	-0.2719
SE	0.0547	0.0481	0.0101	0.4284
Prob (T)	0.3620	0.0470	0.9520	0.5260
Constant (Slope)	-5.9815	-12.8364	1.2022	1.0704
SE	7.8225	6.9891	3.9708	0.1496
Prob (T)	0.4440	<i>0.0660</i>	0.7620	0.0000
N	63	63	116	264
LR Chi(1)	0.84	4.48	0.00	0.39
Prob >chi2	0.358	0.034	0.952	0.531
Pseudo R Squared	0.012	0.065	0.000	0.001
Log Likelihood	-34.157	-32.338	-68.323	-151.466

Bold= Statistically significant at the 0.05 level

italics = statistically significant at the 0.10 level

Given our analysis, we find that the standardized test admission requirement poses an additional burden on students without providing justification to continue the requirement. The one aspect of the analysis that at least provided some prediction on student graduation is the verbal GRE component. However, we use the students’ statements of purpose to evaluate their writing skills and other information assessing their likely fit and future performance. Thus, this additional admissions requirement poses an additional cost in time, and potentially funds, to

students, and thus an additional barrier to graduate education. The admissions requirement renders the INSS MS program less competitive to other programs at UTEP and other universities that have already removed their standardized test requirements, and our analysis shows there is little evidence showing that retaining ours is necessary. Removing this admissions requirement will improve the program's ability to recruit applicants.

References

Cheng, M. 2022. "The GRE is No Longer Useful in Evaluating Students for Graduate School". *Quartz* <https://qz.com/gre-test-scores-graduate-schools-changing-requirements-1849843761>

Hirschfeld, M, Moore, R.L. & Brown, E. 1995. "Exploring the Gender Gap on the GRE Subject Test in Economics". *The Journal of Education*, 26(1):3-15.

House, J. Daniel; Keeley, Edward J. 1993. "Differential Prediction of Graduate Student Achievement from Miller Analogies Test Scores". <https://files.eric.ed.gov/fulltext/ED364605.pdf>

Kuncel, N.R., Hezlett, S.A., & Ones, D.S. 2001. "A Comparative 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, K. 2019. "A Wave of Graduate Programs Drops the GRE Application Requirement." <https://www.science.org/content/article/wave-graduate-programs-drops-gre-application-requirement>

Lieff Benderly, B. 2017. "GREs Don't Predict Grad School Success. What Does? *Science* (June 7, 2017).

Miller, C. & Staussen, K. 2014. "A Test that Fails". *Nature*, 510, 300-304.

Perez, K. 2011. "GRE as a Predictor of Graduate Student Success at a Hispanic Serving Institution of Higher Education Administration, Florida International University." <https://digitalcommons.fiu.edu/cgi/viewcontent.cgi?article=1495&context=etd>

Petersen, S.L., Erenrich, E.S., Levine, D.L., Vigoreaux, J. & Gile, K. 2018. "Multi-Institutional Study of GRE Scores as Predictors of STEM Ph.D. degree completion: GRE Gets a Low Mark". *PLOS One*, 13 (10),

Sealy, R., Saunders, C., Blume, J., & Chakley, R. 2019. "The GRE Over the Entire Range of Scores Lacks Predictive Ability for Ph.D. Outcomes in the Biomedical Sciences." *PloS One* 14 (2).

Sternberg, R.J., & Williams, W.M. 1997. "Does the Graduate Record Examination Predict meaningful Success in the Graduate Training of Psychologists? A Case Study." *American Psychologist*, 52(6), 630-641.

Tift, H. 1984. "The Prediction of Academic Performance in a Doctoral Counseling Program". Master's of Arts Thesis, Atlanta University.

Verostek, M., Miller, C., & Zwickl, B. 2021. "Analyzing Admissions Metrics as Predictors of Graduate GPA and Whether Graduate GPA Mediates Ph.D. Completion." *Physical Review, Physics Education Research* 17 (2).

CURRICULUM CHANGE PROPOSAL

APPROVAL PAGE

Proposal Title: INSS MS Standardized Admission Requirements

College: Liberal Arts

Department: Criminal Justice & Security Studies

DEPARTMENT CHAIR - Dr. Egbert Zavala

I have read the enclosed proposal and approve this proposal on behalf of the department.



2-16-24

Signature

Date

COLLEGE CURRICULUM COMMITTEE CHAIR - Dr. Selfa A. Chew-Melendez

I have read the enclosed documents and approve the proposal on behalf of the college curriculum committee.

Signature

Date

COLLEGE DEAN - Dr. Anadeli Bencomo

I have read the enclosed documents and approve the proposal on behalf of the college. I certify that the necessary funds will be allocated by the college in support of this proposal.

Signature

Date