



Office of Academic Planning and Assessment

A Report of the Course-Embedded Texas Government Assessment

POLS 2306

Spring 2022

Description of the Course Embedded Texas Government Assessment

Each spring, a locally developed pretest to posttest is administered within sections of POLS 2306: Texas Government. The instrument consists of 10 multiple-choice questions and is administered at the beginning and at the end of each spring semester. The instrument was developed by the faculty of the Department of Political Science for use as part of their ongoing programmatic assessment as well as for Core Learning assessment. As the instrument was locally developed by faculty from the Department of Political Science, it is assumed that instrument has content-related validity (Banta & Palomba, 2015). Additionally, as this test was embedded within the POLS 2306: Texas Government courses, the student scores represent authentic student work (Banta & Palomba, 2015; Kuh et al., 2015). However, as the instrument is not for a grade within the course, it represents a low-stakes assessment of student learning.

The student data presented within this report reflect student performance regarding the Texas Higher Education Coordinating Board's Core Learning Objective of Social Responsibility (THECB, 2022). The THECB (2022) defines Social Responsibility as "intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities." Data from this assessment align with the "knowledge of civic responsibility" element of the broader concept of Social Responsibility.

Methodology

Faculty teaching POLS 2306: Texas Government administer the Course-Embedded Texas Government Assessment to students in a pretest-to-posttest fashion each spring semester. Paired samples *t*-tests were used for analysis to determine whether student performance increased from pretest-to-posttest. Student identification numbers were collected along with the student scores to allow for the matching of students' pre- and posttest scores. Statistical analysis was conducted on only those students for whom both pre- and posttest scores could be identified. The total number of student scores examined for Spring 2022 was 20.

Prior to conducting inferential statistics to determine whether differences were present between the students' pre- to posttest scores, checks were conducted to determine the extent to which these data were normally distributed. The standardized skewness and kurtosis coefficients (i.e., the skewness and kurtosis values divided by their standard error) were within the range of normality of +/-3 (Onwuegbuzie & Daniel, 2002). Readers are directed to Table 1 for these results and to Table 2 for aggregated pretest-to-posttest descriptive statistics.

Table 1

Standardized Skewness and Kurtosis Values for Student Pre- and Posttest Scores for Spring 2022

Student Population	Standardized Skewness Coefficient	Standardized Kurtosis Coefficient
Pretest	1.36	0.05
Posttest	-0.56	-1.09

Note. n = 20

Results

A parametric paired samples *t*-test revealed a statistically significant difference at the $p < .01$ level between students' pre- to posttest scores, $t(19) = -4.88$, $p < .001$ for students enrolled in POLS 2306: Texas Government. Readers are directed to Table 2 for the aggregated descriptive statistics for student pre- and posttest scores.

Table 2

Descriptive Statistics for Student Pre- and Posttest Scores on Course-Embedded Assessments in POLS 2306: Texas Government for Spring 2022

Test Version	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M %</i>	<i>SD %</i>
Pretest Scores	20	4.65	1.42	46.50	14.24
Posttest Scores	20	6.35	1.35	63.50	13.49

Additional information regarding student performance can also be gained through a disaggregated or item analysis of student performance on individual test questions. This item analysis revealed that students scored statistically significantly higher ($p < .01$) on the posttest for Question 6, and statistically significantly higher ($p < .05$) on Question 5. Question 7 was approaching statistical significance at $p < .05$. The effect size for these three questions was moderate, but approaching large for Question 6 (Cohen, 1988). Statistical significance was not present for the remaining questions. The results for a complete breakdown of item analysis data are presented in Table 3.

Table 3

Percentage of Students Correctly Answering Pre- and Posttest Questions for Spring 2022

	Pretest %	Posttest %	Mean Difference	<i>p</i>	Cohen's <i>d</i>
Question 1	85	95	10	0.330	0.33
Question 2	20	20	0	NA	NA
Question 3	10	20	10	0.330	0.28
Question 4	55	70	15	0.330	0.31
Question 5	35	70	35	0.015*	0.73
Question 6	50	85	35	0.005**	0.79
Question 7	50	80	30	0.055	0.65
Question 8	100	100	0	NA	NA
Question 9	40	60	20	0.214	0.40
Question 10	20	35	15	0.186	0.33

Note. $n = 20$. *significant at $p \leq 0.05$; **significant at $p \leq 0.01$. Cohen's *d* from 0.2–0.49 indicates a small effect size, 0.50–0.79 indicates a moderate effect size, and 0.80 and higher indicates a large effect size (Cohen, 1988).

Discussion

This assessment was given to all students enrolled in all sections of POLS 2306: Texas Government, regardless of teaching and learning modality. A total of 1,095 students received an invitation via Qualtrics to complete the pretest during the first week of class, and they received an invitation to complete the posttest near the end of the semester prior to finals. Out of the 20 students who completed both the pre- and posttest, eight were online students. Due to the limited number of participants, the decision was made to aggregate the results rather than to disaggregate to show any differences between online and face-to-face students.

References

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