

**Office of Academic
Planning and Assessment**

A Report of the Course-Embedded American Government Assessment

POLS 2305

Fall 2020

Description of the Course-Embedded American Government Assessment

Each fall, a locally developed pretest to posttest is administered within sections of POLS 2305: American Government. The instrument consists of 12 multiple-choice questions and is administered at the beginning and at the end of each fall semester. The instrument was developed by the faculty of the Department of Political Science for use as part of their on-going 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 the instrument has content-related validity (Banta & Palomba, 2015). Additionally, as this test was embedded within the POLS 2305: American 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, 2021). The THECB (2021) 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 2305: American Government administer the Course-Embedded American Government Assessment to students in a pretest-to-posttest fashion each fall 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 post-test scores. Statistical

analysis was conducted on only those students for whom both pre- and post-test scores could be identified. The total number of student scores examined for fall 2020 was 49.

Results

Prior to conducting inferential statistics to determine whether differences were present between the students' pre- to post-test 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 Post-test Scores for Fall 2020

Student Population	Standardized Skewness Coefficient	Standardized Kurtosis Coefficient
Pre-Test	-2.07	0.12
Post-Test	-1.58	0.08

Note. n = 49

Table 2

Descriptive Statistics for Student Pre- and Post-test Scores on Course-Embedded Assessments in POLS 2305: American Government for Fall 2020

Test Version	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M %</i>	<i>SD %</i>
Pre-test Scores	49	10.31	1.19	85.88	9.95
Post-test Scores	49	10.67	1.05	88.94	8.74

Because the standardized skewness and kurtosis coefficients were within the range of normality, a parametric paired samples *t*-test was conducted to analyze student performance on this pretest-to-posttest assessment. The results of this test revealed no statistically significant difference at the $p < .05$ level between students' pre-to post test scores, $t(48) = -1.975, p = 0.54$.

Although this result approached at 0.54, it did not meet the conventional level of $p < .05$ for statistical significance.

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 lower ($p < .05$) on the posttest for Question 4 and statistically significantly higher ($p < .05$) on the posttest for Questions 1 and 11. However the effect sizes for these scores were small (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 Post-Test Questions for Fall 2020

	Pre-Test	Post-Test	Mean Difference	p	Cohen's d
Question 1	48.98%	69.39%	20.41%	.017*	0.42
Question 2	95.92%	97.96%	2.04%	.569	0.12
Question 3	89.79%	95.92%	6.13%	.083	0.24
Question 4	95.92%	81.63%	-14.29%	.018*	0.46
Question 5	100.00%	97.96%	-2.04%	.322	0.20
Question 6	97.96%	97.96%	0.00%	1.00	0.14
Question 7	100.00%	97.96%	-2.04%	.322	0.20
Question 8	75.51%	75.51%	0.00%	1.00	0.43
Question 9	57.14%	63.26%	6.12%	.371	0.12
Question 10	97.96%	97.96%	0.00%	1.00	0.14
Question 11	77.55%	91.84%	14.29%	.033*	0.40
Question 12	93.88%	100.00%	6.12%	.083	0.36

Note. $n = 49$. * significant at $p \leq 0.05$. 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

It should be noted that this assessment was given to all students enrolled in all sections of POLS 2305, regardless of teaching and learning modality. A total of 1,252 students (952 face-to-face/hybrid and 300 fully online), received an invitation via Qualtrics to complete the pre-test

during the first week of class, and 1,219 students (933 face-to-face/hybrid and 286 fully online) received an invitation to complete the post-test near the end of the semester prior to finals. Out of the 49 students who completed both the pre- and post-test, only 5 of them were fully online students. Since most students were learning in a hybrid environment during 2020-2021, the decision was made to aggregate the results rather than to disaggregate to show any differences between online and face-to-face students.

Prior to spring 2020 the pre- and post-tests were given in class using a paper test and scantrons, but this meant that only the face-to-face students could take the test, leaving out the entire online student population. To capture this missing data, OAPA started a partnership with SHSU Online at the beginning of spring 2020 to move these types of assessments into Qualtrics, which prepared OAPA for the complete shift to online learning due to the COVID-19 pandemic.

After administering several pre- and post-tests through Qualtrics, the low participation rates were apparent across all course sections. Rather than re-implement paper tests and scantrons in fall 2021, the plan is to be more targeted in how students are asked to take the tests. During 2020-2021 professors were asked to announce the test dates and to encourage students to participate, but class time in which to take the tests was not requested due to the hybrid learning environment. For fall 2021 OAPA is requesting additional reminders from the chair to professors to pass along to their students, and for professors to allow time in face-to-face classes on specific days at the beginning and end of the semesters for their students to complete the tests in Qualtrics using their personal devices. It is expected that these measures, along with returning to traditional face-to-face learning, will positively affect participation rates.

References

- Banta, T. W., & Palomba, C. A. (2015). *Assessment essentials: Planning, implementing, and improving assessment in higher education* (2nd ed.). San Francisco, CA: Jossey-Bass.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Kuh, G. D., Ikenberry, S. O., Jankowski, N. A., Cain, T. R., Ewell, P. T., Hutchings, P., Kinzie, J. (2015). *Using evidence of student learning to improve higher education*. San Francisco, CA: Jossey-Bass.
- Onwuegbuzie, A. J., & Daniel, L. G. (2002). Uses and misuses of the correlation coefficient. *Research in the Schools, 9*(1), 73-90.
- Texas Higher Education Coordinating Board. (2021). Texas Core Curriculum. Retrieved from: <https://www.highered.texas.gov/institutional-resources-programs/public-universities-health-related-institutions/transfer-resources/texas-core-curriculum-tcc/>