Office of Academic Planning and Assessment

A Report of the Course-Embedded American Government Assessment

POLS 2305

Fall 2021

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 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 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, 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 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 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 Fall 2021 was 50.

  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. Three of the standardized skewness and kurtosis coefficients (i.e., the skewness and kurtosis values divided by their standard error) were outside the range of normality of +/-3 (Onwuegbuzie & Daniel, 2002). Therefore, a non-parametric Wilcoxon's dependent samples *t*-test (Huck, 2007) was conducted to analyze student performance on this pretest-to-posttest assessment. Readers are directed to Table 1 for these results.

Table 1

Standardized Skewness and Kurtosis Values for Student Pre- and Posttest Scores for Fall 2021

Student Population	Standardized Skewness Coefficient	Standardized Kurtosis Coefficient
Pretest	-4.72	6.19
Posttest	-3.08	1.04

Note. n = 50

Results

A non-parametric Wilcoxon's dependent samples *t*-test (Huck, 2007) revealed a statistically significant difference at the $p < .05$ level between students' pre- to posttest scores, $z = -2.25$, $p < .05$ for students enrolled in POLS 2305: American Government. These differences represented small to moderate effect sizes (Cohen's *d*) (Cohen, 1988). Readers are directed to Table 2 for the descriptive statistics for student pre- and posttest scores.

Table 2

Descriptive Statistics for Student Pre- and Posttest Scores on Course-Embedded Assessments in POLS 2305: American Government for Fall 2021

Test Version	*n*	*M*	*SD*	*M %*	*SD %*
Pretest Scores	50	9.48	1.88	79.00	15.63
Posttest Scores	50	10.26	1.55	85.50	12.91

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 ($p < .05$) on the posttest for Questions 1, 3, 10, and 12. The effect size for Question 1 was moderate, while the effect sizes for Questions 3, 10, and 12 were small but approaching moderate (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 Fall 2021

	Pretest	Posttest	Mean Difference	*p*	Cohen's *d*
Question 1	36.00%	62.00%	26.00%	0.005**	0.53
Question 2	100.00%	98.00%	-2.00%	0.317	
Question 3	86.00%	98.00%	12.00%	0.014*	0.45
Question 4	88.00%	80.00%	-8.00%	0.248	
Question 5	92.00%	98.00%	6.00%	0.083	
Question 6	92.00%	94.00%	2.00%	0.655	
Question 7	90.00%	88.00%	-2.00%	0.739	
Question 8	76.00%	80.00%	4.00%	0.593	
Question 9	40.00%	52.00%	12.00%	0.221	
Question 10	82.00%	96.00%	14.00%	0.020*	0.45
Question 11	76.00%	80.00%	4.00%	0.617	
Question 12	90.00%	100.00%	10.00%	0.025*	0.47

Note. n = 50. * significant at p ≤ 0.05; ** significant at p ≤ 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 2305, regardless of teaching and learning modality. A total of 1,206 students received an invitation via Qualtrics to complete the pretest during the first week of class, and 1,188 students received an invitation to complete the posttest near the end of the semester prior to finals. Out of the 50

students who completed both the pre- and posttest, 14 were fully 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.

Prior to Spring 2020, the pre- and posttests 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 these 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 posttests through Qualtrics, the low participation rates were apparent across all course sections. Rather than re-implement paper tests and scantrons in Fall 2021, a plan was made 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 requested 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. The Qualtrics emails were scheduled to go out on the same days face-to-face students were present in their enrolled section of POLS 2305; students enrolled in an online section received emails the same days as students enrolled on Monday, Wednesday, and Friday. These measures did not result in increased participation as anticipated.

References

Banta, T. W., & Palomba, C. A. (2015). *Assessment essentials: Planning, implementing, and improving assessment in higher education* (2nd ed.). Jossey-Bass.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.)*.* Lawrence Erlbaum.

Huck, S. W. (2007). *Reading statistics and research* (5th ed.). Addison Wesley.

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*. 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. (2022). *Texas Core Curriculum*. https://www.highered.texas.gov/institutional-resources-programs/public-universities-health-related-institutions/transfer-resources/texas-core-curriculum-tcc/