



A Report of the Course-Embedded Contemporary Moral Issues Assessment

PHIL 2306

Fall 2024-Spring 2025

Description of the Course-Embedded Contemporary Moral Issues Assessment

Beginning in fall 2022, a new locally developed pretest to posttest assessment was administered within sections of PHIL 2306: Contemporary Moral Issues. The instrument consisted of 20 multiple choice questions and was administered at the beginning and at the end of the fall and spring semesters. The instrument was developed by Philosophy faculty for use as part of their ongoing programmatic assessment as well as for Core Learning assessment. Because the instrument was developed by faculty with expertise in teaching these concepts, it is assumed that the instrument has content-related validity (Banta & Palomba, 2015). Additionally, as this test was embedded within normal sections of PHIL 2306, the student scores represent authentic student work (Banta & Palomba, 2015; Kuh et al., 2015).

The student data presented within this report reflect student performance regarding the Texas Higher Education Coordinating Board's Core Learning Objectives of Social Responsibility and Personal Responsibility (THECB, 2025). The THECB (2025) defines these concepts as follows:

- Social Responsibility: intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities
- Personal Responsibility: ability to connect choices, actions, and consequences to ethical decision-making

These data should therefore be used in conjunction with other data to fully understand student knowledge and ability with regards to these Core Learning Objectives.

Methodology

A total of 123 students took the pretest, and a total of 69 students took the posttest for all sections of PHIL 2306: Contemporary Moral Issues for the 2024-2025 academic year; however, not all student test scores were used for analysis. To determine whether student performance increased from pretest to posttest, a dependent samples *t*-test was used for analysis. Student identification numbers were collected along with student scores to identify each student's score on both the pretest and posttest. A total of 57 students could be identified as taking both the pre- and posttests. All statistical analysis was therefore conducted on only those students for whom both pre- and posttest scores could be identified.

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. All four of the standardized skewness and kurtosis coefficients were within the limits of normality of ± 3 (Onwuegbuzie & Daniel, 2002) for the face-to-face, online, and combined student populations. Therefore, a parametric dependent samples *t*-test was used to analyze the student performance data for the combined populations. A complete breakdown of the standardized skewness and kurtosis coefficients is in Table 1.

Table 1*Standardized Skewness and Kurtosis Values for Student Pre- and Posttest Scores for 2024-2025*

Student Population	Standardized Skewness Coefficient	Standardized Kurtosis Coefficient
Face-to-Face Students		
Pretest	-0.10	-1.18
Posttest	-1.43	-0.06
Online Students		
Pretest	0.21	-1.11
Posttest	-0.27	-1.31
All Students		
Pretest	0.17	-1.56
Posttest	-0.82	-1.21

Results

A parametric dependent samples *t*-test revealed no statistically significant difference between students' pre- to posttest scores for students enrolled in face-to-face sections of PHIL 2306: Contemporary Moral Issues for the 2024-2025 academic year, $t(16) = -0.94, p = .360$. The average student score increased from 64.41% to 69.41%, representing a 5.00% increase. This equated to an average increase of 1.00 questions answered correctly from pre- to posttest. Readers are directed to Table 2 for a breakdown of these results.

Table 2*Descriptive Statistics for Student Pre- and Posttest Scores on Course-Embedded Test in PHIL 2306: Contemporary Moral Issues for 2024-2025 (Face-to-Face)*

Test Version	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i> %	<i>SD</i> %
Pretest Scores	17	12.88	3.53	64.41	17.67
Posttest Scores	17	13.88	3.71	69.41	18.53

A parametric dependent samples *t*-test revealed a statistically significant difference at the $p < .01$ level between students' pre- to posttest scores for students enrolled in online sections of PHIL 2306: Contemporary Moral Issues for the 2024-2025 academic year, $t(39) = -3.39, p = .002$. This difference represented a moderate effect size (Cohen's *d*) of 0.54 (Cohen, 1988). The average student score increased from 61.12% to 71.12%, for an increase of 10.00%. This equated to an average increase of 2.00 questions answered correctly from pre- to posttest. Readers are directed to Table 3 for a breakdown of these results.

Table 3*Descriptive Statistics for Student Pre- and Posttest Scores on Course-Embedded Test in PHIL 2306: Contemporary Moral Issues for 2024-2025 (Online)*

Test Version	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M</i> %	<i>SD</i> %
Pretest Scores	40	12.23	3.17	61.12	15.87
Posttest Scores	40	14.23	3.87	71.12	19.33

A parametric dependent samples *t*-test revealed a statistically significant difference at the $p < .01$ level between students' pre- to posttest scores for students enrolled in all sections of PHIL 2306: Contemporary Moral Issues for the 2024-2025 academic year, $t(56) = -3.28$, $p = .002$. This difference represented a small effect size (Cohen's *d*) of 0.43 (Cohen, 1988). The average student score increased from 62.10% to 70.61%, for an increase of 8.51%. This equated to an average increase of 1.70 questions answered correctly from pre- to posttest. Readers are directed to Table 4 for a breakdown of these results.

Table 4

Descriptive Statistics for Student Pre- and Posttest Scores on Course-Embedded Test in PHIL 2306: Contemporary Moral Issues for 2024-2025 (All Students)

Test Version	<i>n</i>	<i>M</i>	<i>SD</i>	<i>M %</i>	<i>SD %</i>
Pretest Scores	57	12.42	3.27	62.10	16.34
Posttest Scores	57	14.12	3.79	70.61	18.95

Additional important information regarding student performance can also be gained through an item analysis of student pre- and posttest performance on individual test questions for each of the examined student populations. This item analysis revealed that students in face-to-face sections scored statistically significantly higher on Question 2 from pre- to posttest. Readers are directed to Table 5 for a complete breakdown of item analysis data for face-to-face students.

Table 5

Percentage of Face-to-Face Students Correctly Answering Pre- and Posttest Questions for 2024-2025

	Pretest %	Posttest %	Mean Difference	<i>p</i>	Cohen's <i>d</i>
Question 1	47	59	12	.431	
Question 2	76	100	24	.041*	0.54
Question 3	94	94	0	n/a	
Question 4	47	35	(12)	.332	
Question 5	59	71	12	.431	
Question 6	76	47	(29)	.056	
Question 7	65	88	23	.104	
Question 8	71	65	(6)	.579	
Question 9	47	47	0	n/a	
Question 10	12	18	6	.668	
Question 11	59	82	23	.163	
Question 12	71	82	11	.431	
Question 13	53	65	12	.496	
Question 14	82	88	6	.668	
Question 15	71	71	0	n/a	
Question 16	82	65	(17)	.188	
Question 17	88	76	(12)	.431	
Question 18	82	88	6	.668	
Question 19	35	65	30	.056	
Question 20	71	82	11	.496	

Note. $n = 17$. (Decrease in score from pretest to posttest); * significant at $p < .05$. 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).

An item analysis for students in online sections revealed that they scored statistically significantly higher on 3 of the 20 test questions (Questions 1, 6, and 11) from pre- to posttest. Readers are directed to Table 6 for a complete breakdown of item analysis data for online students.

Table 6

Percentage of Online Students Correctly Answering Pre- and Posttest Questions for 2024-2025

	Pretest %	Posttest %	Mean Difference	p	Cohen's d
Question 1	55	85	30	.003**	0.49
Question 2	93	93	0	n/a	
Question 3	93	93	0	n/a	
Question 4	68	80	12	.133	
Question 5	83	70	(13)	.168	
Question 6	18	50	32	< .001***	0.62
Question 7	38	53	15	.135	
Question 8	73	78	5	.486	
Question 9	40	43	3	.812	
Question 10	25	40	15	.135	
Question 11	30	60	30	.003**	0.49
Question 12	78	90	12	.058	
Question 13	73	83	10	.210	
Question 14	78	85	7	.323	
Question 15	45	53	8	.372	
Question 16	80	73	(7)	.372	
Question 17	50	68	18	.090	
Question 18	83	85	2	.711	
Question 19	48	65	17	.128	
Question 20	78	80	2	.743	

Note. $n = 40$. (Decrease in score from pretest to posttest); * significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$. 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).

An item analysis for students in all sections combined revealed that face-to-face and online students scored statistically significantly higher on 4 of the 20 test questions (Questions 1, 7, 11, and 19) from pre- to posttest. Readers are directed to Table 7 for a complete breakdown of item analysis data for all students.

Table 7

Percentage of All Students Correctly Answering Pre- and Posttest Questions for 2024-2025

	Pretest %	Posttest %	Mean Difference	<i>p</i>	Cohen's <i>d</i>
Question 1	53	77	24	.003**	0.41
Question 2	88	95	7	.459	
Question 3	93	93	0	n/a	
Question 4	61	67	6	.443	
Question 5	75	70	-5	.496	
Question 6	35	49	14	.088	
Question 7	46	63	17	.032*	0.29
Question 8	72	74	2	.766	
Question 9	42	44	2	.849	
Question 10	21	33	12	.128	
Question 11	39	67	28	.001**	0.45
Question 12	75	88	13	.051	
Question 13	67	77	10	.159	
Question 14	79	86	7	.289	
Question 15	53	58	5	.472	
Question 16	81	70	-11	.135	
Question 17	61	70	9	.301	
Question 18	82	86	4	.568	
Question 19	44	65	21	.022*	0.31
Question 20	75	81	6	.472	

Note. $n = 57$. (Decrease in score from pretest to posttest); * significant at $p < .05$; ** significant at $p < .01$; *** significant at $p < .001$. 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).

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.
- 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. (2025). *Texas Core Curriculum*.
<https://www.highered.texas.gov/institutional-resources-programs/public-universities-health-related-institutions/transfer-resources/texas-core-curriculum-tcc/>