

These results indicate a decline in performance from the previous year. In discussions with faculty, it was discovered that a faculty member teaching PHIL 2303 for the first time did not include a unit on linked probabilities for his 128 students. This may explain the decline in student performance.

**Online Results:**

Among the 34 online students who took the pre-test, 2 (5.9%) answered question 23 correctly. Among the 23 students who took the post-test, 4 (17.4%) answered question 23 correctly. These results indicate an increase of 195% in the number of students who answered question 23 correctly. This result did meet the criterion for success. However, the small number of students who correctly answered the question raises questions about the student learning outcome for this group of students in this area.

The post-test result that 17.4% of students answered question 23 correctly indicates that students completing this general education course did not do better on this task than historical senior-level business students. This result did not meet the criterion for success.

In discussions with faculty, it was discovered that the faculty member teaching PHIL 2303 online did not include a unit on linked probabilities for his students.

RELATED ITEM LEVEL 3

**Linked Probabilities Action**

**Action Description:**

The program will undertake a series of program-wide meetings to ensure that all faculty are teaching all required elements of Core Curriculum courses. The focus of these meetings will be to ensure that all faculty are aware of the expectations for each course.

RELATED ITEM LEVEL 2

**Response Scores On TACTS**

**Indicator Description:**

All students who take PHIL 2303 will be tested on their critical thinking skills. All faculty who teach PHIL 2303 will administer the Texas Assessment of Critical Thinking Skill (TACTS), an externally validated test of critical thinking skills, in a pre-test/post-test format. The TACTS is a broad-based assessment of critical thinking skills that goes beyond the current scope of PHIL 2303. This will allow the faculty to determine areas that may be added to our current curriculum in the future. In addition, it allows for substantial flexibility in what is taught, thereby ensuring academic freedom for instructors to design individual sections around their own expertise and interests. A copy of the current TACTS is attached. A copy of the credited responses is attached. The Philosophy Program Coordinator will be responsible for ensuring that all faculty who teach PHIL 2303 effectively administer the pre- and post-tests in every section of their course. Dr. Sanford will be responsible for gathering pre- and post-test data from the faculty members who teach PHIL 2303.

**Criterion Description:**

A paired two-sample t-test will be performed on the scores of all students who take the pre-test and the post-test. The philosophy program expects to see a statistically significant improvement from the pre-test to the post-test.

**Findings Description:**

**Face-to-Face Results**

A parametric dependent samples *t*-test revealed a statistically significant difference between the pre- to post-scores for students enrolled in face-to-face sections of PHIL 2303: Critical Thinking for the 2016-2017 academic year,  $t(325) = -4.08, p < .001$ . This difference represented a small effect size (Cohen's *d*) of 0.26 (Cohen, 1988). The average student score increased from 29.76% to 32.95%, for an increase of approximately 3%. Readers are directed to Table 1 in the attached PDF for a breakdown of these results.

**On-line Results**

For online students, a parametric dependent samples *t*-test did not reveal a statistically significant difference between the pre- to post-scores,  $t(21) = -1.36, p = .19$ . Readers are directed to Table 2 in the attached PDF for a breakdown of these results.

**Combined Results**

Finally, for both populations combined, a parametric dependent samples *t*-test revealed a statistically significant difference between the pre- to post-scores for the 2016-2017 academic year,  $t(347) = -4.26, p < .001$ . This difference represented a small effect size (Cohen's *d*) of 0.26 (Cohen, 1988). The average student score increased from 30.17% to 33.34%, for an increase of approximately 3%. Readers are directed to Table 3 in the attached PDF for a breakdown of these results.

Attached Files

 [Texas Assessment of Critical Thinking Skills 2016-2017 Report](#)

RELATED ITEM LEVEL 3

**TACTS Scores Action**

**Action Description:**

The Program will continue to monitor student learning outcomes in all sections of PHIL 2303. In addition, the Program will hold meetings with all faculty who teach PHIL 2303 to facilitate sharing of successful strategies for engaging students and improving outcomes. The focus of these meetings will be on improving performance in on-line sections of PHIL 2303.

#### RELATED ITEM LEVEL 1

##### **Demonstrate Formal Logic Skills**

##### **Learning Objective Description:**

Formal reasoning is a highly regarded component of philosophical work. Students will be able to analyze formal arguments and construct formal proofs.

#### RELATED ITEM LEVEL 2

##### **Formal Arguments and Proofs**

##### **Indicator Description:**

All students in PHIL 2352 will be tested on their knowledge of basic concepts in formal logic using a locally standardized pre-test and post-test for each section. Following a review of best practices for the teaching of these courses, a group of Program faculty chose the questions for the assessment. The questions asked cover the range of concepts that are taught in peer departments. Instruction on these concepts promotes a basic competence in analysis of formal arguments and construction of formal proofs. The attached document provide the assessment instrument for PHIL 2352.

##### **Criterion Description:**

A paired two-sample t-test will be performed on the scores of all students who take the pre-test and the post-test. Students will demonstrate a statistically significant improvement from the pre-test to the post-test.

##### **Findings Description:**

The paired two-sample t-test showed significant improvement from the pre-test to the post test.

The pre- and post-test scores for all students are in the attached PDF named "PHIL 2352 Pre-Post Scores (2016-2017)." The attached PDF named "PHIL 2352 Pre-Post t-Test (2016-2017)" shows the descriptive statistics.

Attached Files

[!\[\]\(f1c5da15572e3e09d343161be98f508d\_img.jpg\) PHIL 2352 Pre-Post t-Test \(2016-2017\).](#)

[!\[\]\(235bfe13ebf007ce2eea9e689707fac7\_img.jpg\) PHIL 2352 Pre-Post Scores \(2016-2017\).](#)

#### RELATED ITEM LEVEL 3

##### **Formal Logic Action**

##### **Action Description:**

The Program will continue to monitor student performance in PHIL 2352 while it focuses its improvement efforts elsewhere.

#### RELATED ITEM LEVEL 1

##### **Develop Instrument for Assessing Metacognitive Judgement in PHIL 2303**

##### **Performance Objective Description:**

The ability to evaluate one's own knowledge and skills is an essential part of critical thinking and decision making. In order to better understand this understudied component of critical thinking, the Program has encouraged Dr. Sanford and Dr. Wright to work with Jeff Roberts, SHSU's Director of Assessment, to advance their research in this area by promoting the development and future deployment of an instrument for assessing students' metacognitive performance.

#### RELATED ITEM LEVEL 2

##### **Development of an Instrument for Measuring Students' Metacognitive Abilities**

##### **KPI Description:**

The Program will develop an instrument to assess students metacognitive abilities and intellectual humility as part of the PHIL 2303 course assessment. These efforts will be considered successful if the Program is able to implement a metacognition and intellectual humility assessment instrument in Fall 2017.

##### **Results Description:**

The Program was successful at developing an instrument that will allow for assessment of students metacognitive abilities and intellectual humility. Combining elements of the instruments Dr. Wright and Dr. Sanford have been working on with items from the TACTS, the Program successfully developed an instrument that can assess critical thinking, metacognition, and intellectual humility. It will be used in all PHIL 2303 sections during 2017-2018.

#### RELATED ITEM LEVEL 3

##### **Implementing Metacognition Instrument**

##### **Action Description:**

The Philosophy Program will administer the new combined critical thinking and metacognition instrument in all sections of PHIL 2303 during Fall 2017 and Spring 2018. This will replace the TACTS as the main assessment instrument for PHIL 2303.

## **Review/Revise Assessment Instrument for PHIL 1301**

##### **Goal Description:**

Given that the program has used the same instrument for pre-test/post-test assessment in PHIL 1301 sections for several years, all faculty who currently teach this course will be invited to serve on a committee charged with reviewing (and revising, as necessary) this instrument to ensure