

CORE ASSESSMENT REPORT TWU 2015-16

OBJECTIVES: COMMUNICATION AND CRITICAL THINKING

SUMMARY

For the 2015-16 academic year, TWU assessed the objectives of *Communication* and *Critical Thinking* in the following undergraduate general education areas as assigned by the state:

- Communications (first-year composition)
- Mathematics
- Life & Physical Sciences
- Creative Arts
- Social & Behavioral Sciences
- History
- Government
- Language, Philosophy, & Culture

The objectives assessed in 2015-16 are defined by THECB as follows:

- **Critical Thinking Skills (CTS)** – to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information;
- **Communication Skills (COMS)** – to include effective development, interpretation and expression of ideas through written, oral and visual communication.

Facets of each objective are captured through suites of narrower criteria. The objective of *Communication*, for instance, includes the criteria of Explanation of Issues and Organization. *Critical Thinking* includes Evidence Analysis and Define Problem. These criteria are assessed by volunteer raters in organized sessions, who employ a modified VALUE rubric on a three-point scale, with a 1 representing an unmet standard, a 2 indicating a mixed or partial success, and a 3 indicating clear success. Our currently published goal is that 65% of students will meet at least level 2 for any criterion.

For *Communication*, 72.43% of students met that criterion for success.

- All class levels, from first-year to senior, saw above 65% of constituents meeting the criterion for success.
- Both first-time-in-college (FTIC) and transfer student populations came in above goal, and both full-time and part-time students did so, too.
- Among *Communication* criteria that were often rated and tended to have more robust reliability, Central Message and Organization stood out as noteworthy strengths (83.54% and 81.57% of students meeting the criterion for success, respectively), suggesting students are generally good at getting their main point across and not losing their way in discourse.
- Access and Use Information Ethically and Legally, Content Development, and Uses Information Purposefully stood out as relative weaknesses (64.47%, 58.46%, and 58.95%, respectively), suggesting students may need more scaffolding and practice at shoring up points with research and evidence.
- Finally, Comprehension (68.94%) and Explanation of Issues (76.76%) stood out as criteria that, for how frequently faculty selected them as relevant to assigned tasks, may require more scaffolding and explicit

instruction. It is worth noting that these last two criteria are interrelated, in that students who struggle to comprehend assigned materials also struggle to explain them.

For *Critical Thinking*, 65.64% met the criterion for success.

- Notably, the percentages of first-year and sophomore students meeting the criterion for success fell just short of goal (62.15% and 64.98%, respectively), though the percentages of juniors (70.44%) and seniors (75.86%) meeting the criterion for success brought the overall TWU average over the 65-percentile mark.
- FTIC students fell just below this benchmark at 64.76%, while transfer students came in above at 68%.
- Both full-time and part-time students came in above goal.
- Among *Critical Thinking* criteria that were often rated and tended to have more robust reliability, both Define Problem and Existing Knowledge, Research, and Views stood out as noteworthy strengths (78.15% and 77.94% of students meeting the criterion for success, respectively).
- Application/Analysis; Conclusions and Related Outcomes; and Ethical Issue Recognition stood out as relative weaknesses (63.72%, 61.17%, and 64.41%, respectively).
- Finally, Evidence Analysis (72.46%) stood out as a criterion that, for how frequently faculty selected it as relevant to assigned tasks, may require more scaffolding and explicit instruction.

CONTENTS

Summary.....	1
Recommendations.....	2
Participants.....	4
Students.....	4
Participating Faculty	5
Core-Academy Raters	5
Tables of Results	6
Rates of success generally increased as students progressed through grade ranks, from first-year to senior.....	6
Results by Student classification.....	6
Results by Criterion.....	7
Results by College and Component Area.....	10
History and Government	11
Contact Information	12

RECOMMENDATIONS

New recommendations will appear near the top of these lists in each report. Recommendations from previous reports may reappear later because they bear repeating or for the benefit of those new to the core community.

Set appropriate challenge levels. A heavy cognitive load impairs performance on all criteria, not just the one under stress. Give students a difficult analytical challenge and their grammar will suffer, too. We saw this sort of thing a lot in the assessed artifacts. First-year composition asked students to do something difficult: analyze two articles

with competing opinions and make an argument for what value or principle was most driving the authors apart. A student's organization scores for such an assignment will be lower than they would be for a class in which they were simply asked to summarize a textbook chapter, wherein the structure is already partly baked in. In some cases, a challenge may have been set too high. We saw several assignments that asked students to summarize, or in some cases even evaluate the methodology of, scientific articles from journals like *Nature*. Often students responded to this challenge by plagiarizing or patch-writing what the article said, a response well-predicted by [research on plagiarism](#). Conversely, too low a bar keeps students from improving. The ideal learning situation tends to be [challenging but scaffolded](#) in such a way that students can navigate through it with the help provided by the scaffolding. One way to do this is to break up a challenging task into discrete steps. Our raters were impressed with the Social Action Project assignment created for one of the Women's Studies core courses (WS 2013). Students are asked to analyze a social problem and recommend a research-supported social action that might effect change, neither of which are easy. But the assignment has a common template, a form broken up into specific tasks and questions, and these walk students through the process of responding to the challenge.

Emphasize foundational criteria. It's difficult to explain something without first comprehending it. It's difficult to develop content that hasn't been sufficiently researched or analyzed. Which is to say, some of the criteria on our rubric may be more deserving of emphasis than others, simply because growth in those areas is likely to have trickle-out effects to other criteria. Comprehension is one such criterion for *Communication*. Evidence Analysis is one for *Critical Thinking*.

Build background knowledge. [Research in educational psychology](#) emphasizes the critical relationship between background knowledge and reading comprehension, critical thinking, and evaluation. What you already know determines to large extent what you are ready to understand. Background knowledge not only includes specialized terminology or statistical concepts but also easy-to-overlook elements like the organizational structure of a typical peer-reviewed scientific article. (Students without this knowledge often misinterpret the opening literature review as a thesis-bearing introduction and will report as findings what was meant to be historical background.)

Take advantage of the "teaching effect" to build student background knowledge. Most faculty have experienced the phenomenon in which, by teaching a subject, they learn it better than they ever would have understood it if they had spent that same time continuing to study as a student. [Students experience this, too](#). By giving students more opportunities to explain content, faculty can take advantage of this effect. One powerful method for encouraging student explanations is [Writing to Learn](#): short, informal written tasks, performed in-class or in preparation for class, which instead of being graded or commented on are instead, more often, used during group or class activities and perhaps recorded as credit/no-credit. (Writing to Learn combines powerfully with [Team-Based Learning](#) in-class activities.)

Make assignment expectations clear in written instructions. Even if expectations are transmitted orally, they should also be communicated in writing for reference. Assignments for which such information was scant often had weaker student performances.

Volunteer to rate artifacts. Many of the above observations stem from discussions that bloomed during rating sessions. Faculty participants often came away from their rating experiences with new ideas for assignments or plans to revise assignments. It is one thing to see how your own students react to your own course, and quite another to see how many students respond to many different kinds of requests. You get a sense of what all students seem to struggle with, and of what kinds of work students are capable of when they're challenged but have the right kind of scaffolding.

PARTICIPANTS

The subsections below shed light on the range of participants, in terms of assessed students, submitting faculty, and core-academy raters.

STUDENTS

For AY 2015-16, students to assess were selected by Institutional Research and Data Management through a stratified random sample of face-to-face students in main-campus core curriculum courses, with the sample sizes calculated so as to produce a margin of error of 3%.

- Female: 88.96%, Male: 11.04%
- FTIC: 71.86%, Transfer: 28.14%
- Full-Time: 90.32%, Part-Time: 9.68%

Student Classification	Percentage
First-Year	40.87%
Sophomore	33.28%
Junior	16.01%
Senior	8.80%
Post-baccalaureate	1.04%
Grand Total	100.00%

Student Ethnicity	Percentage
American Indian or Alaska Native, non-Hispanic	1.16%
Asian, non-Hispanic	10.61%
Black, non-Hispanic	21.12%
Hawaiian/Pacific Islander, non-Hispanic	0.16%
Hispanic/Latino	34.75%
International	0.92%
Unknown	0.92%
White, non-Hispanic	30.36%
Grand Total	100.00%

Student College	Percentage
Arts and Sciences	35.29%
General	0.89%
Health Sciences	23.17%
Nursing	33.05%
Professional Education	7.59%
Grand Total	100.00%

PARTICIPATING FACULTY

Core faculty tend to come from the College of Arts and Sciences. Of faculty teaching the core during the academic year in question, 46.91% held doctoral degrees or equivalents. The remainder of core faculty comprise mostly adjunct faculty and (particularly for first-year composition) graduate teaching assistants.

Faculty Department	Percentage
Biology	11.19%
Business and Economics	1.36%
Chemistry and Physics	17.90%
Dance	1.26%
English, Speech, and Foreign Language	8.69%
General	3.60%
Kinesiology	4.43%
Mathematics and Computer Science	16.39%
Music and Drama	1.86%
Psychology and Philosophy	18.32%
Sociology and Social Work	3.07%
Teacher Education	0.11%
Visual Arts	2.33%
Women's Studies	9.52%
Grand Total	100.00%

CORE-ACADEMY RATERS

Our volunteer rater pool comprised 23.66% full-time faculty, 42.26% staff, and 21.76% graduate students, with the remainder filled out by a combination of adjunct faculty, administrators, and alumni.

Raters	Percentage
Adjunct	6.51%
Admin	0.84%
Alumni	4.06%
Faculty	23.66%
Grad Student	21.76%
Guest	0.61%
Staff	42.26%
Undergrad Student	0.29%
Grand Total	100.00%

TABLES OF RESULTS

Rates of success generally increased as students progressed through grade ranks, from first-year to senior.

RESULTS BY STUDENT CLASSIFICATION

CORE OBJECTIVE Student Classification	MEETS STANDARD	
	No	Yes
Communication	27.66%	72.34%
FR	32.72%	67.28%
SO	25.63%	74.37%
JR	22.42%	77.58%
SR	21.51%	78.49%
Critical Thinking	34.48%	65.52%
FR	37.85%	62.15%
SO	35.02%	64.98%
JR	29.56%	70.44%
SR	24.14%	75.86%
Grand Total	31.14%	68.86%

RESULTS BY FULL-TIME OR PART-TIME STATUS

Objective Class Load	MEETS STANDARD	
	No	Yes
Communication	27.57%	72.43%
Full time	27.44%	72.56%
Part time	22.98%	77.02%
Critical Thinking	34.36%	65.64%
Full time	34.41%	65.59%
Part time	33.87%	66.13%
Grand Total	31.04%	68.96%

RESULTS BY FIRST-TIME IN COLLEGE OR TRANSFER STATUS

Objective Admission Status	MEETS STANDARD	
	No	Yes
Communication	27.57%	72.43%
FTIC	28.62%	71.38%
Transfer	24.75%	75.25%
Critical Thinking	34.36%	65.64%
FTIC	35.24%	64.76%
Transfer	32.00%	68.00%
Grand Total	31.04%	68.96%

RESULTS BY CRITERION

PERCENTAGE OF STUDENTS MEETING STANDARD BY CRITERION		
Objective Criteria	MEETS STANDARD	
	No	Yes
Communication	27.57%	72.43%
Access and Use Information Ethically and Legally	35.53%	64.47%
Central Message	16.46%	83.54%
Command of Interpretive Strategies	23.17%	76.83%
Comprehension	31.06%	68.94%
Content Development	41.54%	58.46%
Context of and Purpose for Communication	25.57%	74.43%
Control of Language, Syntax, and Mechanics	16.91%	83.09%
Data Interpretation	31.75%	68.25%
Data Representation	28.42%	71.58%
Empathy	41.18%	58.82%
Explanation of Issues	23.24%	76.76%
Genre and Disciplinary Conventions	23.57%	76.43%
Integrated Communication	16.67%	83.33%
Oral Delivery	44.44%	55.56%
Organization	18.43%	81.57%
Other* -Communication	0.00%	100.00%
Relationship to Text	37.38%	62.62%
Uses Information Purposefully	41.05%	58.95%
Critical Thinking	34.36%	65.64%
Analysis of Knowledge	47.30%	52.70%
Application / Analysis	36.28%	63.72%
Application of Ethical Perspectives/Concepts	34.27%	65.73%
Apply Disciplinary Knowledge	29.50%	70.50%
Apply Disciplinary Methods	42.16%	57.84%
Conclusions and Related Outcomes	38.83%	61.17%
Define Problem	21.85%	78.15%
Embracing Contradictions	64.26%	35.74%
Ethical Issue Recognition	35.59%	64.41%
Ethical Self-Awareness	48.57%	51.43%
Evaluate Information and its Sources Critically	48.71%	51.29%

Evaluate Outcomes of Attempted Solutions	27.33%	72.67%
Evaluate Potential Solutions	36.69%	63.31%
Evidence Analysis	27.54%	72.46%
Existing Knowledge, Research, and/or Views	22.06%	77.94%
Identify Strategies	32.55%	67.45%
Implement Solution	33.01%	66.99%
Influence of context and assumptions	30.60%	69.40%
Limitations and Implications	25.49%	74.51%
Other*-Critical Thinking	43.55%	56.45%
Propose Solutions/Hypotheses	27.75%	72.25%
Reflection and Self-Assessment	23.22%	76.78%
Research Design	50.00%	50.00%
Social Self-Awareness	28.24%	71.76%
Source Use & Evaluation	24.04%	75.96%
Student's position	57.71%	42.29%
Textual Analysis	64.71%	35.29%
Topic selection	9.37%	90.63%
Understanding Social Systems	40.89%	59.11%
Uses Information Purposefully	28.92%	71.08%
Grand Total	31.04%	68.96%

* The *Other* Communication* and *Other * Critical Thinking* criteria are temporary criteria for the pilot and this academic year, meant to give faculty options to nominate criteria not adequately covered by those already on the rubric. Few faculty selected these options, and we expect to discontinue these options in future rubrics.

FREQUENCY OF CRITERIA SELECTION BY PARTICIPATING FACULTY

Objective	
Criteria	Number of Ratings
Communication	10,320
Access and Use Information Ethically and Legally	155
Central Message	934
Command of Interpretive Strategies	131
Comprehension	1387
Content Development	1021
Context of and Purpose for Communication	404
Control of Language, Syntax, and Mechanics	715
Data Interpretation	823
Data Representation	186
Empathy	199
Explanation of Issues	1481
Genre and Disciplinary Conventions	143
Genres	10

Integrated Communication	128
Oral Delivery	214
Organization	1217
Other*-Communication	2
Relationship to Text	324
Uses Information Purposefully	846
Critical Thinking	11,887
Analysis of Knowledge	358
Application / Analysis	499
Application of Ethical Perspectives/Concepts	182
Apply Disciplinary Knowledge	666
Apply Disciplinary Methods	155
Conclusions and Related Outcomes	820
Define Problem	663
Embracing Contradictions	279
Ethical Issue Recognition	188
Ethical Self-Awareness	107
Evaluate Information and its Sources Critically	434
Evaluate Outcomes of Attempted Solutions	675
Evaluate Potential Solutions	476
Evidence Analysis	928
Existing Knowledge, Research, and/or Views	681
Identify Strategies	405
Implement Solution	326
Influence of context and assumptions	283
Limitations and Implications	104
Other*-CriticalThinking	84
Propose Solutions/Hypotheses	505
Reflection and Self-Assessment	250
Research Design	58
Social Self-Awareness	135
Source Use & Evaluation	533
Student's position	695
Textual Analysis	382
Topic selection	400
Understanding Social Systems	289
Uses Information Purposefully	327
Grand Total	22,207

Items above that appear in red are being considered for removal. Although we started by casting a wide net, paring down criteria is ultimately good both for rater reliability and for instructional focus. Items in red stood out, often for being seldom selected relative to other criteria. They may have other issues, including reliability, faculty confusion resulting in artifacts that only rarely could be rated, or overlap with other criteria. Other criteria, such as Application/Analysis, Reflection & Self-Assessment, and Understanding Social Systems may be moved to other core objectives where raters' sense was that they would fit better.

RESULTS BY COLLEGE AND COMPONENT AREA

PERCENTAGE OF STUDENTS MEETING CRITERION FOR SUCCESS, BY COLLEGE		
CORE OBJECTIVE	MEETS STANDARD	
College	No	Yes
Communication	27.44%	72.56%
Arts and Sciences	25.69%	74.31%
Health Sciences	28.87%	71.13%
Nursing	28.82%	71.18%
Professional Education	25.70%	74.30%
Critical Thinking	34.18%	65.82%
Arts and Sciences	33.10%	66.90%
Health Sciences	35.63%	64.37%
Nursing	34.61%	65.39%
Professional Education	32.90%	67.10%
Grand Total	30.88%	69.12%

PERCENTAGE OF STUDENTS MEETING CRITERION FOR SUCCESS, BY FOUNDATIONAL COMPONENT AREA OF THE CORE CURRICULUM		
CORE OBJECTIVE	MEETS STANDARD	
Foundational Component Area	No	Yes
COMMUNICATION	27.57%	72.43%
Communications	59.08%	40.92%
Creative Arts	12.66%	87.34%
Language, Philosophy, & Culture	18.98%	81.02%
Life & Physical Sciences	29.19%	70.81%
Mathematics	30.24%	69.76%
Social & Behavioral Sciences	24.68%	75.32%
CRITICAL THINKING	34.36%	65.64%
Communications*	71.96%	28.04%
Creative Arts	18.42%	81.58%
Language, Philosophy, & Culture	25.02%	74.98%
Life & Physical Sciences	33.27%	66.73%
Mathematics	40.11%	59.89%
Social & Behavioral Sciences	31.31%	68.69%
Grand Total	31.04%	68.96%

* A note on Communications: The first-year composition program, which comprises the entirety of the Communications foundational area, has had its own internal pre- and post-test assessment system, employing trained raters, for several years, dating to before the new Texas core curriculum. Each artifact is rated by Core Assessment raters independently of the program’s own internal rating system. As noted earlier, the writing task given to students is analytically challenging, and timed. While the activity is scaffolded, it is difficult enough to have ripple effects affecting organization and expression. However, the program’s results also provide a benchmark against which to measure growth.

HISTORY AND GOVERNMENT

The History and Government programs, housed in a common department, have elected to submit their general education artifacts separate from other general education courses. The sample of students to be assessed in History and Government is generated the same way, at the same time, and in the same batch as are the samples for the rest of the core curriculum. The list of criteria, scales of performance, benchmarks for success, and the rubrics used are the same as for the rest of the core. However, instead of having than instructors individually submit artifacts to the university’s core assessment rating system, these programs submit their scores to a single faculty member liaison, who then provides them to the assistant director of academic assessment through an Excel spreadsheet.

The scores are based on standardized assessments used across all sections of HIST 1013, HIST 1023, GOV 2013, and GOV 2023. Students are provided with a reading and a series of multiple-choice questions, each of which is coded as aligning with one of the criteria in the table below, with each criterion corresponding to three questions. For instance, Textual Analysis has three questions associated with it. If a student answers all three correctly, the student’s score for this criterion is 3. If the student answers two correctly, the score is 2. Otherwise, the student doesn’t meet the criterion for success and the score is a 1.

All students take the same test in every core History and Government class, which means some students may take it as many as four times. For this reason, data from these programs are segregated from the data in the main core assessment system. In this inaugural year, students also were permitted to take the test as many times as they wanted, though we are told that policy will not continue. Possibly as a partial result of the above policies, criterion-of-success rates are higher here than in the core community at large, though Organization and Define Problem (from *Communication* and *Critical Thinking*, respectively) stand out as opportunities for progress.

Fall 2015	No	Yes
COMMUNICATION	7.67%	92.33%
Comprehension	5.33%	94.67%
Explanation of Issues	11.11%	88.89%
Interpretation	4.00%	96.00%
Organization	10.67%	89.33%
Textual Analysis	0.00%	100.00%
CRITICAL THINKING	9.00%	91.00%

Define Problem	10.67%	89.33%
Evidence Analysis	9.33%	90.67%
Existing Knowledge, Research, and/or Views	10.67%	89.33%
Influence of Context & Assumptions	5.33%	94.67%
Spring 2016	No	Yes
COMMUNICATION	2.75%	97.25%
Comprehension	5.49%	94.51%
Explanation of Issues	0%	100.00%
Interpretation	2.20%	97.80%
Organization	3.30%	96.70%
CRITICAL THINKING	1.65%	98.35%
Define Problem	2.20%	97.80%
Evidence Analysis	2.20%	97.80%
Existing Knowledge, Research, and/or Views	1.10%	98.90%
Influence of Context & Assumptions	1.10%	98.90%

CONTACT INFORMATION

For more information about core assessment results, consult on assignment design for assessments, or learn more about joining our volunteer community of raters, Core Rater Academy, please contact Dr. Gray Scott, assistant professor of English and assistant director of academic assessment, at grayscott@twu.edu or (940) 898-2327.