

**Middle Tennessee State University
General Education Competencies
Assessment Report 2017 - 2018**

Assessment of General Education Learning Outcomes
Subject Area: Mathematics
Academic Year: 2017-2018

1. Identify the course(s) used in the assessment. Include the prefix, number, and title of each course.
 - MATH 1710 – College Algebra
 - MATH 1710K – College Algebra
2. Indicate the number of students who were assessed. Was sampling used? If yes, briefly describe the method of selecting student work and the percentage of students whose work was assessed.
 - A total of 1,749 students were assessed in the academic year (1,170 in fall 2017 and 579 in spring 2018). Results of all students who took the departmental final examination were used in the assessment.
3. Do the procedures described in Items 1 and 2 represent any significant change from previous assessments? If so, describe the changes and rationale.
 - Reports for academic years 2014-2017 did not include distance and dual enrollment sections. Academic year 2017-2018 shows results for both distance and dual enrollment. The procedures used are the same as used in the 2014 – 2017 reports. Each of the five learning outcomes for mathematics is associated with a specific set of questions on the final examination—40 questions for learning outcome 1; 16 questions for each of learning outcomes 2, 3, and 4; and 12 questions for learning outcome 5.

The same set of questions was used to assess both Learning Outcome 2 (real-life problems) and Learning Outcome 3 (meaningful connections), as the distinction between these two learning outcomes was too subtle to measure with a single examination.

A correct response rate of:

- At least 85% is deemed superior,
- Between 60% and 84%, inclusive, is deemed satisfactory, and
- Less than 60% is deemed unsatisfactory.

Mathematics Learning Outcome to be Assessed	<u>Test Used</u>	<u>Test Item Numbers</u>
Learning Outcome 1: Students are able to use mathematics to solve problems and determine if results are reasonable.	Math 1710 Common Final	Questions ALL (1-40)
Learning Outcome 2: Students are able to use mathematics to model real-world behaviors and apply mathematical concepts to the solution of real life problems.	Math 1710 Common Final	Questions (total = 16) 2,5,6,7,8,9,10,11,12,13,14,15,19,21,22,25
Learning Outcome 3: Students are able to make meaningful connections between mathematics and other disciplines.	Math 1710 Common Final	Questions (total = 16) 2,5,6,7,8,9,10,11,12,13,14,15,19,21,22,25
Learning Outcome 4: Students are able to use technology for mathematical reasoning and problem solving.	Math 1710 Common Final	Questions (total = 16) 4,6,9,10,11,12,13,14,15,16,17,19,21,25,28,36
Learning Outcome 5: Students are able to apply mathematical and/or basic statistical reasoning to analyze data and graphs.	Math 1710 Common Final	Questions (total = 12) 7,13,15,17,20,26,32,33,34,36,37,40

4. Per the evaluation rubric utilized at your institution, adapt the table below to record the results of the assessments of each learning outcome in the subject area discussed in the report. Revise the table to reflect the descriptors used at your institution. The table shows Mathematics Learning Outcomes that include distance and dual enrollment sections.

<i>Mathematics Learning Outcomes, Academic Year 2017-18</i>				
<i>N = 1,749</i>				
Mathematics Outcome to be Assessed	Superior	Satisfactory	Superior or Satisfactory	Unsatisfactory
	# and %	# and %	# and %	# and %
1. Students are able to use mathematics to solve problems and determine if results are reasonable.	n=370 (21.1%)	n=1034 (59.1%)	n=1404 (80.3%)	n=345 (19.7%)
2. Students are able to use mathematics to model real-world behaviors and apply mathematical concepts to the solution of real life problems.	n=437 (25.0%)	n=951 (54.3%)	n=1388 (79.4%)	n=361 (20.6%)
3. Students are able to make meaningful connections between mathematics and other disciplines.	n=437(25.0%)	n=951 (54.3%)	n=1388 (79.4%)	n=361 (20.6%)
4. Students are able to use technology for mathematical reasoning and problem solving.	n=582 (33.3%)	n=914 (52.2%)	n=1496 (85.5%)	n=253 (14.5%)
5. Students are able to apply mathematical and/or basic statistical reasoning to analyze data and graphs.	n=746 (42.7%)	n=821 (46.9%)	n=1567 (89.6%)	n=182 (10.4%)

Supporting data can be found at the end of the report.

- Summarize your impressions of the results reported in item 4. Based upon your interpretation of the data, what conclusions emerge about student attainment of the learning outcomes?

The table below shows results of AY 2017-2018 for percentages of unsatisfactory responses on each of the five mathematics learning outcomes compared to data from three previous academic years.

Mathematics Learning Outcomes	% Unsatisfactory AY 2014-2015	% Unsatisfactory AY 2015-2016	% Unsatisfactory AY 2016-2017	% Unsatisfactory AY 2017-2018
Outcome 1	25.5	25.7	28.9	19.7
Outcome 2	35.1	35.5	34.6	20.6
Outcome 3	35.1	35.5	34.6	20.6
Outcome 4	26.6	26.6	31.3	14.5
Outcome 5	16.8	17.9	18.6	10.4

Supporting data can be found at the end of the report.

Analyzing the data, we found a noticeable improvement in the percentage of students performing at the unsatisfactory rate for all Learning Outcomes. Some possible explanations include increased tutoring opportunities, a revision of the previous final exam to address faulty questions, a change in the ACT scores of students enrolling in the course, and the implications of including distance and dual enrollment courses.

- Students are placed in K-sections (prescribed enhanced sections) based on a Math ACT score of 17 or 18, and students are placed in non-K-sections with a Math ACT score of 19 or better. This assessment combines the results of all students (both K- and non-K-sections), so that the average math ACT score of the student population in MATH 1710 is certainly less than the ACT Test Benchmark of 22, the ACT College Readiness Benchmark for a 75% chance of passing College Algebra with a C or better.
- Extra support for students enrolled in K-sections includes the tenured and tenure-track faculty from University Studies who consistently teach the majority of the K-sections of MATH 1710. These students also receive extra time each week for classroom instruction, as well as the use of online programs to supplement with helping students to be more consistent in completing homework assignments. These efforts have been successful as indicated by studies consistently showing no significant difference in the final examination results when K- and non-K-sections are compared.

6. Do you plan to implement strategies to correct any deficiencies that emerged from the data obtained? If yes, please explain.

Several strategies have been taken to provide a more consistent program for general education courses—

- The Committee created common departmental syllabi and common course schedules listing topics to cover for all instructors of MATH 1710 (also for MATH 1010, MATH 1530, MATH 1630, & MATH 1810).
- All faculty members are instructed to keep accurate attendance records on each student to document D-F-W grades and to encourage students to attend classes.
- Faculty members are instructed to utilize the University's Academic Alert System early and throughout the semester to notify students who are in academic jeopardy.
- Students are encouraged to use all available resources to receive tutoring and help with classwork. The syllabus includes a link to the Tutoring Center in James Walker Library.
- The department's MS GTAs are currently supervised by Dr. Rebecca Calahan. Supervision of GTAs in the Ph.D. program and the COMPS program is assigned to Dr. Mary Martin. In supervising the teaching assistants, these faculty members provide teaching mentoring, help with instructional practices, scheduling of workloads, and oversight of University and Departmental requirements in the programs of the graduate students.
- In the Department of Mathematical Sciences, College Algebra is taught almost entirely by full-time temporary instructors, adjunct instructors, and GTAs.
 - ❖ In F2017, 50 sections were taught (25 K-sections and 25 non K-sections). One of the 25 K-sections were distance. One of the 25 non K-sections was distance and 3 were dual enrollment. The K-sections were taught by 10 different instructors with 6 of them tenured. The non K-sections were taught by 17 different instructors with only 1 by a tenured MTSU faculty.
 - ❖ In S2018, 32 sections were taught (19 K sections and 13 non K sections). One of the 19 K-sections was distance. One of the 13 non K-sections was distance and 3 were dual enrollment. The K-sections were taught by 9 different instructors with 5 of them tenured. The non K-sections were taught by 11 different instructors with only 1 by a tenured MTSU faculty.
- Because of an inherently higher turn-over rate for adjunct and temporary, the Department continues to request more tenure-track faculty lines to meet the needs of the student population enrolling in MATH 1710 to satisfy general education requirements.

7. Did you implement any plans to correct deficiencies based upon data obtained from previous assessments? If yes, please explain.

- In order to insure greater uniformity in syllabi, grading, and learning expectations, all instructors are now required to have common information on syllabi and to use the same grading scale ranges.
- A significant and continuing goal of the Department is to develop course communities, also called professional communities, of faculty for its Gen Ed courses. MATH 1530 and MATH 1810 are examples of courses that have formed these communities where faculty teaching the courses meet on a regular basis to share and plan for ways to improve student learning in these courses.
- The Department of Mathematical Sciences and the Department of University Studies both continue to provide free tutoring to students in all General Education Mathematics courses. In support of the University's Quest for Student Success, last spring the General Education tutoring operation for MATH 1010, 1410, 1420, 1530, 1630, and 1710 was relocated to the Walker Library, extending tutoring services into the evening and weekend hours. The Mathematics Department continues to offer tutoring in Calculus and Pre-calculus in KOM. The University Studies Department offers tutoring for MATH 1010-K, 1710-K, and 1530-K in the KOM building.

University Studies offers a program called Academic Intervention in Mathematics (AIM) to promote success for those highly at-risk students who are repeating prescribed General Education mathematics courses. AIM targets students who have failed the course in which they are enrolled. These at-risk students are identified for each instructor at the beginning of the semester. The instructor meets with each student periodically to advise, to encourage, to teach study skills, and to individualize other interventions. Interventions may include assignments of time to be spent in the math lab, notebook checks, or written assignments. Simply meeting with students to show concern for them and to build relationships with them is a proven retention tool. Students are encouraged to meet with instructors during office hours. Instructors also use phone calls, emails, and Advisor Alerts to contact students who are not attending class. It is obvious that this type of intervention would be helpful to other students, so instructors intervene when any student is not progressing well. Any intervention that is designed for repeating students is also available to non-repeaters. For students who have missed a class or for tutors who might need to review some course topic(s), videos from the online 1710K are made available for viewing with all students and all faculty given access.

- In order to identify actions and strategies to improve student achievement, assessment results are provided and shared with faculty in Mathematical Sciences, faculty in University Studies, and members of the Mathematics General Education Committee.

All faculty received the email below. Suggestions for improvement are being implemented.

Greetings All,

The table below shows results of AY 2016-2017 for percentages of unsatisfactory responses on each of the five General Education Learning Outcomes compared to data from three previous academic years:

Mathematics Learning Outcomes	% Unsatisfactory AY 2013-2014	% Unsatisfactory AY 2014-2015	% Unsatisfactory AY 2015-2016	% Unsatisfactory AY 2016-2017
Outcome 1	25.5	25.7	28.9%	26.5
Outcome 2	35.1	35.5	34.6%	35.4
Outcome 3	35.1	35.5	34.6%	35.4
Outcome 4	26.6	26.6	31.3%	26.7
Outcome 5	16.8	17.9	18.6%	17.5

A correct response rate of less than 60% is deemed unsatisfactory. Learning Outcomes 2 and 3 have the highest unsatisfactory response rate. The following questions on the course review address these two learning outcomes: 1, 6, 9, 12, 16, 19, 20, 21, 23, 41, 44, 56, 60, 67, 68, 71, 74, 76, 77, 79-82, 84, 86, 87, 91, and 94.

Here is a link to the course review: <http://www.mtsu.edu/math/1710-Final-Exam-Review-10-09-17.pdf>

Mathematics Learning Outcome to be Assessed

Learning Outcome 1: Students are able to use mathematics to solve problems and determine if results are reasonable.

Learning Outcome 2: Students are able to use mathematics to model real-world behaviors and apply mathematical concepts to the solution of real life problems.

Learning Outcome 3: Students are able to make meaningful connections between mathematics and other disciplines.

Learning Outcome 4: Students are able to use technology for mathematical reasoning and problem solving.

Learning Outcome 5: Students are able to apply mathematical and/or basic statistical reasoning to analyze data and graphs.

Please let me know if you have ideas on how we can improve on these two Learning Outcomes.

	Learning Outcome 1			Learning Outcome 2-3		
	X ≥ 85%	85% > X ≥ 60%	60% > X	X ≥ 85%	85% > X ≥ 60%	60% > X
Fall 2017 vA	113	342	117	145	315	112
Fall 2017 vB	126	364	108	149	332	117
Spring 2018 vA	46	143	51	54	129	57
Spring 2018 vB	85	185	69	89	175	75
<i>Total</i>	<i>370</i>	<i>1034</i>	<i>345</i>	<i>437</i>	<i>951</i>	<i>361</i>

	Learning Outcome 4			Learning Outcome 5		
	X ≥ 85%	85% > X ≥ 60%	60% > X	X ≥ 85%	85% > X ≥ 60%	60% > X
Fall 2017 vA	194	286	92	221	285	66
Fall 2017 vB	206	320	72	271	266	61
Spring 2018 vA	63	133	44	106	113	21
Spring 2018 vB	119	175	45	148	157	34
<i>Total</i>	<i>582</i>	<i>914</i>	<i>253</i>	<i>746</i>	<i>821</i>	<i>182</i>

Assessment of General Education Learning Outcomes

Academic Year: 2017-2018

Subject Area: Oral Communication

1. Identify the course(s) used in the assessment. Include the prefix, number, and title of each course.

The course of COMM 2200 (Fundamentals of Communication) was used to assess the subject of oral communication at Middle Tennessee State University during the Spring of 2018 semester. The prefix for this course is “COMM,” the number for this course is “2200,” and the title for this course is “Fundamentals of Communication.” COMM 2200 was the only course that was used in the 2018 assessment project. The course of COMM 2200 centers on human communication. Speeches are given by students who are enrolled in COMM 2200 in order to fulfill the core requirements for this academic offering.

2. Indicate the number of students who were assessed. Was sampling used? If yes, briefly describe the method of selecting student work and the percentage of students whose work was assessed.

The number of students who were assessed were 323 ($N = 323$) individuals who were enrolled in COMM 2200 during the Spring of 2018 semester. Female students (63.2%) were in the majority for the utilized sample whereas male students (36.8%) were in the minority for the utilized sample. Freshman (65.9%) were the most represented class standing in this assessment followed by sophomores (26.6%), juniors (6.2%), and seniors (1.3%). The mean age for the participants in the 2018 assessment was 19.41 years of age.

Sampling was used in the 2018 assessment. A stratified sampling procedure was utilized to assess oral communication during the Spring of 2018 semester. The stratified sampling procedure was comprised of four steps. The first step was to divide the 51 on-ground sections of COMM 2200 that were offered during the Spring of 2018 semester by the strata of “time of day” (i.e., morning classes which had a start time between 8:00AM-11:30AM, afternoon classes which had a start time between 12:40PM-4:20PM, and evening classes which had a start time of 6:00PM). The second step involved a random selection of 50% of the classes from the first strata (e.g., morning classes which had a start time between 8:00AM-11:30AM). The third step involved a random selection of 50% of the classes from the second strata (e.g., afternoon classes which had a start time between 12:40PM-4:20PM). The fourth step was a random selection of 50% of the classes from the third strata (e.g., evening classes which start at 6:00PM). A total of 26 different sections of COMM 2200 were thereby included in the present sample. However, three of these 26 sections were not assessed because one of the evaluators experienced an unexpected health issue and scheduling conflicts. The end result was that 23 sections of COMM 2200 were included in the final sample.

Selecting student work for this project involved four evaluators reporting to 23 sections of COMM 2200 to complete a discrete on-ground assessment of persuasive speeches live in class. Three of the trained evaluators were full-time temporary instructors of COMM 2200. The fourth trained evaluator was an assistant professor in the Department of Communication Studies who filled in for an evaluator who had a health issue and scheduling conflicts. The fourth evaluator had already been trained and served as an evaluator on previous oral communication assessments at Middle Tennessee State University. It was during February of 2018 that the other three evaluators were either trained (or re-trained) on assessment. The training/re-training involved witnessing the stratified sampling procedure, assigning the evaluators to specific sections based on their availability, reviewing the rubric for assessment, and rating sample speeches from a departmental dropbox.

It was in the 2018 assessment that approximately 95% of the total student work was assessed amongst the 23 sections of COMM 2200 that were evaluated live in class. Most of the sections (19 out of 23) that were evaluated live in class had 100% of the total speeches assessed by the evaluators. It was in the other four sections that a handful of speeches were assessed. Less than 100% of the speeches in those other four sections were assessed because of the aforementioned health issue and scheduling conflicts that confronted one of the evaluators who participated in the 2018 oral communication assessment. These unforeseen issues resulted in less than 100% of all student work being assessed within the 23 sections of COMM 2200 that were evaluated live in class. All in all, a vast majority of the student work (approximately 95%) within these 23 sections were analyzed in this assessment project.

3. Do the procedures described in Items 1 and 2 represent any significant change from the pilot assessment? If so, describe the changes and rationale.

The answer to this question is no. No significant changes were made in the 2018 assessment relative to the 2017 assessment.

The only change that is noteworthy of mention was that more evaluators were involved in the 2018 assessment. It was during the 2017 assessment that two evaluators collected oral communication data live in class. It was during the 2018 assessment that four evaluators collected oral communication data live in class. The rationale for increasing the number of evaluators was to offer more flexibility in terms of scheduling and to reduce the time demands that were placed on the evaluators.

In summation, a negligible change was made from the previous assessment in order to benefit the assessment schedule and to reduce the workload that was placed upon the evaluators.

4. Per the evaluation rubric utilized at your institution, adapt the table below to record the results of the assessments of each learning outcome in the subject area discussed in the report. Below is an example of a table for oral communication. Revise the table to reflect the descriptors used at your institution. If you rephrased a TBR goal statement, type your institution's version below the corresponding TBR goal and within the same cell. If you addressed additional outcomes not included in the TBR list, create rows for them at the bottom of the table.

(See Table 1 on the Following Page)

Table 1. Oral Communication Competencies for 2018**PRESENTATIONAL COMPETENCIES**

Department of Communication Studies and Organizational Communication, MTSU – 2018 *

ORAL PRESENTATION Rubric	Severely Deficient (1/A)	Inadequate (2/B)	Fair (3/C)	Good (4/D)	Excellent (5/E)
<p>TBR Outcome I: <u>Competency One:</u> Within the opening segment of the speech the speaker meets the four criteria for an effective opening [1. the introduction gains the audience’s attention; 2. the thesis / purpose statement is clear and concise, 3. the purpose is appropriate for a persuasive presentation, and 4.the speaker clearly relates the topic to the members of the audience]; and the opening segment is adequately developed.</p>	<p>Within the opening segment the speaker fails to meet all four criteria and/or the opening segment is missing.</p>	<p>Within the opening segment the speaker only meets two of the four criteria and/or the opening segment is severely under developed.</p>	<p>Within the opening segment the speaker meets three of the four criteria; and the opening segment lacks some development.</p>	<p>Within the opening segment the speaker meets all four criteria; the opening section may contain minor flaws in development.</p>	<p>Within the opening segment the speaker meets all four criteria; the opening segment is fully developed.</p>
<p>(2017) $M = 3.59$ ($N = 345$)</p>	<p>4 (1.16%)</p>	<p>65 (18.84%)</p>	<p>101 (29.28%)</p>	<p>74 (21.45%)</p>	<p>101 (29.28%)</p>
<p>(2018) $M = 3.64$ ($N = 323$)</p>	<p>9 (2.8%)</p>	<p>63 (19.5%)</p>	<p>69 (21.4%)</p>	<p>77 (23.8%)</p>	<p>105 (32.5%)</p>
<p>TBR Outcome II: <u>Competency Two:</u> The speaker uses an organizational pattern appropriate to the persuasive presentation.</p>	<p>The speech is clearly not persuasive and/or fails to effectively use a persuasive organizational pattern that is appropriate for the topic, and audience.</p>	<p>The speech is somewhat persuasive and/or the organizational pattern and expression of arguments are severely deficient [the organizational pattern is unclear and/or incomplete].</p>	<p>The speech is persuasive; the speaker uses an appropriate persuasive organizational pattern with some errors or omissions, and some arguments may be deficient</p>	<p>The speaker uses an appropriate persuasive organizational pattern. The organizational pattern is complete, and the speaker leaves the audience with a clear persuasive message or call to action.</p>	<p>The speech is clearly persuasive and the speaker presents an exceptionally clear and compelling argument or case. The organizational pattern is complete and the speaker leaves the audience with an undeniable message or call to action.</p>
<p>(2017) $M = 3.52$ ($N = 345$)</p>	<p>9 (2.61%)</p>	<p>54 (15.65%)</p>	<p>100 (28.99%)</p>	<p>114 (33.04%)</p>	<p>68 (19.71%)</p>
<p>(2018) $M = 3.57$ ($N = 322$)</p>	<p>19 (5.9%)</p>	<p>45 (14.0%)</p>	<p>75 (23.2%)</p>	<p>101 (31.4%)</p>	<p>82 (25.5%)</p>

<p>TBR Outcome III. <u>Competency Three:</u> The speaker provides supporting material (examples, statistics and testimony) appropriate for a persuasive presentation; the quality and variety of support clearly enhances the credibility of the speech and source credibility is clearly established.</p> <p>(2017) <i>M</i> = 3.70 (<i>N</i> = 345)</p> <p>(2018) <i>M</i> = 3.63 (<i>N</i> = 323)</p>	<p>The speaker uses no supporting material</p> <p>0 (0%)</p> <p>6 (1.9%)</p>	<p>The speaker's use of support material is lacking in variety, and/or is lacking in quality and/or quantity; source credibility is not established.</p> <p>49 (14.20%)</p> <p>59 (18.3%)</p>	<p>The speaker's use of support material is adequate but is somewhat deficient [may be lacking in quality and/or quantity; source credibility is not established].</p> <p>89 (25.80%)</p> <p>80 (24.8%)</p>	<p>The speaker uses supporting material that is appropriate in quality, quantity and variety; source credibility may not always be established.</p> <p>126 (36.52%)</p> <p>82 (25.3%)</p>	<p>The speaker's use of support material is exceptional; utilizes all three kinds of support material, the quality and variety of support clearly enhances credibility of the speech and source credibility is clearly established.</p> <p>81 (23.48%)</p> <p>96 (29.7%)</p>
<p>TBR Outcome IV: <u>Competency Four:</u> The speaker uses language appropriate to the audience and occasion. Language is persuasive. Correct grammar, diction, and syntax are used.</p> <p>(2017) <i>M</i> = 3.95 (<i>N</i> = 345)</p> <p>(2018) <i>M</i> = 3.93 (<i>N</i> = 323)</p>	<p>The speaker uses unclear language and/or uses jargon and/or slang that is inappropriate for a formal occasion and for the audience; the language is sexist, racist, non-inclusive, etc. Grammar and pronunciation are incorrect and/or distracting.</p> <p>4 (1.16%)</p> <p>3 (0.9%)</p>	<p>The speaker uses unclear language and/or uses jargon and/or slang that is inappropriate for a formal occasion and/or distracts from the presentation. The language attempts to be persuasive but sounds more informative. Grammar, syntax, and diction are not effective.</p> <p>17 (4.93%)</p> <p>24 (7.4%)</p>	<p>The speaker uses language that is reasonably clear and appropriate for a formal occasion. The speaker uses an occasional slang expression or jargon, but such language is not distracting. The language is persuasive to an extent but borders on informative. Grammar, syntax, and diction are effective.</p> <p>85 (24.64%)</p> <p>71 (22.0%)</p>	<p>The speaker uses language that is clear, vivid, and appropriate. The presentation is devoid of inappropriate slang or jargon. Language is persuasive throughout the entire speech. Grammar, syntax, and diction are used to emphasize points.</p> <p>124 (35.94%)</p> <p>121 (37.5%)</p>	<p>The speaker uses language that is exceptionally clear, vivid, appropriate, and the speaker uses parallel sentence structure and/or repetition etc. Language is persuasive, compelling, and clear throughout the entire speech. Grammar, syntax, and diction are used to emphasize points.</p> <p>115 (33.33%)</p> <p>104 (32.2%)</p>

<p>TBR Outcome V: <u>Competency Five:</u> The speaker demonstrates the ability to effectively utilize material gathered from multiple sources.</p> <p>(2017) <i>M</i> = 3.49 (<i>N</i> = 345)</p> <p>(2018) <i>M</i> = 3.43 (<i>N</i> = 323)</p>	<p>The speaker fails to include any source documentation in the presentation.</p> <p>17 (4.93%)</p> <p>43 (13.3%)</p>	<p>The speaker incorporates a few sources in the presentation but the documentation is deficient [five or fewer sources cited and/or a variety of sources are not used and/or some sources do not appear to be credible].</p> <p>103 (29.86%)</p> <p>74 (22.9%)</p>	<p>The speaker incorporates a minimum of four sources in the presentation and the sources appear to be credible, but the documentation is deficient [a variety of sources is not used and/or source credibility is not always established].</p> <p>47 (13.62%)</p> <p>24 (7.4%)</p>	<p>The speaker incorporates a minimum of four sources in the presentation; the sources appear to be credible, and the source documentation is <u>not</u> deficient [a variety of sources is utilized].</p> <p>50 (14.49%)</p> <p>66 (20.4%)</p>	<p>The speaker incorporates more than four sources in the presentation; the sources are clearly credible, and the source documentation is <u>not</u> deficient.</p> <p>128 (37.10%)</p> <p>116 (35.9%)</p>
<p>Totals</p> <p>(2017) Totals <i>M</i> = 3.65 (<i>N</i> = 345)</p> <p>(2018) Totals <i>M</i> = 3.64 (<i>N</i> = 323)</p>	<p>2017 = 34 (1.9%)</p> <p>2018 = 80 (4.9%)</p>	<p>2017 = 288 (16.7%)</p> <p>2018 = 265 (16.4%)</p>	<p>2017 = 422 (24.5%)</p> <p>2018 = 319 (19.8%)</p>	<p>2017 = 488 (28.3%)</p> <p>2018 = 447 (27.7%)</p>	<p>2017 = 493 (28.6%)</p> <p>2018 = 503 (31.2%)</p>

*For the purpose of comparison, data from 2017 is presented in blue. Data from 2018 is presented in red.

5. Summarize your impressions of the results reported in item 4. Based upon your interpretation of the data, what conclusions emerge about student attainment of the learning outcomes?

Data from the 2018 assessment which was reported in item 4 yielded a number of different interpretations and conclusions. The section that follows provides a breakdown for each outcome and concludes with overall interpretations and conclusions.

- **Outcome I:** The first outcome concentrated on the opening segment of a speech. Results indicated that 77.7% of students were evaluated at a level that was fair or higher for the first outcome. More specifically, the findings revealed that 21.4% of students ($N = 69$) were evaluated as fair, 23.8% of students ($N = 77$) were evaluated as good, and 32.5% of students ($N = 105$) were evaluated as excellent. It was at the other end of the spectrum that 22.3% of students were evaluated as inadequate or severely deficient. An inadequate assessment was applied by evaluators to 19.5% of the student ($N = 63$) speeches and an assessment of severely deficient was applied by evaluators to 2.8% of the student ($N = 9$) speeches.
 - The results from Outcome I are good. A non-significant downward trend was observed on Outcome I in 2018 relative to the data that emerged on Outcome I in 2017 but this decrease was not statistically significant ($t(666) = -0.547, p = .584$). For example, it was in the 2017 assessment that 80.0% of the assessed speeches were evaluated at a level that was fair or higher whereas it was in the 2018 assessment that 77.7% of the assessed speeches were evaluated at a level that was fair or higher. Indeed, these results reveal a slight decrease. The negligible decrease on this outcome in 2018 illustrates the evaluations have stabilized and also indicates that students are performing competently in terms of the introduction of a persuasive speech. While a 2.3% percentage point drop occurred on the fair to excellent spectrum, the finding that 77.7% of students executed at least 3 of the 4 required elements for an effective opening segment suggests students are effectively completing the introductory portion of their speeches.
- **Outcome II:** The second outcome concentrated on using an organizational pattern that was persuasive in nature. Results indicated that 80.1% of students were evaluated at a level that was fair or higher for the second outcome. That is, the findings from this analysis illustrated that 23.2% of students ($N = 75$) were evaluated as fair, while 31.4% of students ($N = 101$) were evaluated as good, and 25.5% of students ($N = 82$) were evaluated as excellent. In contrast, a total of 19.9% of students were evaluated as inadequate or severely deficient. The breakdown reveals that evaluators assigned the label of inadequate for Outcome II to 14.0% of the student ($N = 45$) speeches and an assessment of severely deficient was assigned by evaluators to 5.9% of the student ($N = 19$) speeches.
 - The results from Outcome II are positive. No statistical difference was observed on Outcome II in the 2018 assessment relative to the results for Outcome II in the 2017 assessment ($t(644.43) = -0.567, p = .571$). A closer examination of the data from the previous assessment for Outcome II demonstrated that 81.7% of students were evaluated as fair or higher in 2017 while the data from the current assessment for Outcome II demonstrated that 80.1% of students were evaluated as fair or higher in 2018. A 1.6% percentage point decrease occurred on Outcome II in 2018 for speeches that were evaluated at a level of fair or higher. However, the current analysis revealed that the 2018 overall mean score for this outcome ($M = 3.57$) was higher than the 2017 overall mean score for this outcome ($M = 3.52$). This slight increase in the overall mean score for Outcome II in 2018 was born out of 25.5% of students performing at the (5) excellent level for this outcome. The very similar results on this outcome in 2018 and 2017 likely occurred because it was during the training/re-training session with the evaluators that the same message was delivered by the trainer for Outcome II. Specifically, evaluators were

once again instructed to make a concentrated effort to listen for (and award) key buzzwords that are consistent with students using an organizational pattern that is persuasive in nature. For instance, the words “problem(s)” and “solution(s)” are staples in good persuasive speaking at the undergraduate level. Students were taught by some of the instructors of COMM 2200 to use these words. Evaluators were taught to award high scores on this outcome when/if these types of words were verbalized by students while being assessed. Stated differently, a contributing factor that resulted in positive ratings for this particular outcome was because evaluators made a concerted effort to listen for and appropriately award students who used persuasive terminology.

- **Outcome III:** The third outcome for this study looked at the use of appropriate supporting materials. The findings for the third outcome indicated that 79.8% of students were evaluated at a level that was fair or higher. A further breakdown revealed that 24.8% of students ($N = 80$) were evaluated as fair, while 25.3% of the students ($N = 82$) were evaluated as good, and 29.7% of students ($N = 96$) were evaluated as excellent. Additional data for the third outcome found that 18.3% of students ($N = 59$) were evaluated as inadequate. A total of 1.9% of students ($N = 6$) were evaluated as severely deficient.
 - The findings from Outcome III are good as well. The overall differences on Outcome III for 2018 when compared to Outcome III for 2017 were not statistically significant ($t(636.78) = 0.776, p = .438$). A narrower result for the 2017 data on the third outcome found that 85.8% of students were evaluated at a level that was fair or higher whereas the 2018 data for the third outcome found that 79.8% of students were evaluated at a level that was fair or higher. Interestingly, the percentage of students who were evaluated as excellent increased to 29.7% in 2018 whereas the percentage of students who were evaluated as excellent was 23.5% in 2017. That noted, one reason for this non-statistically significant decrease on this outcome can be partially attributed to information literacy not being a focal point at meetings for COMM 2200 instructors during the 2017-2018 academic year relative to the 2016-2017 academic year. It is conceivable that part of this decrease was born out of not having an information literacy librarian speak to COMM 2200 instructors during the Spring of 2018 semester. It is also possible that the non-significant decrease occurred because there were two new instructors of COMM 2200 during the Spring of 2018 semester. These new instructors of COMM 2200 may not have been as familiar with library resources (including librarian-led information literacy instruction) that could have helped students score higher on this outcome. Taken together, less focus on this outcome in 2018 coupled with a pair of new instructors may have contributed to the non-statistically significant decrease on Outcome III.
- **Outcome IV:** The fourth outcome for this study looked at language criteria such as appropriate grammar, diction, and syntax. It was for the fourth outcome that the emergent data indicated that 91.7% of students were evaluated at a level that was fair or higher. The specifics for the fourth outcome illustrated that 22.0% of students ($N = 71$) were evaluated as fair, while 37.5% of the students ($N = 121$) were evaluated as good, and 32.2% of students ($N = 104$) were evaluated as excellent. The findings also revealed that 8.3% of students were evaluated as inadequate or lower. Specifically, 7.4% of students ($N = 24$) were evaluated as inadequate and 0.9% of students ($N = 3$) were evaluated as severely deficient.
 - The results from Outcome IV unfolded as expected. Similar results that were not statistically significant were found when the 2018 data was compared against the 2017 data for the fourth outcome ($t(666) = 0.380, p = .704$). Further comparisons between the 2017 assessment data for Outcome IV and the 2018 assessment data for Outcome IV highlight a slight decrease in that 93.9% of students were evaluated as fair or higher during the 2017 assessment whereas 91.7% of students were evaluated as fair or higher

during the 2018 assessment. A 2.2% percentage point decrease was observed. The high scores that continue to be procured on this outcome are likely tied to the notion that Outcome IV continues to be the least rigorous of the five outcomes. Employing normal everyday language that is polite is sufficient enough to secure an evaluation of fair on this particular outcome. In contrast, students would need to make a conscious effort to utilize inappropriate or offensive language in order to be rated as severely deficient. All things considered, the evaluated students performed well on this outcome.

- **Outcome V:** The fifth outcome for the oral communication assessment focused on gathering and using multiple sources. Results indicated that 63.7% of students were evaluated at a grade of fair or higher. A further rundown for the fifth outcome revealed that 7.4% of students ($N = 24$) were evaluated as fair, while 20.4% of students ($N = 66$) were evaluated as good, and 35.9% of students ($N = 116$) were evaluated as excellent. At the same time, the evaluators found that 36.2% of student speeches were inadequate or lower. Evaluators rated 22.9% of students ($N = 74$) as inadequate and evaluated 13.3% of students ($N = 43$) as severely deficient.
 - The findings on Outcome V were relatively good. It was in the present analysis that comparing the observed data on Outcome V in 2018 against the observed data on Outcome V in 2017 revealed that no statistical difference existed between these two years ($t(651.32) = 0.523, p = .601$). A closer inspection of the 2017 data for the fifth outcome revealed that 65.2% of students were evaluated at a level that was fair or higher whereas the 2018 data for the fifth outcome revealed that 63.7% of students were evaluated at a level that was fair or higher. It is noteworthy to mention that the findings on Outcome V reflect a greater campus-wide deficiency in terms of information literacy that is not unique to COMM 2200. Data from the National Survey of Student Engagement (2016) revealed that MTSU students' ability to find and use legitimate outside information in their coursework was below that of our peer institutions. While the Walker Library information literacy advisory board is working to combat this issue, it would benefit COMM 2200 to have instructors physically take classes to the library in order to take advantage of librarian-led information literacy workshops. However, the ability for all COMM 2200 instructors to do this in an effort to potentially improve results on Outcome V is not currently feasible due to scheduling conflicts and resources. In short, a non-significant decrease occurred on Outcome V and this outcome should be a point of emphasis during the 2018-2019 academic year.

Overall Interpretation and Analysis

The overall analysis of the emergent data for the 2018 oral communication competency assessment is favorable. The mean scores for all five outcomes were higher than the mid-point. The 2018 grand mean was a score of 3.64. This illustrates the majority of speeches achieved a rating that was beyond "fair" and leaned towards a rating of "good." Comparisons between the 2018 data and the 2017 data indicated that increases on the mean were observed on two of the assessment outcomes while decreases on the mean were observed on three of the assessment outcomes. All of the increases and decreases were minimal. Please find that the following paragraphs appropriately discuss overall and broader interpretations of the emergent data.

There are three overall interpretations for the 2018 oral communication competency data that should be noted in context. The first overall interpretation that should be noted was that the 2018 oral communication data was very similar to the 2017 oral communication data. As alluded to previously, the grand mean for all five outcomes for the 2018 assessment was 3.64 while the grand mean for all outcomes for the 2017 assessment was 3.65. One of the main reasons why the data was so similar was because the same processes unfolded in both 2018 and 2017. That is, the

same method of data collection occurred, the same sampling methods were used, the same rubric was utilized, and so forth. This consistency was the main reason why the data stabilized in 2018. Stabilization was a good thing in this context because it further illuminated that students are above average in terms of their oral communication skills.

A second overall interpretation that should be noted were the negligible decreases that occurred on Outcome III and Outcome V. The reason why these non-significant decreases should be concurrently noted (as opposed to individually noted) is because both of these outcomes center on supporting materials. These outcomes have historically been rated the lowest by the evaluators over the past five years. One reason why students scored lower on the supporting material outcomes in 2018 (and in years prior) is because there are a small sample of students who will not put any effort into obtaining sources for a speech. This needs to be noted in context as well. Outcome III and Outcome V require students to do work outside of the normal meeting time for the class. This is not necessarily the case for some of the other outcomes. For example, Outcome IV concentrates on language. A student can score fair on this outcome by simply not using offensive language. Similarly, Outcome I looks at the introduction of a speech. While it takes some effort to comprise a good or excellent introduction, most students can put together a fair introduction as a result of just paying a little bit of attention to the speeches of their fellow classmates during class. However, securing the right kind of supporting materials (Outcome III) and securing the appropriate number of supporting materials (Outcome V) requires students to be self-motivated enough to do this work outside of the normal class meeting time. Some instructors of COMM 2200 have built in research time during class to help improve the quality and quantity of supporting materials. There is likely some benefit to this in terms of assessment. Yet, it is difficult for instructors of COMM 2200 to carve out this in-class research time based on the unique set of time demands that are inherent to COMM 2200. In short, it takes about six weeks of class time for all students to give their required speeches in a 16-week semester which limits the amount of available lecture time (and in-class research time) that is available to the instructors and students of COMM 2200. Nevertheless, it is important to reiterate that the observed decreases on these outcomes were negligible and fell in line with the data from the National Survey of Student Engagement (2016) which revealed that MTSU students' ability to find and use legitimate outside information in their coursework was below that of peer institutions.

A third overall interpretation that should be noted was the increased number of speeches that were rated in one of the two extreme categories. A 5-point response continuum was used in both the 2018 assessment and the 2017 assessment. There was a slight increase in the number of speeches that were evaluated as "excellent" in 2018 relative to 2017. It was in the 2018 assessment that the rating of excellent increased on three out of the five outcomes. Most notably, a 5.8% percentage point increase was observed on Outcome II in the current analysis. At the same time, the number of speeches that were rated as severely deficient rose from 1.9% in 2017 to 4.9% in 2018. This resulted in a relatively lessened number of speeches that were considered to be inadequate, fair, or good. The slight increase in the number of excellent ratings and the slight increase in the number of severely deficient ratings could be a product of two different evaluators serving on this project in 2018 or it could reflect a real trend in terms of student performance. Either way, the slight increase in extreme scores is something that should be watched closely in the future. When taken together, the overall interpretations that should be noted were that (a) similar results emerged in 2018 relative to 2017, (b) a slight decrease that was not statistically significant occurred on both of the supporting material outcomes, and (c) there was a slight increase in the number of speeches that were rated as either excellent or severely deficient.

6. Do you plan to implement strategies to correct any deficiencies that emerged from the data obtained? If yes, please explain.

One strategy that will be implemented to improve deficiencies for the outcomes that center on supporting materials (e.g., Outcome III and Outcome V) will be to take advantage of the resources are offered by the James Walker Library. Specifically, a reference librarian will be scheduled to attend a meeting for COMM 2200 instructors in the Spring of 2019 semester in order to keep our educators familiar with library resources and supporting materials. As hinted at previously, it would also be beneficial if a reference librarian could attend every single section of COMM 2200 in the Spring of 2019 semester. This would offer students more personalized advice on how to effectively research her or his topic. Potentially implementing this idea has been an ongoing topic of discussion with Jason Vance who oversees information literacy at the James Walker Library. Nevertheless, a limited number of resources coupled with competing time demands (e.g., most COMM 2200 instructors teach supporting materials during the same week of the semester) creates a logistical issue when it comes to effectively implementing library led tutoring for COMM 2200.

An additional (and recurring) strategy that would help correct deficiencies as it pertains to speeches that were evaluated as severely deficient in 2018 would be to establish a speaking center on campus. Unfortunately, this is not likely to transpire in the foreseeable future but the notion of re-establishing a speaking center on campus is being mentioned within the current document in order to keep it on the academic radar for the larger campus community. The benefits of an on-ground speaking center in terms of oral communication competence have been well documented in previous scholarship (see Yook & Atkins-Sayre, 2012). Tutoring students at a speaking center on campus would offer more individualized and personalized assistance to students who are struggling. A speaking center would also be a good resource for students to be tutored on how to secure the appropriate quality and quantity of sources for her or his speech. Students who are trending towards being severely deficient in any outcome could be guided towards the speaking center early in the semester and prior to being evaluated for oral communication competence. Class incentives (i.e., extra credit) for visiting the speaking center could move the dial upward in terms of improving scores on the five outcomes that are represented within the oral communication assessment.

A final strategy to correct deficiencies is to alter the rubric that is being used to assess oral communication outcomes. While this would not reduce deficiencies per se, it would allow for more representative data for oral communication to emerge in the assessment process. The rubric that was utilized in the 2018 assessment was based on TBR requirements. These old TBR requirements are not favorably written when it comes to effectively measuring competence in oral communication. For example, the 2018 assessment rubric does not feature an outcome that focuses on the concluding elements of a speech (e.g., the speaker prepared the audience for the end of the speech, the speaker effectively summarized her or his main points, the speaker provided closure, etc.). This is problematic. As the divorce from TBR continues to become finalized, it would make sense to add a sixth outcome that concentrates on how effectively (or ineffectively) a speaker ends her or his speech. All things considered, deficiencies could be reduced and the process could be improved via making a more conscious effort to (a) utilize the resources of the James Walker Library, (b) re-establish an on-ground speaking center on campus, and (c) make alterations to the rubric that is currently being used to assess oral communication competence.

7. Have you implemented any plans to correct deficiencies based upon data obtained from previous assessments?

The answer to this question is yes. One of the deficiencies that was noted in the 2017 general education oral communication competency assessment report was that only two evaluators were involved in the assessment project. This deficiency was corrected by adding two new evaluators in 2018. This helped quite a bit in terms of scheduling and reducing the considerable time demands that were (and continue) to be placed on the evaluators. In summation, the findings from the 2018 oral communication competency assessment report suggest (a) the data has stabilized and (b) illustrate that MTSU students are performing well on all five outcomes that examine oral communication.

References

Frey, L., Botan, C., & Kreps, G. (2000). *Investigating communication: An introduction to research methods* (2nd ed.). Boston, MA: Allyn & Bacon.

National Survey of Student Engagement (2016). *NSSE topical module report experiences with information literacy*. [Data File]. Retrieved from: http://nsse.indiana.edu/html/summary_tables.cfm

Yook, E. & Atkins-Sayre, W. (2012). *Communication centers and oral communication programs in higher education: Advantages, challenges, and new directions*. Lexington Books, Lanham, MD.

Assessment of General Education Learning Outcomes

Academic Year: 2017-2018

Subject Area: Critical Thinking

- 1. Identify the Performance-Funding test of general education used by your institution.**

California Critical Thinking Skills Test (CCTST)

- 2. If you used sampling as permitted by THEC, describe the method used.**

Sampling was not used.

- 3. Present the institutional mean scores or sub-scores on the Performance Funding instrument that your institution reviewed to assess students' comprehension and evaluation of arguments. If comparable scores for a peer group are available, also present them.**

MTSU = 16.1; National = 16.20

- 4. Summarize your impressions of the results yielded by the THEC test regarding critical thinking. Based upon your interpretations of the data, what conclusions emerge about student attainment of critical thinking skills?**

The CCTST requires students to draw inferences, make interpretations, analyze information, draw warranted inferences, identify claims and reasons, and evaluate the quality of arguments using brief passages, diagrams, and charts. The 2017-2018 score for MTSU students (16.1) is the same as the MTSU score in 2016-2017 and is slightly below the 2016-2017 national average (16.2). Over the past four years, MTSU's scores have been below the national average, though MTSU's average score and national averages remained steady between AY 2016-2017 and AY 2017-2018.

- 5. Do you plan any strategies to correct deficiencies or opportunities for improvement that emerged with respect to critical thinking? If so, describe them below.**

MTSU's Quality Enhancement Plan (MT Engage), which was implemented in fall 2016, emphasizes the development of critical thinking skills, specifically integrative thinking and critical reflection. We will continue to encourage faculty to certify their courses as a MT Engage course.

The Learning, Teaching, and Innovative Technologies Center (LT&ITC) continues to offer workshops that help faculty incorporate strategies for improving critical thinking. For example, the LT&ITC offered workshops on topics such as course redesign for increased student engagement, active learning, "Teaching Truth in the Era of Fake News," experiential learning and MT Engage pedagogies (including the use of ePortfolios to encourage integrative thinking and assessment), etc.

All General Education courses emphasize the development of critical thinking skills. The three required courses in the Communication category, in particular, provide incoming students with an introduction to the critical and analytical skills necessary for success in college. Small class size in these courses is essential to insure that students receive the individual attention they need to develop these skills. The General Education Committee has recommended to the Provost that class size in the courses in the Communication category not exceed the recommendations of the National Council of Teachers of English and the National Communication Association. The General Education Committee continues to recommend that class size not exceed the guidelines endorsed by professional organizations.

Critical thinking skills will continue to be emphasized in General Education and in each degree program (see Institutional Effectiveness Reports for the various majors).

Instructors of UNIV 1010 will continue to assign textbooks that contain a critical thinking component.

Tutoring in the University Writing Center emphasizes the development of critical thinking skills in the writing process. Instructors will continue to encourage students to work with the Center's trained tutors.

The University Library Research Coach service (which offers students in-depth, one-on-one sessions with a librarian) emphasizes critical thinking in finding and selecting the best books, articles, and database resources for projects, papers, and presentations. Instructors will continue to advise students to use this service.