

Middle Tennessee State University: QEP Impact Report

Executive Summary (2016)

MT Engage, Middle Tennessee State University's (MTSU or University) Quality Enhancement Plan, seeks to create a culture in which students become actively engaged in their learning. MT Engage will build a campus climate that encourages and supports faculty to teach with high-impact educational practices and create opportunities for students to reflect on and document their own learning.

Student engagement is a priority at MTSU. The University's mission statement stresses the importance of fostering "a student-centered environment conducive to lifelong learning, personal development, and success," and challenging students "through diverse teaching methods and media including educational technology, experiential learning, undergraduate and graduate research, and co-curricular and extra-curricular activities." This emphasis is supported by the University's 2015–2025 Academic Master Plan Strategic Direction 1, which aims to "promote engagement that supports learning, scholarship, and student success." The University's *Quest for Student Success* strategic planning document also emphasizes the importance of pedagogies that enhance learning through hands-on learning and strategic use of technology that allows for more classroom interaction. Yet MTSU scores on the National Survey of Student Engagement and the results from student focus groups and faculty surveys demonstrate the need for a renewed, deliberate, and sustained plan to address student engagement on our campus.

In order for students to become more engaged in their learning, faculty must first create opportunities for them to become physically and psychologically involved in productive learning activities. MT Engage will create a support network to help faculty integrate high-impact educational practices into their classroom teaching and supplement student learning with relevant co-curricular activities. These high-impact practices, based on research by George Kuh (2008) and the Association of American Colleges and Universities, include learning communities, problem-based learning, collaborative learning, project-based learning, and research, as well as co-curricular activities like attending cultural events, participating in Scholars Week, and community involvement. Faculty who choose to learn about and implement such practices can earn an MT Engage designation for their classes, and students can seek out these engaging learning environments throughout their educational careers at MTSU.

The second key piece of MT Engage is getting students to reflect on their learning. Each MT Engage-designated course will require students to complete at least one assignment that fosters integrative thinking and reflection. This metacognitive process will result in students demonstrating their ability to make connections across multiple contexts and educational experiences and developing a sense of themselves as learners. Examples of this work will be collected in personalized ePortfolios, which will become showcases for students' integration of the knowledge, skills, and abilities gained during their time at MTSU.

Section 1: Initial Goals and Intended Outcome of the QEP

Informed by scores lower than the national average for “reflective and integrative learning,” “collaborative learning,” and “supportive environment” on the National Survey of Student Engagement (NSSE) and by Student Retention Survey data, MT Engage (MTE) was designed to increase students’ academic engagement through one student learning outcome and two goals.

Student Learning Outcome (SLO): Students will use integrative thinking and reflection to demonstrate the ability to make connections across multiple contexts and educational experiences.

To support integrative thinking and reflection, students complete signature assignments in each MTE course and can complete ePortfolios at the sophomore and senior level documenting their learning across contexts. The SLO is informed by the belief that engaged students are integrative learners who participate in campus events, explore connections between their learning and personal experiences, identify their strengths and areas for improvement, see themselves as apprentices in their chosen fields, persuasively articulate what they have learned, and consider how to apply their learning in their future professional and civic lives.

The methods used to assess the SLO include the collection of course signature assignment rubrics and sophomore and senior ePortfolio rubrics to determine if students’ scores met indicator targets. Student growth was measured using a rubric adapted from the AAC&U Integrative Learning VALUE rubric containing the following indicators: 1. “Connections to Experience,” 2. “Connections to Discipline,” 3. “Transfer,” 4. “Integrated Communication,” and 5. “Reflection and Self-Assessment,” with a target of 80 percent at advancing or capstone (the two highest levels) for seniors in 4000-level classes and on senior ePortfolios. Students’ End of Course (EoC) survey responses were assessed as an indirect measure.

Goal One: To foster a culture of engaged learning.

The intended outcome of Goal One is that students, through increased exposure to High-Impact Practices (HIPs) and integrative and reflective thinking within MT Engage courses and experiences, will report higher levels of academic engagement.

Several initiatives were undertaken to meet Goal One. MT Engage promotes academic engagement during the freshman and sophomore years through the MTE Foundation Pathway comprising certified Lower Division (1000- and 2000-level) courses. Major Pathways allow undergraduate students to apply integrative thinking and reflection skills across courses in their major and in a culminating ePortfolio. Faculty development is also a key element of MT Engage. Open to all faculty and designed to promote high-impact practices (HIPs) and integrative learning, offerings include Summer Institutes, Faculty Learning Communities, book groups, small group trainings, and workshops facilitated by national experts. MT Engage Week introduces students to a variety of campus engagement opportunities. Approximately 20 MT Engage Week events are held each year, and \$62,519 has been spent creating student engagement opportunities that help students explore links between campus events and what they are learning in their classes. Students synthesize their learning across experiences and courses in an ePortfolio and submit ePortfolio presentations to compete for scholarships and to receive MTE Graduation Distinction awards. An annual reception showcases students’ integrative learning.

The methods used to assess Goal One include: tracking program participation, comparing scores on student engagement questions from the MTSU Sophomore Student Engagement Survey (SES) and Graduating Senior Survey (GSS), analyzing MTE students’ responses on the End of Program (EoP) survey to determine if they met targets, and conducting pre-and-post tests on Faculty Activity Surveys for select questions. Test of statistical significance were run. The following indicators were measured:

1. Participation targets will be met for Foundation Pathways, Major Pathways, Faculty Development, Faculty Teaching Approved Courses, ePortfolio Submissions, and MTE Graduation Distinction Awards.

2. MT Engage students will score higher than non-MT Engage students on select questions on the Sophomore SES and the GSS.
3. MT Engage students will score at the 80 percent target on the EoP survey.
4. Faculty will report higher adoption of HIPs/MT Engage pedagogies after implementation of the QEP.

Goal Two: To improve student success as measured by retention, progression, and graduation.

The intended outcome of Goal Two is to improve retention, progression, and graduation as a result of MTE pedagogies and experiences. The methods used to assess Goal Two include comparing course retention, progression, and graduation rates of MTE vs. non-MTE students, testing for statistical significance. The following indicators were measured:

1. Students who enroll in MT Engage sections, including General Education courses, are more likely to pass those courses than students who enroll in the same course not designated as MT Engage, referred to as MTO (course retention, assessed using DFWNs).
2. Students who enroll in an MT Engage course their first year are more likely to enroll at MTSU the next year (progression, indicated by fall-to-fall retention).
3. Students who enroll in MT Engage courses are more likely to graduate in four or five years, compared to other students (four-year graduation rate).

Section 2: Changes to the QEP and Reasons for Those Changes

- Because the Pre-Program Survey and the Freshmen Student Engagement Survey (SES) yielded overly positive results, failing to provide an accurate baseline, both were discontinued. Instead of a standalone Senior SES, student engagement questions were added to the existing Graduating Senior Survey (GSS), administered by the university every semester, eliminating the need for a Senior SES.
- Other intended outcomes underwent minor modifications based on data Institutional Effectiveness, Planning, and Research (IEPR) provided and to better capture the impact of the program. For example, wide adoption of MTE across the undergraduate experience precluded tracking students using a cohort model of incoming freshmen. MTE and IEPR instead track students using fall-to-fall retention rates, comparing rates for MTE students to those for non-MTE students.
- Suggestions from faculty guided revisions to the Integrative Thinking and Reflection VALUE rubric in fall 2016. AAC&U descriptors (Capstone, Advancing, Milestone, Benchmark, and Developing) replaced numerical scores, and unclear or negative phrasing was removed from level descriptors.
- In response to faculty assessors and the SACSCOC review committee, the Leadership Team removed the original 80 percent target for signature assignment rubric indicators in all course levels, though the 80 percent rubric indicator target remains for seniors in 4000-level classes and for the senior ePortfolio evaluation.
- To create equitable pathways for students with dual enrollment, Advanced Placement, International Baccalaureate, and transfer credit hours, the Leadership Team reduced the number of required MTE courses from six to four, at least two of which must be at the Upper Division level.
- Because expected enrollment never materialized, the UNIV 3000 MTE Practicum course, designed to support students' ePortfolio development, was replaced with peer tutoring.

Section 3: QEP Impact on Student Learning and the Learning Environment: Achievement of Identified Goals and Outcomes and Unanticipated Outcomes

Student Learning Outcome: Students will use integrative thinking and reflection to demonstrate the ability to make connections across multiple contexts and educational experiences.

As demonstrated below by rubric and survey data, involvement in MT Engage improved students' integrative thinking and reflection.

Signature Assignment Rubric Data

Signature assignment rubric scores for all course levels improved at the advancing and capstone levels for each indicator. Students attaining these higher scores increased from a range of 6 to 8 percent in fall 2016 to a range of 29 to 34 percent in fall 2020. These gains suggest that MT Engage facilitates students' integrative learning. 4000-level courses mark the most improvement, with indicators trending upward toward the 50 to 60 percent range (Table 1). Although still well short of the 80 percent target for 4000-level courses, the percent of students attaining the upper levels on the rubric increased noticeably over time. Scores for "Connections to Discipline" are consistently lower, and yet performance in this category improved the most, from 7 percent to 52 percent (over seven times as many students, or a 643 percent increase). Note in the table below, the Ns vary for each indicator because although faculty must assess students' "Reflection and Self-Assessment," they may customize the assignment by assessing two or more other indicators of their choice.

Table 1. Percent of Seniors in 4000-Level Courses at Advancing and Capstone Levels for Each Signature Assignment Indicator (Fall 2016-Fall 2020)

	Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
Indicator	N=39-46	N=114-181	N=206-280	N=183-249	N=176-253
Connections to Experience	24%	42%	48%	38%	57%
Connections to Discipline	7%	46%	49%	33%	52%
Transfer	17%	50%	51%	45%	61%
Integrated Communication	12%	60%	53%	43%	69%
Reflection and Self-Assessment	18%	52%	51%	43%	59%

As the number of MTE courses taken increases, the percent of students scoring at advancing and capstone levels on the rubric increases on average. Attending to seniors at the 4000 level (Table 2) reveals that each indicator increased for those reaching advancing or capstone when comparing students who took one MTE course with those who took five or more courses.

Table 2. Percent of Seniors in 4000-Level Courses at Advancing or Capstone Levels for Each Signature Assignment Indicator (Fall 2018-Spring 2021)

Indicator	Number of MTE Courses Passed	
	1	5 or more
Connections to Experience*	48%	57%
Connections to Discipline*	45%	57%
Transfer	54%	59%
Integrated Communication**	48%	61%
Reflection and Self-Assessment	49%	55%

* $p < 0.05$; ** $p < 0.01$

ePortfolio SLO Rubric Data

Students can submit sophomore and senior ePortfolios to be assessed by faculty evaluators. ePortfolios were assessed each year. Year 5 data is shown below. The 80 percent target was met in "Connections to Experience" and "Reflection and Self-Assessment" at both the sophomore and senior level by the end of Year 5 (Table 3).

“Reflection and Self-Assessment” is the only indicator all faculty must assess in the signature assignments leading to students’ ePortfolio submissions; as a result, students have more experience with reflection than with other skills represented by the indicators. Meeting this target suggests that faculty development workshops on integrative and reflective thinking, increased usage of the ePortfolio as a teaching tool, University Writing Center consultations dedicated to ePortfolio submissions, and the addition of a peer tutoring service supported applicants’ ability to reflect on and document their integrative learning at a higher level.

Table 3. Percent of Students Scoring 3-4 on the Sophomore and Senior ePortfolio Rubric in Year 5

Indicator	Sophomore Spring 2021 (N = 54)	Target Met	Senior Spring 2021 (N = 41)	Target Met
Connections to Experience	88%	Yes	80%	Yes
Connections to Discipline	62%	No	71%	No
Transfer	70%	No	88%	Yes
Integrated Communication	80%	Yes	71%	No
Presentation and Appearance	79%	No	78%	No
Reflection	91%	Yes	85%	Yes

End of Course (EoC) Survey Data

The EoC survey asks students to report the extent to which they engaged in the five SLO indicators in their MT Engage class. Although the 80 percent target was not met for the top two levels (agree, strongly agree), when expanded to include somewhat agree, students’ results exceed the 80 percent target in all areas but “Connections to Discipline.”

SLO Unanticipated Outcomes

Although appreciated by faculty, the customizable nature of the program posed challenges for assessing the SLO, as the End of Course survey asked students to report on indicators their instructors may not have chosen to assess. For example, faculty assessing course signature assignments selected “Connections to Discipline” less frequently than other indicators. When assessed in both signature assignments and ePortfolios, scores for this indicator tended to be lower than scores for other indicators, revealing the challenges of penetrating the disciplinary divides that order students’ learning experiences and suggesting a need for ongoing support for faculty and students exploring connections within and across disciplines. Meeting the 80 percent target on signature assignment and ePortfolio rubrics also proved difficult, further underscoring the challenges of implementing an academic enhancement program crossing course levels and disciplines and utilizing a dizzying array of HIPs, beyond-the-classroom experiences, and signature assignments. And yet, End of Program survey results and rubric data demonstrate valuable gains in students’ integrative and reflective learning. These findings suggest that fostering students’ ability to document their learning over time and across contexts requires more than one signature assignment. One student focus group participant explained how she did not fully recognize how much she had learned until she found herself drawing on that knowledge in a future semester. As this example illustrates, students benefit from opportunities to revisit past learning experiences, connecting the dots that perhaps were not fully visible without the benefit of hindsight.

Goal One: To foster a culture of engaged learning.

MT Engage successfully fostered a culture of engaged learning by exceeding participation targets in Foundation Pathways (general education/lower division courses) and Major Pathways, providing faculty development that increased adoption of HIPs, promoting learning beyond the classroom, and facilitating ePortfolio development.

Participation Targets

Evident in Table 4, MTE not only met but exceeded participation targets for every initiative except ePortfolio Submissions. MTE exceeded targets for General Education and other Lower Division courses, exposing students to reflection and self-assessment practices early in their college careers. MTE also exceeded the target for Major Pathways, with students in fourteen undergraduate degree programs across six different colleges benefitting from repeat encounters with MTE pedagogies in their major. One graduate-level pathway (Master of Arts in Liberal Arts) was also established. By Year 5, MTE courses were offered in all eight colleges, with 12,673 students enrolled. MTE also exceeded participation targets in Faculty Development. The primary method of faculty development is the Summer Institute (SI), revised annually based on assessment data to address faculty needs and gaps in adoption of HIPs. An overwhelming majority of participants surveyed upon completing SI agree with the survey statement, “The institute helped me to better understand MT Engage components including the SLO and its associated indicators,” likewise reporting that they “would recommend to other faculty that they attend this institute next year.” One participant expressed appreciation for the “ability to reflect on [their] practice as an instructor and connect [their] ideas to research-based practices.” Participation of faculty teaching approved courses was robust, with 183 faculty offering certified courses in Year 5 (Table 4). MTE further impacted the learning environment by collaborating with campus partners to establish support systems for ePortfolio development, with approximately 2,000 students participating in classroom trainings with Walker Library ePortfolio Graduate Assistants, and 317 peer tutoring sessions conducted over the life of the QEP. The University Writing Center held 1,130 ePortfolio consultations from fall 2018 to spring 2021. ePortfolio scholarship submissions increased each year but fell short of the Year 5 target. In Year 5, 130 students fulfilled MTE Graduation Distinction requirements, nearly doubling the target of 77 (Table 4).

Table 4: Program Goal One Year 5 Participation Targets and Actual Accomplishments

		Target	Actual	Target Met
Foundation Pathway	Different MTE General Education courses offered	13	17	Yes
	Departments offering MTE Lower Division courses	14	18	Yes
Major Pathways	Majors offering repeat encounters with MTE pedagogies and a culminating ePortfolio	7	14	Yes
Faculty Development	Faculty participating in learning communities and summer institutes	50	73	Yes
	Faculty attending one-hour workshops	45	101	Yes
Faculty Teaching Approved Courses	Faculty offering approved MTE courses	160	183	Yes
ePortfolio Submissions	Students submitting ePortfolios at two-year mark	133	76	No
MTE Graduation Distinction	Students graduating from MTE program	77	130	Yes

MTSU Sophomore Student Engagement Survey (SES) and Graduating Senior Survey (GSS)

Both MTE and non-MTE students were surveyed about their academic engagement at the sophomore and senior level. For each survey, students enrolled in MTE sections mark agree/strongly agree (A/SA) at consistently higher rates than students in non-MTE sections. As the number of MT Engage courses taken increases, so does the number of students reporting the top two responses. Table 5 includes the questions on the Sophomore SES that directly relate to the MTE indicators. Table 5 compares Sophomore SES responses from 2018-2021 for students who took at least 2 MTE courses (N = 353) to students who took no MTE courses (N = 815). The positive differences shown in the table below were statistically significant at the $p < .05$.

Table 5. MTSU Sophomore SES Responses by MTE Indicators 2018-2021

Connections to Experience	Student Type	% A/SA
#6 My ability to relate material I am reading/studying to what I already know.	MTE	70
	NonMTE	62
#15 My ability to relate my experiences outside of class to what I am learning in class.	MTE	73
	NonMTE	61
Connections to Discipline		
#9 My ability to make connections across the content of different disciplines	MTE	68
	NonMTE	56
#10 My ability to make connections across courses I've taken	MTE	75
	NonMTE	65
Transfer		
#2 My capacity to think critically or analytically.	MTE	78
	NonMTE	67
#7 My ability to apply information I am learning.	MTE	73
	NonMTE	67
Integrated Communications		
#1 My ability to write or speak effectively or clearly.	MTE	76
	NonMTE	60
Reflection & Self-Assessment		
#12 My personal development	MTE	74
	NonMTE	61
#13 My ability to reflect on what I know	MTE	75
	NonMTE	60
#14 My professional development	MTE	73
	NonMTE	59

GSS responses for questions aligned with MTE rubric indicators (Table 6) were higher at a statistically significant level for students who had passed five or more MTE sections (N = 492) than for their non-MTE counterparts (N = 4,093).

Table 6. Graduating Senior Survey Questions Aligned with MTE Rubric Indicators

Please indicate the extent to which you agree with the following statements: “I believe that I have significantly improved my skills and abilities with respect to . . .”	Non-MTE	MTE with 5+ Courses Passed
Connecting relevant experience and knowledge	65%	73%
Making connections across disciplines, fields of study, and perspectives	67%	72%
Adapting and applying skills, abilities, theories, or methodologies in one situation to new situations	68%	74%
Choosing and using the most appropriate form of communication	67%	74%
Reflection and self-assessment/making plans that build on past experience	68%	75%

SES and GSS results indicate that participation in MTE fostered engaged learning, thus fulfilling the Goal One assessment target that MTE students will score higher than non-MTE students on select questions on the Sophomore SES and GSS.

End of Program Survey

Only MTE students fulfilling program requirements for the MTE Graduation Distinction are invited to complete the End of Program Survey (EoP). Respondents report significant improvement in their integrative and reflective thinking (Table 7). One asserted, “These classes required me to think on a different level than the regular courses throughout my collegiate experience did. They challenged me and helped me participate in a more critical way which helped me apply things to my everyday life.” Another shared, “I truly believe all students can benefit from these courses.” All responses on the EoP far exceeded the 80 percent target, indicating that MT Engage fostered a culture of engaged learning.

Table 7. End of Program Survey Fall 2019-Spring 2021 (N = 70)

After participating in the MT Engage program, I believe that I have significantly improved my skills and abilities with respect to...		Strongly Agree/Agree/ Somewhat Agree	Strongly Agree/ Agree	Target Met
Connections to Experience	Connecting relevant experience and knowledge.	99%	91%	Yes
Connections to Discipline	Making connections across courses, disciplines, fields of study, and perspectives	100%	92%	Yes
Transfer	Adapting and applying skills, abilities, theories, or methodologies in one situation to new situations.	100%	90%	Yes
Integrated/ Effective Communication	Choosing and using the most appropriate form of communication for completing an assignment.	100%	87%	Yes
	Communicating Effectively	99%	90%	Yes
Reflection and Self-Assessment	Reflection and self-assessment: developing a sense of myself as a thinker.	100%	91%	Yes

Pre- and Post- Tests on Faculty Activity Survey

A pre- and post-Faculty Activity Survey was used to assess how MTE faculty development informs instruction by tracking faculty adoption of MT Engage pedagogies. Faculty are invited to complete the Faculty Activity Survey (a five-point Likert scale) after SI but prior to teaching a certified course, and again at Year 5. The seventy participants completing both surveys report statistically significant increases in inviting students to reflect (from 4.19 to 4.39) and make connections from experiences outside of class to what they are learning in class (from 4.05 to 4.24). The largest gains appear in ePortfolio development (from 2.49 to 3.51, an increase of 1.02 points), indicating that MT Engage has moved the needle on faculty use of HIPs, including ePortfolio pedagogies which support students’ developing sense of themselves as learners and their ability to document their integrative thinking.

Goal One Unanticipated Outcomes

The initiatives and the overwhelming participation of faculty resulted in an abundance of data, confirming SACSCOC reviewers’ initial assessment that the QEP was “ambitious.” The program transitioned to a new

Director in Year 4, thus relationships with faculty and stakeholders had to be forged anew. COVID-19 posed challenges for faculty development, beyond-the-classroom experiences, and faculty implementation of high-impact practices such as collaborative learning. ePortfolio scholarship submissions were also negatively affected by the pandemic and fell short of Year 5 targets.

Goal Two: To improve student success as measured by retention, progression, and graduation.

Advances in retention, progression, and graduation rates indicate that MT Engage fostered student success.

Course Retention

MT Engage improved student course retention, as indicated DFWNs. When comparing semester grades for students across all undergraduate course levels taking an MTE section with those of their peers taking the same course without the MTE designation (referred to as MTO courses), the MTE courses have *consistently lower* DFWN rates, indicating higher course retention. Tests of significance were run each term, and the MTE group for all course levels was statistically lower ($p < .05$) every term (Table 8). For five out of the seven most recent semesters, students taking MTE General Education courses had lower DFWN rates than their MTO counterparts (Table 9).

Table 8: Course Retention, as Indicated by DFWN Rates for All Undergraduate Course Levels (Fall 2016-Spring 2021)

Year	Term	% with DFWN MTE	% with DFWN MTO	Target Met
2016	Fall	15%	17%	Yes
2017	Spring	15%	19%	Yes
2017	Fall	14%	18%	Yes
2018	Spring	13%	17%	Yes
2018	Fall	13%	18%	Yes
2019	Spring	13%	19%	Yes
2019	Fall	13%	17%	Yes
2020	Spring	12%	16%	Yes
2020	Fall	17%	22%	Yes
2021	Spring	14%	21%	Yes

Table 9: Course Retention, as Indicated by DFWN Rates for General Education Courses (Fall 2016-Spring 2021)

Year	Term	% with DFWN MTE	% with DFWN MTO	Target Met
2016	Fall	20%	18%	No
2017	Spring	20%	19%	No
2017	Fall	19%	18%	No
2018	Spring	17%	18%	Yes
2018	Fall	19%	19%	No
2019	Spring	18%	20%	Yes
2019	Fall	17%	18%	Yes
2020	Spring	16%	18%	Yes
2020	Fall	23%	22%	No
2021	Spring	18%	22%	Yes

Higher DFWN rates for MTE students in fall 2020 likely result from instructional changes prompted by the pandemic. Many faculty who had never taught online before found themselves teaching remotely, and as a result either of online course delivery methods or social distancing guidelines, some program faculty eliminated assignments using HIPs and beyond-the-classroom experiences, thus students were unable to experience the full benefit from MTE pedagogies in fall 2020.

Progression, as Indicated by Fall-to-Fall Retention Rates

IEPR data indicate that the more MTE classes a student takes, the more likely that student is to return the next fall. Fall-to-fall retention rates are consistently higher for MTE students than for their peers taking the same course without the MTE designation (Table 10, semesters in which MTE retention rates are greater than MTO retention rates in bold), with the target met in all but two semesters. Overall, students taking the MTE course are more likely to return the following fall and more likely to return in subsequent years than students taking the same course without the MTE designation (MTO).

Table 10: Progression, as Indicated by Fall-to-Fall Retention Rates (Fall 2016-Fall 2020)

		Fall 2016	Fall 2017	Fall 2018	Fall 2019	Fall 2020
1 st to 2 nd Fall	MTE	81%	82%	81%	82%	81%
	MTO	76%	76%	75%	79%	74%
1 st to 3 rd Fall	MTE	67%	71%	68%	68%	
	MTO	66%	67%	69%	68%	
1 st to 4 th Fall	MTE	61%	62%	58%		
	MTO	60%	60%	58%		

Graduation Rates

Students taking multiple MTE classes have significantly higher 4-year graduation rates than those of students taking MTO classes (Table 11). As the number of MTE classes passed increases so does the graduation rate. As indicated below, in 2016-2017, students who never took an MTE course had a 26% graduation rate as compared to 27% for students taking one MTE course, 35% for those taking three MTE courses and up to 58% for those taking seven or more MTE courses. This same trend of higher graduation rates for MTE participants was repeated with the 2017-2018 graduation rate as shown in Table 11.

Table 11: Graduation Rates by Number of MTE Courses Passed (2016-2018)

MTE Courses Passed	2016-2017 Students enrolled per number of MTE courses passed	2016-2017 4-Year Graduation Rate	2017-2018 Students enrolled per number of MTE courses passed	2017-2018 4-Year Graduation Rate
0 (MTO)	1,617	26%	1400	38%
1+	1,103	27%	1536	36%
2+	734	32%	1019	44%
3+	415	35%	652	49%
4+	225	37%	407	55%
5+	129	41%	228	57%
6+	90	47%	121	63%
7+	59	58%	75	68%

Improved retention, progression, and graduation rates indicate that MT Engage improved student success, achieving Goal Two.

Goal Two Unanticipated Outcomes

Exposure to MTE pedagogies appears to have a cumulative effect, as the more MTE classes a student takes, the more likely that student is to return to MTSU the next fall.

Section 4: What the University Learned as a Result of the QEP Experience

MTSU learned five key lessons from MT Engage:

- A strong desire for faculty development and collaboration exists at MTSU. As evident in Table 4, faculty participation far exceeded targets. One Summer Institute participant praised the program's flexibility, noting, "I really appreciate that you've built a program that is adaptable to different disciplines and faculty."
- The story of MT Engage is one of growth over time. Signature assignment rubric data indicates that reflection and integrative thinking are challenging, but growth is apparent as students progress throughout courses, with the highest scores for seniors taking 4000-level courses (Table 1). The QEP required six classes for program completion, and SACSCOC reviewers recommended scaling back to four. The tipping point for positive gains appears to be five courses. On average, students' End of Course survey scores increase as the number of MTE classes passed increases, climbing from an average response of 5.7 in the first MTE class to 6.0 (on a seven-point Likert) with five or more MTE courses passed.
- The ePortfolio is crucial in helping students recognize their growth as integrative learners. One focus group participant reported that it helped her "realize all [...] the ways that I've grown since being a freshman." Others revisited ePortfolios when applying for scholarships and internships, positioning the ePortfolio as a catalyst for future opportunities. And yet, the inability to meet submission targets implies that the QEP was overly optimistic concerning voluntary student participation. Student focus group participants characterized the ePortfolio as daunting, and both faculty and students consider the tool clunky with too many design limitations. The significant time investment outside of class may deter students. A logical next step is scaling back ePortfolio requirements and exploring the possibility of a course-embedded ePortfolio in the first two years and a sequential scale-up culminating in an upper division course in the major.
- Breaking down disciplinary boundaries is a challenge. Low scores for "Connections to Discipline" reveal a need for instruction in disciplinarity. A future action item should support faculty in foregrounding disciplinary values and practices as students explore how disciplinary ways of knowing, doing, and communicating are evident across courses.
- Investing in faculty development on HIPs and integrative and reflective thinking pays off. MT Engage was developed in response to National Survey of Student Engagement (NSSE) data indicating that MTSU students were not academically engaged. 2019 NSSE results underscore significant improvements in students' academic engagement following QEP implementation, with students reporting higher levels of academic engagement than their peers did prior to the QEP and placing MTSU means significantly higher than all comparison groups (Southeast, Carnegie, and NSSE 2018-19) in three of the ten engagement areas for first-year students. Notably, reflective and integrative learning increased from 35.9 in 2014 to 37.5. Seniors' results also increased, from 37.4 to 38.3. In addition to positive student feedback, faculty report increased adoption of HIPs, and the University experienced improved student retention and success outcomes during the QEP period. Faculty Learning Communities (FLCs) and Professional Learning Communities (PLCs) are essential to these improvement efforts, with FLCs supporting faculty adoption of HIPs at all course levels, and PLCs promoting consideration of the curricula, departmental cultures, staffing needs, and disciplinary practices shaping major pathways. Future efforts will build on the lessons learned during our QEP implementation process by setting strategic priorities to advance faculty adoption of HIPs and students' opportunities to grow as integrative, reflective thinkers.