resolve
to solve

2022 QUALITY ENHANCEMENT PLAN

MARS HILL
UNIVERSITY 1856

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an academic community rooted in the Christian faith, challenges and equips students to pursue intellectual, spiritual, and personal growth

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EXECUTIVE SUMMARY

The Mars Hill University Quality Enhancement Plan, *Resolve to Solve*, will implement problem solving, defined as project-based learning that emphasizes rigorous, active, and systematic application of the process of solving problems, into the student experience, with the overarching goal of enhancing student learning.

With a new administration in place, a substantial gift to the university to elevate work in the career development center, and a renewed determination among faculty and staff to enhance the student experience, Mars Hill University embarked upon identifying and developing a quality enhancement plan that would help reflect the institution's focus on connecting a Mars Hill education to the world of work, as well as provide students with a distinctive MHU learning experience.

As the plan developed, it was critical to align with institutional mission:

Mars Hill University, an academic community rooted in the Christian faith, challenges and equips students to pursue intellectual, spiritual, and personal growth through an education that is

▶ grounded in a rigorous study of the liberal arts;

▶ connected with the world of work; and

▶ committed to character development, service, and responsible citizenship in the community, region, and the world.

OUR MISSION

Mars Hill University, an academic community rooted in the Christian faith, challenges and equips students to pursue intellectual, spiritual, and personal growth through an education that is

▶ grounded in a rigorous study of the liberal arts;

▶ connected with the world of work; and

▶ committed to character development, to service, and to responsible citizenship in the community, region, and the world.

Additionally, an explicit goal incorporated into the current strategic plan is to "strengthen our commitment to liberal arts education and career development for the 21st century. Both the mission of the institution and the strategic plan emphasize the importance of a liberal arts education and connection to the world of work.

In order to remain connected to the above institutional guidance, university leaders determined that the quality enhancement plan should (a) create a unique, valuable MHU experience; (b) help students understand the meaning and value of a liberal arts education; (c) increase student engagement and learning; and (d) help students succeed and be prepared to make a life and a living.

Resolve to Solve will enhance student learning by helping them to develop, improve, and recognize the value of problem-solving skills. This encompasses three components: 1) learning experiences that are introduced and reinforced in first-year courses, 2) curricular and co-curricular experiences that focus on problem solving in the academic disciplines and related professions, and 3) upper-level capstone courses where problem solving skills are demonstrated.

CHAPTER 1
PROCESS OF DEVELOPING THE QEP

INTRODUCTION:

Standard 7.2 of the Southern Association of Colleges and Schools Commission on Colleges (SACSCOC) reaffirmation of accreditation process requires the development of a carefully designed Quality Enhancement Plan (QEP), "(a) [is]a topic identified through its ongoing, comprehensive planning and evaluation processes; (b) has broad-based support of institutional constituencies; (c) focuses on improving specific student learning outcomes and/or student success; (d) commits resources to initiate, implement, and complete the QEP; and (e) includes a plan to assess achievement" (SACSCOC Principles of Accreditation 18).

Resolve to Solve, the Mars Hill University QEP, is a "well-defined and focused topic or issue related to enhancing student learning…and accomplishing the mission of the institution" (SACSCOC Handbook for Institutions Seeking Reaffirmation, 39). The overarching goal is to enhance student learning by helping traditional undergraduate students develop, improve, and recognize the value of problem-solving skills. This chapter describes the ongoing, comprehensive planning process that led to Mars Hill University's (MHU) adoption of *Resolve to Solve* as its QEP.

PHASE I: IDENTIFICATION OF INSTITUTIONAL PRIORITIES

The QEP process began in the fall 2019 semester. In September of that year, former Provost John Omachonu appointed an Executive Committee that was charged with initiating the QEP development process, identifying campus representatives to serve on a Steering Committee, and providing general guidance and support to the Steering Committee (see Appendix A).

Dr. Omachonu introduced the QEP process to the campus community during a town hall meeting on October 24, 2019. Initial ideas for a QEP focus area were collected via a survey administered to students, faculty, staff, administrators, trustees, and community members. The survey included a total of 440 respondents across multiple constituencies: 91.7% response rate for senior leadership team, 80% for Board of Trustees, 69% for faculty, and 38.5% for staff. Alumni and community members responded to the survey, but with an insignificant response rate, given the wide distribution of the survey. Survey results identified the following institutional priorities for QEP consideration:

► Career-Academic Nexus: Integration of professional goals into academics throughout the college experience.

► Experiential Learning: Provide unique learning experiences such as internships.

► Increase Graduation: Raising rates of retention and degree completion.

► Intercultural Competence: Promote student appreciation for diversity.

► Interpersonal Skills: Develop student ability to interact effectively in a variety of settings.

► Residence Life: Integrating the residence experience with academic life.

The survey results indicated that **Experiential Learning: Provide Unique Learning Experiences** (n=257, 58.40%) and **Increase Graduation: Raising Rates of Retention and Degree Completion** (n=253, 57.50%) were the highest priorities.

In November 2019, the Steering Committee convened and began working in tandem with the Executive Committee on all matters and phases of the QEP—from topic selection to implementation. Subsequent meetings of the committees included discussions of the survey results within the context of retention, MHU's mission, strategic planning, current initiatives for improving student success or student learning, and institutional viability. On December 17, 2019, the joint committees agreed that support for, and potential benefit to, the institutional retention efforts provided a starting point for the development of a QEP designed to enhance student success or student learning.

PHASE II: MOVING FROM RETENTION TO ENHANCING STUDENT SUCCESS OR STUDENT LEARNING

In January 2020, the QEP Steering Committee began the process of developing the QEP. Membership of the committee included university personnel representing all major academic divisions, co-curricular programs, and administrative offices (see Appendix A). Meeting weekly from 2020 to present, the committee began its work by considering the university's Mission Statement and Strategic Plan, as well as the core values, skills, and dispositions desired for the MHU graduate. Subsequently, the steering committee formed subcommittees to review the literature, collect and analyze data, and provide initial planning for marketing and budget parameters.

<u>Aligning with Institutional Mission, Planning, and Core Characteristics</u>

Mars Hill University challenges and equips students through an education that is grounded in a rigorous study of the liberal arts; is connected to the world of work; and is committed to character development, service and responsible citizenship. These elements of our mission align explicitly with the 2017-2022 strategic plan (see Appendix B).

Priority II (from Strategic Plan). Quality Academic Environment: MHU will strive to improve and enhance the current academic programs and seek opportunities to move into new and innovative academic arenas that better serve our students, the region, and the changing landscape of higher education.

> Goal 1: Strengthen our commitment to liberal arts education and career development for the 21st century.
>
> Goal 3: Strengthen our commitment to quality academic programs.
>
> Goal 4: Establish new and strengthen existing programs and partnerships that engage students in the community, the region, and the world.

(Integrate the various curricular, co-curricular, and interdisciplinary programs.)

Both Mission Statement and Strategic Plan focus on institutional action. The Steering Committee next turned to a more student-centric question: What core values and characteristics do MHU faculty and staff desire for graduates? Consideration of this question began with a brainstorming session, included conversations with colleagues outside the committee, and ended with rank-ordering those skills and dispositions considered to be most important for the 21st-century MHU graduate (see Table 1-1).

Table 1-1. Desired Skills and Dispositions of the 21st Century MHU Graduate

Skills of MHU Graduates	Dispositions of MHU Graduates
Think critically	Are responsible
Think creatively	Are adaptable & flexible
Solve problems effectively	Are resilient
Read critically for comprehension	Demonstrate a growth mindset + perseverance for sustained period of time
Write effectively	Have a well-developed sense of self
Speak effectively	Have emotional intelligence
Demonstrate effective interpersonal communication and interaction	Look for, observe, and make connections…With people, with information, with methodologies, with resources, etc.
	Are involved in, and committed to, community
	Embrace diversity, inclusivity, and equality
	Can be leaders
	Have basic functional life skills

General Research

As mentioned earlier, retention is an institutional priority and a starting point for designing a more focused QEP. A Steering Committee subcommittee responsible for reviewing research, therefore, examined current research and best practices relevant to retention and graduation; efforts at comparable institutions; connections between retention efforts and equality, diversity, and inclusion; retention of student-athletes; and connections between retention and residential life.

According to the Noel-Levitz National Center for Enrollment Management (now Ruffalo Noel Levitz), "Improving retention is a complex task; retention and attrition are multi-variant phenomena and are not subject to 'quick-fix' strategies" (2008, p. 3). Furthermore, a Hanover Research report, "Overview of Student Retention Theories, Strategies, and Practices at Peer Institutions," published in 2010, gives an important overview of student retention. The study reviewed 18 colleges/universities' attempts to increase retention, satisfaction, and graduation rates, showing which strategies worked, and which did not. A significant point made in the study was that "both academic and non-academic forces and strategies need to remember the majority of factors proven to improve student retention are related to academic goals, academic-related skills, and academic self-confidence."

Table 1-2. Factors Related to Retention: Relative Connection

Category	Factors	Correlation Coefficient
Factors with strong correlation to retention	Academic-related skills	.366
	Academic self-confidence	.359
	Academic goals	.340
Factors with moderate correlation to retention	Institutional commitment	.262
	Social support	.257
	High school GPA	.246
	Institutional selectivity	.238
	Socioeconomic status	.228
	Social involvement	.216
	Financial support	.188
	ACT Assessment scores	.124
Factors with weak correlation to retention	Achievement motivation	.066
	General self-concept	.050

Source: ACT 2004

In addition to the importance of academic skills, self-confidence, and goals, the following themes consistently emerged across retention research:

▶ the efficacy of "using existing retention strategies as a foundation for developing a more systematic approach to improving the quality of student learning" (e.g., Noel-Levitz, 2008),

▶ the importance of student engagement, per the High-Impact Practices identified by George Kuh and AAC&U (2013),

▶ the value of higher-order cognitive skills (e.g., AAC&U VALUE rubrics and Essential Learning Outcomes, NACE Competencies),

▶ the need to create consistency between, and relevance to, students' academic experiences and career goals (e.g., Hanover Research).

Data Collection

To continue the QEP development process, a different Steering Committee subcommittee collected and analyzed fall 2013–spring 2020 demographic and academic data on a per-semester, per-student basis. Data collection began with basic questions:

▶ Why do students choose to come to MHU?

▶ Which students leave, and when and why do they leave?

Specific data points (e.g., GPA, major, gender, race, Pell eligibility, and admit type) were disaggregated and

compared in a variety of ways. Primary findings for those students who leave MHU include:

- 67% leave after their first or second semester. Multiple curricular and co-curricular strategies have focused on first-year (FY) students, resulting in increased retention rates.

- 25% leave after their third or fourth semester. MHU has not had programs that target second-year (SY) students, leaving a "gap" between FY and upper-level courses when students are ensconced in their majors and tend to complete their course of study.

- Attrition rates for student-athletes and non-athletes are similar. The same is true for Pell-eligible versus non-Pell-eligible students.

- The majority of students who leave are making academic progress. They tend to transfer to other institutions to continue their education.

The data analysis did not reflect the Steering Committee's expectations or what the literature often suggests are typical issues with retention (e.g., low GPA, student-athlete attrition rates). There was no single data point that immediately suggested ideas for a QEP.

Phases I and II of the QEP process were completed by October 2020. Throughout these phases, progress reports were provided to the campus community. The next task for the Steering Committee was to move from the abstract to the concrete.

PHASE III: IDENTIFICATION OF POTENTIAL QEP TOPICS

As mentioned, data analysis did not indicate an obvious target population for the QEP. The Steering Committee then turned to High-Impact Practices (HIPs; see Appendix C) for viable, effective ways to positively impact the broadest possible range of students. Many of the HIPs are already integrated into MHU efforts to some extent. Four of the HIPs—First Year Seminars and Experiences, Common Intellectual Experiences, Learning Communities, and Collaborative Assignments and Projects—provided ways to continue the QEP development process.

This is the point at which the Steering Committee coalesced around broad criteria for QEP topics that were situated in current best practices, related to institutional planning, and considered institutional needs and viability. The final QEP would:

► focus on enhancing student learning,

► reach all traditional undergraduate students,

► build on existing curricular efforts,

► demonstrate the value of a liberal arts education,

► integrate aspects of career planning,

► incorporate aspects of High-Impact practices, and

► provide systematic strategies for developing core skills and dispositions.

After further discussion and additional examination of best practices, the Steering Committee identified two potential topics that would meet the criteria and could lead to the final QEP. The ideas were intentionally broad, allowing the committee to bring important constituencies and stake-holders into the development process.

Topic Idea #1: Learning Communities, defined as small groups of students who share common academic goals and work collaboratively in the classroom(s) with each other and with one or more instructors.

Topic Idea #2: Problem-Solving, defined as project-based learning that emphasizes rigorous, active, and systematic application of the process of solving problems.

Steering Committee efforts during February, March, April, and May 2021 focused on engaging the wider MHU community and providing multiple opportunities for input from all stakeholders.

► Presentations of two ideas, rationale from the literature and data, potential value, and possible design aspects

▷ Faculty and Staff Forum (February 25)

▷ Board of Trustees Academic Affairs Committee (March 4)

► Administration of post-forum survey (March 12-16; see Appendix D)

▷ Provided the opportunity for stakeholders to provide reactions, ask questions, and make suggestions.

▷ Designed and distributed a Fact Sheet that summarized the February presentations (see Appendix E).

► Constituency Chats (April and May)

▷ Steering Committee members facilitated 13 separate focus groups and collected additional comments.

▷ Each focus group began with a narrated PowerPoint presentation to introduce the process and objectives.

▷ All Steering Committee members used the same focus questions and protocols (see Appendix F).

▷ Participation included faculty, professional staff, and students.

Facilitators collected comments and reported to the entire Steering Committee. The committee met monthly during the summer, with the goal of addressing the results of the constituency chats (see Appendix F). Faculty, staff, and student comments supported both

topic ideas, but revealed a slight preference for problem-solving, primarily because of viability.

Steering Committee members submitted specific designs for Learning Communities and/or Problem-Solving QEPs that addressed constituents' comments, met the criteria established earlier, and provided a concrete QEP. Six plans were presented and discussed during a working retreat held in August. At the end of the retreat, the consensus of the Steering Committee was that mastery in problem solving would be the QEP topic in support of the institutional focus on increasing retention.

PHASE IV: DESIGNING THE PLAN *RESOLVE TO SOLVE*

As mentioned earlier, existing strategies can be foundational for a more systematic approach to student learning achievement (Noel-Levitz, 2008). Problem Solving (PS) already exists as one of MHU's institutional student learning outcomes, as an explicit learning outcome in numerous programs and courses, and as more informal pedagogy in others. Additionally, Ideas & Innovation courses—the capstone of MHU's general education curriculum—require a signature problem-solving project that is both collaborative and interdisciplinary. Steering Committee efforts to build a QEP designed around problem solving began with these pre-existing learning experiences and strategies.

The importance of problem solving to both professional and personal success was frequently mentioned in the Constituency Chats described earlier, as well as heavily focused upon in the literature (see Chapter 2). The Steering Committee saw this as an opportunity to (a) reinforce the problem-solving process introduced in the first year experience and (supposedly) mastered in upper-level general education and major courses, (b) target the second-year experience as a way to extend and reinforce students' problem-solving skills, (c) apply problem-solving skills across both real-life and theoretical problems, (d) explicitly focus on problem solving in the major, (e) connect skill development to the world of work, and (f) provide students with a distinctive MHU learning experience. Details of the QEP will be described fully in Chapters 3 and 4 of this report, and Chapter 2 provides additional support from the research literature. The final design reflects an iterative process that involved formal presentations to stakeholders (August 23 and October 28), as well as numerous informal updates. Comments and suggestions were used to refine the details of MHU's QEP. The final design phase resulted in a Problem-Solving QEP that focuses on important student learning outcomes that are specific, measurable, and embedded in the MHU Mission and strategic planning. The target population is traditional undergraduates, 85% of the MHU student body in any given year. Informal, but representative, discussions with students led to naming the QEP: ***Resolve to Solve***.

CHAPTER 2
REVIEW OF BEST PRACTICES

LITERATURE REVIEW: NARROWING SCOPE SEQUENCE

You do not have to listen long to hear someone discussing the value of problem solving. Hart Research Associates (2015) report the following in a college learning and career success survey carried out for AAC&U titled "Falling short?"

Figure 2-1. Importance of Learning Outcomes to Employers

Learning Outcomes More Than Half of Employers Rate as Very Important (Proportion of employers who rate each outcome an 8, 9, or 10 on a zero-to-10 scale)	Employers %
The ability to analyze and solve complex problems	70
The ability to locate, organize, and evaluate information from multiple sources	68
The ability to innovate and be creative	65
Staying current on changing technologies and their applications to the workplace	60
The ability to work with numbers and understand statistics	56
The ability to analyze and solve problems with people from different backgrounds and cultures	56

Hart Research Associates, 2015

This report includes statistics about the value employers place on problem solving in college graduates: "…there is broad agreement among employers that all students, regardless of their chosen field of study, should gain broad learning across several areas"; however, the benefit of problem solving can be seen in the multiple learning outcomes.

A more recent report from the Hart Research Associates (2018) continues to emphasize the importance of problem-solving skills for employers.

Figure 2-2. Priorities for College Learning and Sense of Graduates' Preparedness

Very Important* Skills for Recent College Graduates We Are Hiring

■ Business executives   ■ Hiring managers

Skill	Business executives	Hiring managers
Can find, organize, evaluate info from many sources	68% in 2014 — 73%	79%
Able to analyze and solve complex problems	70% in 2014 — 67%	75%
Analyze/solve problems w/people from diff. backgrounds/cultures	56% in 2014 — 65%	73%
Able to innovate and be creative	65% in 2014 — 61%	66%
Stay current on changing tech/applications to workplace	60% in 2014 — 60%	73%
Able to work with numbers and statistics	66% in 2014 — 54%	55%
Proficiency in language other than English	23% in 2014 — 23%	25%

* 8-10 ratings on a 0-to-10 scale; 15 outcomes tested

Hart Research Associates, 2018

The survey referenced above is not alone in the reporting of such ideas. Everyone from employers, to college presidents, faculty, parents, and students demonstrate remarkable consensus that problem solving is one of the most important outcomes of a college education (Bok, 2017; Hart Research Associates, 2015; Hora, Benbow, Oleson, 2016; Passow & Passow, 2017).

It should not be surprising that employers feel that college graduates are falling short in their preparedness in several areas, including the ones employers deem most important for workplace success. This data can be further seen in the 2018 Hart Research report that suggests notable gaps emerge between the importance of key learning outcomes and executives' sense that recent graduates are prepared in these areas, even with some improvements.

Figure 2-3. Gaps Between the Importance of Key Learning Outcomes–Executives
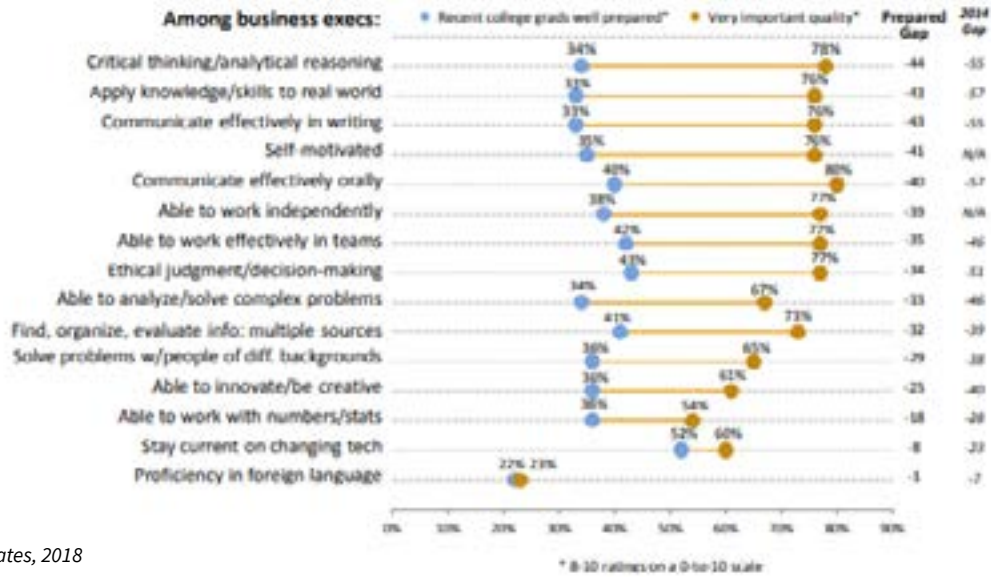
Hart Research Associates, 2018

Hiring managers also identify gaps in recent graduates' preparedness on key learning outcomes.

Figure 2-4. Gaps Between the Importance of Key Learning Outcomes–Managers
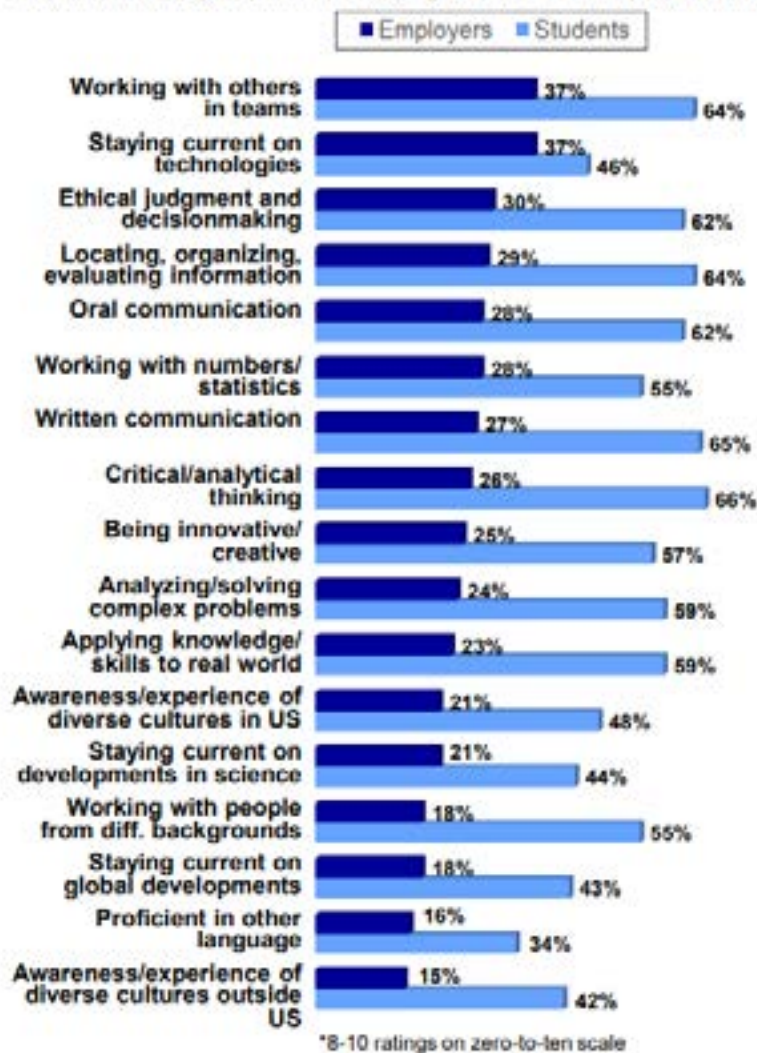

Hart Research Associates, 2018

Both executives and hiring managers perceive a gap of at least 40 points in importance versus preparedness in recent graduates' critical thinking and analytical reasoning skills (Hart Research Associates, 2018).

Interestingly, according to the Falling Short Survey, college students are much more optimistic about their level of preparedness across learning outcomes including problem solving.

Figure 2-5. Reporting of Preparedness Graduates vs. Employers

Proportions saying they/recent college graduates are well prepared in each area*

Legend: ■ Employers ■ Students

Area	Employers	Students
Working with others in teams	37%	64%
Staying current on technologies	37%	46%
Ethical judgment and decisionmaking	30%	62%
Locating, organizing, evaluating information	29%	64%
Oral communication	28%	62%
Working with numbers/statistics	28%	55%
Written communication	27%	65%
Critical/analytical thinking	26%	66%
Being innovative/creative	25%	57%
Analyzing/solving complex problems	24%	59%
Applying knowledge/skills to real world	23%	59%
Awareness/experience of diverse cultures in US	21%	48%
Staying current on developments in science	21%	44%
Working with people from diff. backgrounds	18%	55%
Staying current on global developments	18%	43%
Proficient in other language	16%	34%
Awareness/experience of diverse cultures outside US	15%	42%

*8-10 ratings on zero-to-ten scale

Hart Research Associates, 2015

Even though there is a notable gap between college students' perceptions about their level of preparedness across key learning outcomes and employers' assessment of recent college graduates, there is still room for improvement on both sides of the graduation stage, as suggested in an excerpt from Handstedt (2018). "The other day, a physicist friend was working in the lab with her summer research students. They were talking about the work they'd been doing that summer and how there was no manual or instructions of any sort for any of it, no textbook, no lab procedure. It was as if they were making it up as they went along. Laughing about this, one of the students said, 'You know what we need? We need an entire course with nothing but problems. Just give us one problem after another, and we figure out how to do them. Because that's what real research is.' The rest of the students laughed. And then all of them nodded." (Hanstedt, 2018, p. 41)

As the QEP Steering Committee discussed how to help MHU students make the connection between understanding of the importance of problem solving and the world of work, the committee agreed upon the realization that it may not be doing such a great job of teaching the skill of problem solving.

Mars Hill University has a long history of liberal arts education, the purpose of which is to cultivate such skills as critical thinking and problem solving. However, as the institution began to take a closer look at exactly what it does to build these skills on our campus, faculty and staff members realized that they do not have a systematic way of ensuring all students have the same explicit exposure to and understanding of problem solving.

Needless to say, many programs across campus emphasize problem solving regarding their specific curriculum; however, the Steering Committee found that there was broad range of differences between (and even within) programs across campus in light of a clear understanding of "problem-solving skills". The committee believes this is a skill that this liberal arts university must get right.

According to Wismath & Zhong (2014), problem solving is a critical component of a comprehensive 21st-century education. The committee agrees that without this

skill the futures of MHU students could be at risk. And if students cannot truly problem solve, how are they to navigate the academic, personal, and social situations that arise in everyday life on any campus?

To help students in making the connection that their own understanding and use of academic problem-solving skills also have applications in the world of work, the university needs an approach that is systematically, directly, and explicitly (in common language and methodology) taught to each student from their first semester on our campus to their last. This raises the question of how problem-solving skills can best be developed. As Van Gelder (2005) points out, building expertise in problem solving (critical thinking) is no easy task. He suggests that these skills are enhanced through practice. Faculty and staff can all agree that to practice a skill, they must clearly understand the minute details of the skill. This understanding helps bring about metacognitive awareness, a critical component of deliberate practice and hence a key factor in the development of problem-solving skills.

The Steering Committee agreed that there was a need to fine tune the details of problem solving for Mars Hill University. The institution spent time discussing what students need to be able to do if they were to be strong problem solvers. The following skills emerged:

- ► Identify problems
- ► Reason, observe, and recognize patterns
- ► Recognize the connections between how students solve academic problems and social problems
- ► Learn from mistakes and re-evaluate information
- ► Know how to break complex problems down into smaller, more manageable components
- ► Make connections between concepts and disciplines
- ► Creatively think of multiple ways to solve problems

The Steering Committee also researched widely adapted problem-solving models (PSMs), and that research brought the committee to the 13 most widely-used PSMs (Nickols, 2020).
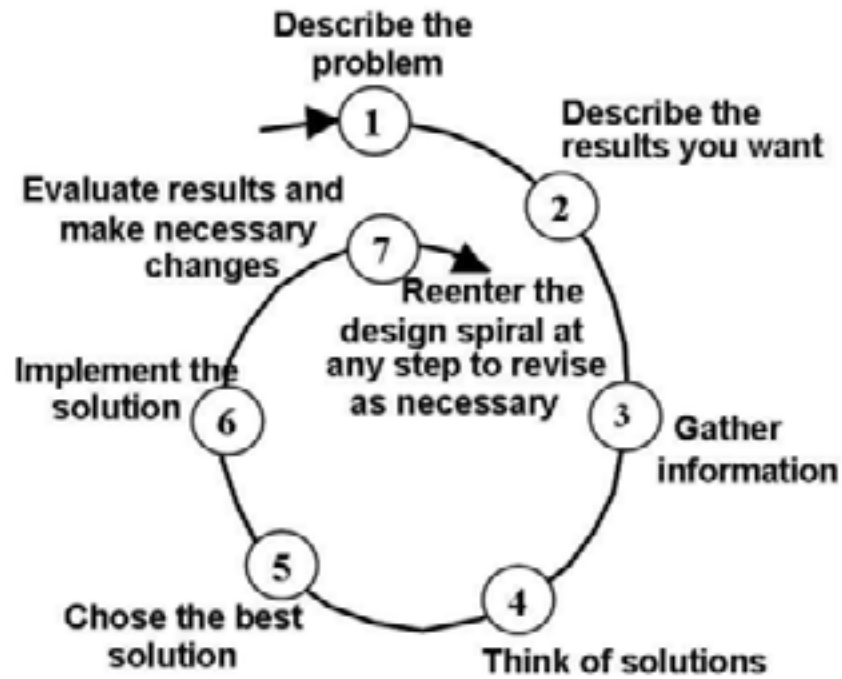
The two models from Fred Nickols Problem Solving Tool Kit (2020) were what most closely aligned with the committee's ideas of what a good problem-solving process might entail:

Figure 2-6. The Six-Step Model
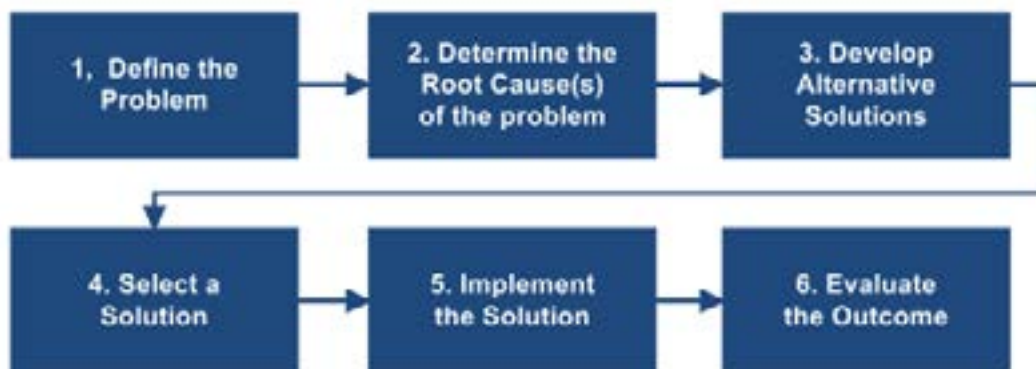
Nickols, 2020

**Figure 2-7. Technological Method of Problem Solving**

Nickols, 2020

Neither model identified an exact match for the committee's envisioned framework. However, this review and discussion around the PSMs led the Committee to adapt the following problem-solving steps that have been aligned with the AAC&U Problem Solving VALUE Rubric.

Figure 2-8. MHU Problem-Solving Model
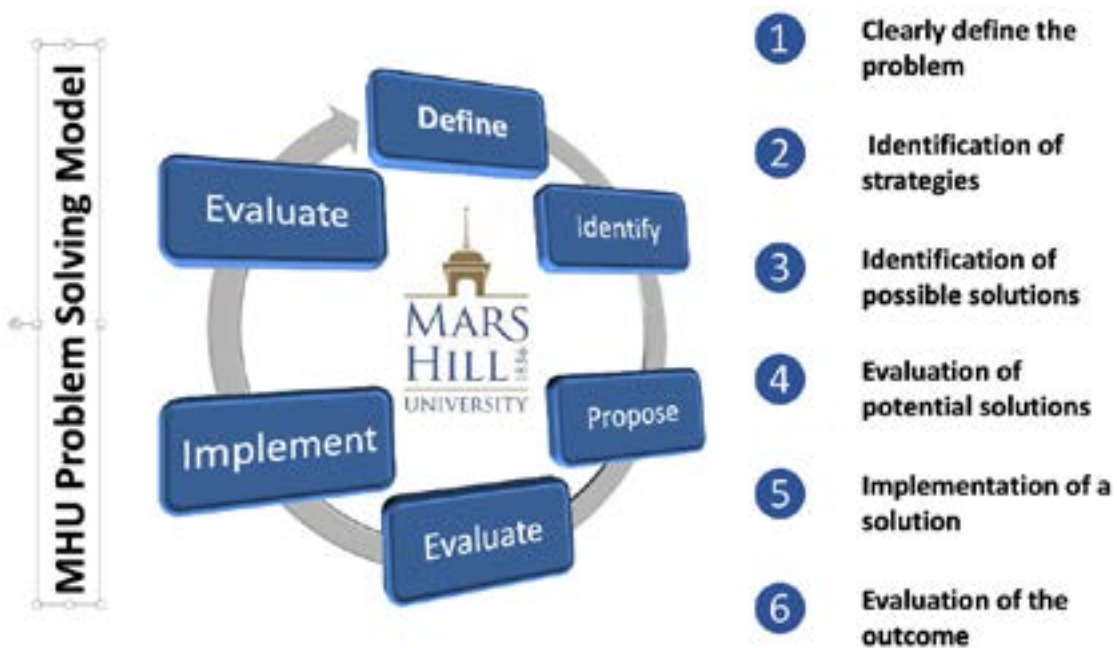
The committee agrees that the process defined in the AAC&U rubric aligns with the important ideas/rationale of problem solving from the literature and our own critical agreements. This process:

- ensures consistency and uniformity in approaching a problem,
- promotes and encourages collaboration,
- helps PS groups reach consensus and stay focused on the problem at hand,
- eliminates confusion,
- outlines the decision-making process,
- provides a justifiable solution,
- promotes a clear step-by-step cycle (that is repeatable) but may not always be linear, and
- applies to a variety of contexts (academic and social).

The final desire for our model was that it be an open process which could be generalized, cross-walked, and connected to discipline-specific problem-solving models as students move into their respective majors.

WHAT IS PROBLEM SOLVING?

According to AAC&U, problem solving is the process of designing, evaluating, and implementing a strategy to answer an open-ended question or achieve a desired goal. The AAC&U's criteria for problem solving include defining problems; identifying strategies; proposing, comparing, and implementing solutions; and evaluating the outcomes. But also, the core expectations articulated in AAC&U's Problem-Solving Rubric can and should be translated into the language of individual campuses, disciplines, and even courses.

"Problems" and "solving them" may be context and discipline-specific, but the concept and process have overarching components and similarities across contexts. Jonassen (2000, p. 65) defines a problem as an "unknown entity in some situation (the difference between a goal state and a current state)" such that "finding or solving for the unknown must have some social, cultural, or intellectual value." Within their college courses, students should be exposed to a wide variety of problems and motivations for solving them. Jonassen (2002) suggest that students should be exposed to "well-structured" problems at one end of the spectrum, which have a typical solution path and solution, and "ill-structured" problems, which are highly context-dependent and have no one solution path. In simple terms, problem solving is a "goal-oriented" process that includes creating and manipulating problems as mental models (Jonassen, 2000).

At Mars Hill University, faculty and staff members want students to create mental models and frameworks that they need to approach a problem rather than just seeking a standard solution. If students can start to build this process, then each problem they encounter, or re-encounter, will deepen their knowledge and build their skills around problem solving.

THE CURRICULUM OF PROBLEM SOLVING

The MHU QEP focus on problem solving aligns with AAC&U recommendations found in its 2021 report on employer views of higher education, "How College Contributes to Workforce Success: Employer Views on What Matters Most" (*Inside Higher Ed*, April 6, 2021). The report ends with a series of recommendations for campuses. As employers widely endorse the skills developed via a liberal education, students must be equipped to "name and reflect" upon those skills—particularly how they connect to workforce needs.

Throughout the discussion in creating the MHU QEP, stakeholders found themselves repeating the same point quoted in this article, "Dispositions, ways of knowing and habits of mind are not solely innate traits," the report says. "As with other skills and abilities, a college education cultivates these capacities through both curricular and co-curricular learning." Skills are enhanced over time through repeated use and assessment. In the same article, AAC&U says, "The only way for campus leaders and educators to truly know if students are prepared to enter the workforce is to assess where students are on outcomes—at the beginning, middle, and end of the college journey."

As the literature points out, "Scholars have determined that attrition rates between the first and second year are perhaps the strongest determinant of institutional graduation rates. Studies found that attrition rates generally decrease by 50 percent in each subsequent year following the first year in attendance at an academic institution." (Hanover Research, p. 6) As mentioned in Chapter 1, MHU loses most of its students early in their academic career—67% after the 1st or 2nd semester, 25% after the 3rd or 4th semester. Most students who leave are making academic progress. An important factor the committee considered was that parents and students were not making a connection of a degree from MHU to the world of work.

In order to clarify and explicitly demonstrate this connection, it is clear that all MHU stakeholders (i.e., students, parents, faculty, staff, and administrators) must not only share a common understanding of problem-solving methods but also the reason for those methods and how to use them. Because of its importance in creating successful results in curricular and co-curricular programs as well as in the post-graduate workplace, MHU chose to concentrate on problem solving as the focus of its QEP.

> "The skills that matter to employers are not developed within a single course or even within a single major," the report says. "General education provides the entry point and foundational pathway for developing the skills, mindsets, and aptitudes that matter for workplace success. But that pathway must be aligned with majors to promote ongoing skill development, from cornerstone to capstone."
>
> "What Employers Want," *Inside Higher Ed*, April 6, 2021

As the institution began to dig into problem solving, the Steering Committee came to understand that problem solving is a skill that is grounded in the best practices of scaffold learning between curricular and co-curricular programs while affording educators opportunities to embed high impact practices identified by the AAC&U High-Impact Educational Practices (see HIPs; Appendix C):

▶ First Year Seminars and Experiences

▶ Common Intellectual Experiences

▶ Collaborative Assignments and Projects

These would encourage efforts to use key elements such as:

▶ Performance expectations set at appropriately high levels.

▶ Significant investment of time and effort by students over an extended period of time.

► Frequent, timely, and constructive feedback.

The committee recognizes that MHU graduates are entering a world of work where well-developed problem-solving skills are one of the leading pathways to success (see Tables 2-1 and 2-2). This calls for the university to intentionally create and maintain opportunities for MHU students to strengthen those skills. The Quality Enhancement Plan (QEP) provides an opportunity for the entire MHU community to focus on one specific issue that can improve student learning, while helping students develop a deeper understanding of how their liberal arts course work at MHU introduces, develops, and strengthens specific skills that are foundational for both academic success and for success in the working world.

Table 2-1. Attributes Employers Seek on a Candidate's Resume, 2020

ATTRIBUTE	% OF RESPONDENTS
Problem-solving skills	91.2%
Ability to work in a team	86.3%
Strong work ethic	80.4%
Analytical/quantitative skills	79.4%
Communication skills (written)	77.5%

National Association of Colleges & Employers (NACE) Survey, 2020

Table 2-2. Attributes Employers Seek on a Candidate's Resume, 2021

ATTRIBUTE	% OF RESPONDENTS
Ability to work in a team	81.0%
Problem-solving skills	79.0%
Analytical/quantitative skills	76.1%
Communication skills (verbal)	73.2%
Communication skills (written)	72.7%

National Association of Colleges & Employers (NACE) Survey, 2021

The MHU QEP, *Resolve to Solve*, is an intentional and sustained process for students to learn, practice, and become proficient at using the skills of problem solving over the course of their studies at MHU. As a result, parents and students will be able to connect that MHU emphasis on mastering problem-solving skills academically and professionally clearly demonstrates that a degree from MHU has real world impact and not vague implications.

CHAPTER 3
DESIRED LEARNING OUTCOMES

STUDENT LEARNING OUTCOMES

The QEP focuses on problem-solving with the aim of improving student learning. It is hypothesized that if students are taught a method of problem solving and given a chance to practice those skills, they will have the tools to constructively deal with difficulties they may encounter in and out of the classroom. Additionally, research shows that problem solving is a skill that employers highly value in college graduates and students often overestimate their problem-solving skills. The QEP's focus on problem solving provides students with the opportunity to systematically practice that method of thinking, thus enhancing student learning. Last, an instruction that places emphasis on problem solving grants students a novel and distinctive approach to their education that allows them to see value in a Mars Hill University education and might contribute to their persistence.

STUDENT LEARNING OUTCOMES

The Student Learning Outcomes (SLOs) will focus primarily on traditional MHU students and are as follows:

SLO 1: Students will identify, define, and explain the steps of the MHU Problem-Solving (PS) process.

SLO 2: Students will apply the MHU PS process to real-life and theoretical problems.

SLO 3: Students will reflect on the value of the MHU problem-solving process in multiple personal and professional contexts.

PROGRAM GOAL AND OBJECTIVES

The goal of the QEP: **MHU students will develop, improve, and recognize the value of problem-solving skills**. To accomplish the SLOs of the QEP, objectives in the following categories have been developed.

1. Campus Mission and Culture

   a. Promote a shared understanding of the problem-solving process (SLO 1).

   b. Foster a culture that connects a rigorous study of the Liberal Arts, in professional and personal contexts, to problem solving (SLO 3).

2. Student-Centric Process

   a. Students will utilize the MHU and discipline-specific PSMs to demonstrate effective problem solving as part of the student experience (SLO 2).

3. Curriculum

   a. Incorporate the MHU PSM within the General Education Curriculum (SLO 1, 2, & 3).

   b. Adapt the MHU PSM to a discipline/major specific PSM models (SLO 2 & 3).

   c. Provide the opportunity for traditional undergraduate students to engage in problem solving through course-based scaffolding (SLO 1, 2, & 3).

   d. Address the gap in targeted programming in the second undergraduate year (SLO 1, 2, & 3).

4. Professional Development Opportunities

   a. Engage with the Center for Engaged Teaching and Learning (CETL) for the implementation of problem solving (SLO 1, 2, & 3).

   b. Design a faculty development program to support the integration of problem solving in instruction, curriculum revision, and assessment through the AAC&U rubric (SLO 1, 2, & 3).

For more information on how the goals relate to the overall QEP plan see Appendix I (Logic Model).

CHAPTER 4
ACTIONS AND TIMELINE FOR IMPLEMENTATION

Mars Hill University has an overarching institutional focus on retention. To support this effort, the QEP **Resolve to Solve** will help students develop, improve, and recognize the value of problem-solving. Earlier chapters of this report described the ongoing and comprehensive planning process that led to the development of **Resolve to Solve**, as well as the specific student learning outcomes related to problem solving. This chapter provides specific details of the plan, actions to be implemented, and the timeline of implementation.

ACTIONS TO BE IMPLEMENTED

Analysis of institutional data reveals that most students who leave MHU are transferring to other institutions, rather than failing to make academic progress. **Resolve to Solve** attempts to answer the question "Why remain at MHU?" by focusing on problem-solving as an important, marketable skill that illustrates the value of, and helps draw out the connections among, the experiences that students have during their time at the institution.

As mentioned in the previous chapter, creating a student-centric culture around problem-solving is one of the objectives of the QEP. This will have a positive impact by:

▶ promoting a shared understanding;

▶ providing a common intellectual experience that can become a distinctive hallmark of the MHU;

▶ emphasizing the practical value of a liberal arts education, and student education and identity;

▶ helping students develop a skill that is crucial to making a living and making a life;

▶ targeting a retention "gap" in the second year of matriculation; and

▶ integrating aspects of high-impact practices that increase student engagement.

Specific curricular aspects of the QEP are designed for students to learn and apply problem-solving skills via scaffold learning experiences that are emphasized in first-year, second-year, and upper-level courses. Problem-solving skills will be cultivated in and out of the classroom, in students' academic majors, as well as in general education courses.

After participating in **Resolve to Solve**, students will be able to effectively apply a problem-solving process

▶ to small and large problems,

▶ to practical and theoretical problems,

▶ in personal and professional contexts,

▶ with peers in the same major and peers in different majors,

▶ alone and in collaboration, and

▶ in curricular settings and co-curricular interaction.

Resolve to Solve has three components that, taken as a whole, provide a systematic plan for achieving problem-solving excellence. Two of the components follow best practices by building on first-year and upper-level learning outcomes and academic emphases that are already in place. A third, newly designed component focuses on the second-year experience and is intended to reinforce and extend students' prior learning, thereby closing the "gap" between first-year and upper-level curricular experiences involving application of problem-solving skills. Additionally, this second-year component of the QEP strengthens the connection between problem-solving and the world of work via curricular experiences in the academic disciplines and related professions. The experiences are planned and facilitated by compensated Faculty and Student Fellows who have responsibilities as outlined below in Table 4-1. The table provides additional details for each **Resolve to Solve** component. These actions are supported by the Logic Model (see Appendix I – Logic Model)

Table 4-1. QEP Curriculum Model

Area of Emphasis	Related Activities
▶ **First-Year Emphasis:** ▶ **First Year Seminars 111 and 112**	*First-year experiences will:* ▶ **introduce** students to the SLOs and to the MHU Problem-Solving Model, process, and language ▶ provide students with multiple opportunities to apply the PS process and to consider its value in multiple contexts ▶ be integrated more systematically and consistently
▶ **Second-Year Emphasis:** ▶ **Problem Solving and the World of Work**	*Second-year experiences will:* ▶ **reinforce** the SLOs ▶ focus on problem-solving in the major ▶ create working cohorts and increase community ("sense of belonging") within programs and, ultimately, across the entire campus community ▶ align with the learning outcomes of the Cothran Center for Career Readiness and establish explicit connections to the world of work *Design elements will include:* ▶ 3-5 academic programs or program cohorts per year across five years. Cohort partnerships could be formed between programs with few second-year majors. ▶ compensation for Faculty and Student Fellows ▶ curricular and co-curricular activities *The Faculty Fellow will:* ▶ participate in professional development related to PS ▶ deliver a specified course that typically includes second-year students ▶ emphasize PS as integral element of disciplinary knowledge and skills ▶ explicitly integrate the MHU Problem-Solving Model and language into course delivery ▶ work with and supervise Student Fellow ▶ coordinate department-wide efforts to adopt PS language *The Student Fellow will:* ▶ work with Faculty Fellow and Cothran Center to plan and facilitate 2-4 events per academic year *The events will:* ▶ involve second-year students only ▶ place emphasis on PS as a significant aspect of career success ▶ increase community within the program and beyond

Area of Emphasis	Related Activities
	Event ideas ▶ Solving problems in the discipline (e.g., faculty panel) ▶ Solving problems in career discernment and planning (e.g., continuation of project introduced in FYS 112) ▶ Solving problems to prepare for the workplace (e.g., mock interviews, establishing a professional network, creating effective resumes) ▶ Solving problems in the workplace (e.g., panel of recent graduates who have entered the workforce) ▶ Culminating Celebration across all second-year program participants (e.g., contest, internal "conference" on PS, PS "mystery night" or escape rooms). Planning would provide students with the opportunity to demonstrate their knowledge and application of the PS process.
▶ **Upper-Level Emphasis:** ▶ **General Education Capstone Courses**	▶ Students will have the opportunity to demonstrate problem-solving mastery they have developed in previous QEP experiences. ▶ Problem-solving skill will be explicitly applied in an interdisciplinary, collaborative project that is a signature assignment across all general education capstone courses (Ideas & Innovations: U.S., Ideas & Innovations: World). ▶ *Aspirant goal: The QEP problem-solving process and language will be explicitly integrated into senior seminars within the majors.*

TIMELINE

The following table includes the primary actions associated with the phased implementation of the QEP. The table indicates professional activities that are aligned with entering cohorts of program participants; however, these opportunities will be open to all stakeholders.

Table 4-2. *Resolve to Solve* **Activity Timeline**

	QEP Administration	Implementation	Professional Development & Curricular Revision
Spring 2022	Market **Resolve to Solve** Appoint QEP Director Continue revision of draft Confirm adoption of AAC&U VALUE operational definition of problem solving Confirm adoption of AAC&U VALUE assessment rubric Assemble baseline data from previous FY problem-solving assessment Adopt an E-portfolio system		Implement professional development activities for First Year Seminar instructors Refine/revise problem-solving SLOs for FYS 111 and FYS 112 Revise common problem-solving signature assignment across course sections Assemble repertoire of small-scale problem-solving assignments
Fall 2022	Implement **Resolve to Solve** kick-off activities Continue marketing Confirm first cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Implement problem-solving focus, activities, and assessments in FYS 111 and FYS 112 Continue problem-solving focus, activities, and assessments in general education capstone courses	Implement professional development activities for first cohort of QEP program participants Creation of problem-solving crosswalk to align AAC&U process with other currently used models
Spring 2023	Continue marketing Recruit second cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Implement problem-solving focus, activities, and assessments in FYS 111 and FYS 112 Continue problem-solving focus, activities, and assessments in general education capstone courses	Implement professional development activities for first cohort of QEP program participants

	QEP Administration	Implementation	Professional Development & Curricular Revision
Fall 2023	Continue marketing Confirm second cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Continue problem-solving focus, activities, and assessments in FYS 111, FYS 112, and General Education capstone Implement problem-solving focus and activities in first cohort of participating second-Year programs	Implement professional development activities for second cohort of QEP program participants
Spring 2024	Continue marketing Recruit third cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Continue problem-solving focus, activities, and assessments in FYS 111, FYS 112, and general education capstone Implement problem-solving focus and activities in first cohort of participating second-Year programs	Implement professional development activities for second cohort of QEP program participants
Fall 2024	Continue marketing Confirm third cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Continue problem-solving focus, activities, and assessments in FYS 111, FYS 112, general education capstone, and the first cohort of participating second-year programs Implement problem-solving focus and activities in second cohort of participating second-year programs	Implement professional development activities for third cohort of QEP program participants
Spring 2025	Continue marketing Recruit fourth cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Continue problem-solving focus, activities, and assessments in FYS 111, FYS 112, general education capstone, and the first cohort of participating second-year programs Implement problem-solving focus and activities in second cohort of participating second-year programs	Implement professional development activities for second cohort of QEP program participants

|	QEP Administration	Implementation	Professional Development & Curricular Revision
Fall 2025	Continue marketing Confirm fourth cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Continue previously-implemented problem-solving focus, activities, and assessments Implement problem-solving focus and activities in third cohort of participating second-year programs	Implement professional development activities for fourth cohort of QEP program participants
Spring 2026	Continue marketing Recruit fifth cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Continue previously implemented problem-solving focus, activities, and assessments Implement problem-solving focus and activities in third cohort of participating second-year programs	Implement professional development activities for fourth cohort of QEP program participants
Fall 2026	Continue marketing Confirm fifth cohort of QEP program participants, Faculty Fellows, and Student Fellows Facilitate professional development activities Conduct QEP assessment activities	Continue previously implemented problem-solving focus, activities, and assessments Implement problem-solving focus and activities in fourth cohort of participating second-year programs	Implement professional development activities for fifth cohort of QEP program participants
Spring 2027	Continue marketing Facilitate professional development activities QEP assessment activities Submit Fifth Year QEP Focus Report	Continue previously implemented problem-solving focus, activities, and assessments Implement problem-solving focus and activities in fourth cohort of participating second-year programs	Implement professional development activities for fifth cohort of QEP program participants

CHAPTER 5
ORGANIZATIONAL STRUCTURE

The QEP will be implemented by a QEP Director. The QEP Director will be a member of the faculty, appointed by the Provost. The QEP Director is responsible for conducting professional development activities relevant to the QEP, leading QEP program-level assessment, collecting and compiling data generated through course-level and co-curricular assessment, and preparing an annual report of QEP activities and outcomes. The QEP Director will report regularly to the Provost, and to any other individual or group that the Provost designates, regarding the implementation and assessment of the QEP. The QEP Director will also have the primary responsibility for preparing the QEP Fifth Year Interim Report.

The QEP Director will be advised and assisted by a QEP Steering Committee. This body need not be made of those individuals that served on the Steering Committee that developed the QEP, but its purpose is the same: to ensure that the perspectives and concerns of stakeholders in the QEP implementation process are incorporated into the ongoing operation of the QEP. The Provost, the Athletic Director, and the Vice President for Student Life must each appoint one, and may each appoint up to three, members of their respective departments to serve on the QEP Steering Committee. An appointee will serve on the QEP Steering Committee until choosing to resign from the Committee, her or his employment with the University comes to an end, or her or his appointer removes her or him from the committee.

Figure 5-1. University Administrative Structure (illustrating QEP alignment)
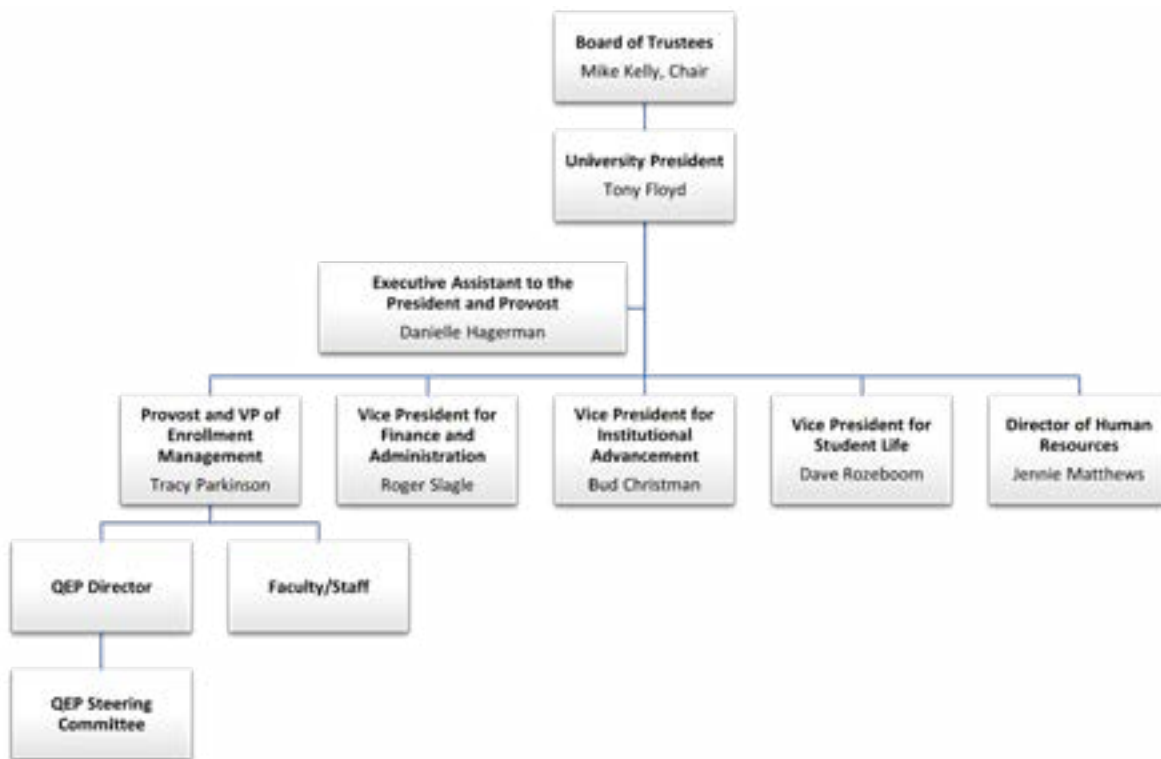
CHAPTER 6
BUDGET

The QEP **Resolve to Solve** is a major initiative and priority for Mars Hill University. The Steering Committee developed the budget for the QEP and relegated organizational structure and budget initiatives of the plan to a subcommittee created for that purpose. The institution is committed to providing adequate, reasonable resources for the QEP initiative. The initial budget funds implementation of the QEP; adjustments will be necessary as the plan is implemented. The QEP Director will oversee the budget with assistance from the Steering Committee and the Subcommittee for Organizational Structure and Budget.

DEVELOPMENT OF RESOURCES

Given the estimates of the QEP Steering Committee and the QEP Subcommittee for Organizational Structure and Budget, Table 6.1 shows the anticipated budget for the developmental year of **Resolve to Solve** 2021-2022. The developmental year is the 2021-2022 academic year, with the launch of the QEP occurring in Fall 2022.

The resources will be implemented through the following means:

▶ Development and marketing of the QEP, with subsequent naming and logo campaigns through focus groups and classes, to ask for preferences

▶ Use of Mars Hill University problem-solving process and the AAU&C Rubric as the assessment tool for **Resolve to Solve** in the classroom assignments

▶ Maintenance of information on the QEP, the QEP process, and the implementation of same on the appropriate MHU webpage for dissemination

▶ Creation of visuals for the representation of **Resolve to Solve** to university constituencies

▶ Request for, and dissemination of, information on the development process and topic selection of the QEP in faculty/staff meetings concerning the **Resolve to Solve** upcoming activities

COMMITMENT OF RESOURCES

Mars Hill University's commitment of resources for **Resolve to Solve** is reflected in the components noted on the QEP Activity Timeline noted in Chapter 4. The items in Table 6.1 are the anticipated costs of the launch of QEP during the 2021-2022 and 2022-2023 academic years.

The QEP budget was developed by the QEP Subcommittee for Organizational Structure and Budget through examining the scope and nature of the program as well as examining QEP plans from similar institutions. The budget encompasses the full period required from planning to full implementation across the university and traditional undergraduate student body. The subcommittee identified relevant costs and resources (presented in Table 6-1 below) in developing the budget and increases as the program is grown and implemented across campus.

Some resources and costs, such as the QEP Director, marketing, and professional development are scalable and can be spread over the program across the development and growth period from Year 0 to Year 5. As the program is fully implemented over the five-year period, some cost and resources required, such as Student Fellows and the E-portfolio platform are variable and will need to increase to support a growing number of departments and students in the program. The number of Student Fellows as well as the E-portfolio platform subscriptions are grown to support a growing number of students enrolled in the program. The program costs expand to ensure that adequate but reasonable resources allocated to support the program.

The QEP budget presented in Table 6-1 is an initial estimate that will be reviewed and assessed during each fiscal year budget cycle.

Table 6-1. QEP Budget

	2021-22 Year 0	2022-23 Year 1	2023-24 Year 2	2024-25 Year 3	2025-26 Year 4	2026-27 Year 5	Cumulative Implemented Cost
Students Involved (est)	345	586	802	1,018	1,043	1,053	
Number of Faculty Fellows	2	6	6	6	6	6	
Number of Student Fellows		6	12	18	24	24	
QEP Director	1,347	2,691	2,691	2,691	2,691	2,691	14,803
Faculty Fellows	2,153	12,918	12,918	12,918	12,918	12,918	66,743
Student Fellows	-	6,459	12,918	19,377	25,836	25,836	90,426
E-Portfolio Subscriptions	4,300	5,860	8,020	10,180	10,430	10,530	49,320
Marketing and Advertisement*	2,600	2,580	1,780	3,380	1,780	1,780	13,900
Professional Development	1,000	1,250	750	500	500	500	4,500
Assessment Workshop Materials	1,000	120	120	120	120	120	1,600
Contingencies	600	600					1,200
Total^	$13,000	$33,4788	$39,197	$49,166	$54,275	$54,375	$242,492

*Breakdown of Marketing Assumption

	2021-22 Year 0	2022-23 Year 1	2023-24 Year 2	2024-25 Year 3	2025-26 Year 4	2026-27 Year 5	Cumulative Implemented Cost
Logo	200						200
Light Pole Flags	600				600		1,200
Building Logos	1,000				1,000		2,000
Mini Rubik's Cube Key-chains			2,180	1,380	1,380	1,380	6,320
Printing	800		400	400	400	400	2,400
Total Marketing & Adv.	$2,600		$2,580	$1,780	$3,380	$1,780	$12,120

^In Fiscal Year 2021, there was a small expense for meeting refreshments in the amount of $115.68.

CHAPTER 7
ASSESSMENT

ASSESSMENT PLAN

As indicated on the Logic Model, assessment is a critical component of the MHU QEP (see Appendix I – Logic Model). Assessment of in-class instruments will employ a two-pronged approach—course-level assessment and program-level assessment. Participating courses will assess problem solving each year using assignments that align with the MHU Problem-Solving Model. To the extent possible, different sections of the same course will use common assignments for assessment purposes. Course-level assessment for SLOs 1 and 2 will follow standard MHU assessment procedure and will be used to measure the success of student learning in problem-solving for each academic year. The instrument used to assess SLOs 1 and 2 will be the AAC&U VALUE Rubric for Problem Solving (see Appendix J). SLO 1 will be assessed by determining if student work products accurately reflect the process and terminology set out in the rubric as outlined in by the MHU Problem-Solving Model Template (see Appendix K). The MHU Problem-Solving Model Template will be used to guide the design of assignments. In the early stages, the template allows instructors to design and assess assignments that provide students with the support they need to learn

the steps of the MHU Problem-Solving Model. Following the first year, achievement of SLO 1 will be required to complete assignments for SLO 2. Therefore, template support will fade as students matriculate and develop their ability to apply the process.

SLO 2 will be assessed by applying the rubric criteria to student work products to measure their mastery of the components of the problem-solving process as defined by the rubric. If results fall short of student learning targets, course instructors will work with the QEP Director to develop modifications to problem-solving instruction and/or corresponding assignments for the following academic year. As an indirect measure and support of SLO 1 and SLO 2, this plan will use a Likert Scale student perception survey entitled The MHU QEP Problem-Solving Survey (see Appendix L). Students will need to mark moderately confident or higher on questions 1-6 to indicate confidence in applying the steps of problem-solving in multiple contexts.

Program-level curricular assessment will focus on the assessment of SLO 3 with attention given to the degree to which students' success in meeting SLOs 1 and 2 does or does not contribute to their perceptions of the value of problem solving as a valuable skill. These assessments will employ both student reflections and a Likert Scale student perception survey entitled the MHU QEP Problem-Solving Survey (see Appendix L) to evaluate perceptions regarding the value and understanding of the MHU Problem-Solving Model. On the surveys, students will need to describe the MHU problem-solving process as valuable by marking moderately confident or higher on questions 7-10.

Problem-solving has been assessed for our students in First Year Seminar 1 (FYS 111). Table 7.1

provides the FYS assessment results from Fall 2019–Spring 2021. A random sample of student work products from across all sections of the course were assessed using the Problem-Solving AAC&U VALUE Rubric, with a target of 70% to meet or exceed benchmark 1 on the rubric (see Appendix K for standards of performance). The data say that across all six categories of the AAC&U

Problem Solving VALUE Rubric students achieved the benchmark level of 1. The mean score for each category is indicated below the category title. The greatest degree of competency among categories is in "Identifying Strategies" (avg. 1.99) and the lowest is in "Evaluate Potential Solution" (avg. 1.56).

Table 7-1. Assessment Results FYS 111

	Define Problem	Identify Strategies	Propose Solutions / Hypotheses	Evaluate Potential Solutions	Implement Solutions	Evaluate Outcomes	AVERAGE	% scoring 1 or more
FA19-SP21	1.52	1.63	1.65	1.19	1.73	1.64	1.56	89.19%
FA20-SP21	1.99	2.35	2.11	1.93	2.07	1.96	2.07	93.33%
AVERAGE	1.76	1.99	1.88	1.56	1.90	1.80	1.81	91.26%

The data indicate that our students did well on this particular assignment. The QEP is intended to improve alignment between the assignment and the steps of the problem-solving process, students were not taught the problem-solving process with the level of explicit instruction that will be expected in the QEP. Therefore, while this assessment instrument provides informative baseline information, the QEP approach will be designed to teach and measure a more in-depth understanding and application of a structured process for problem solving.

Under the QEP model FYS students will be given explicit instruction around the MHU Problem-Solving Model. The FYS assignment will be revised to reflect and assess all specific steps of the MHU QEP Problem-Solving Model. This revised assignment sets higher demands on students and their understanding and application of the Problem-Solving Model. It will require students to address each step of the process in greater depth. The

entire teaching and learning process, therefore, will be more rigorous and students must demonstrate a higher degree of learning. Given that the QEP will be a more formalized process, additional training will be provided to ensure that assessment of student work products will more accurately reflect the criteria of the AAC&U VALUE rubric.

In establishing the QEP benchmarks, the committee understood that a solid foundation of the Problem-Solving Model is required for more sophisticated application. Given this information, the QEP benchmarks were established as reflected in Table 7.2. The QEP targets, while taking into consideration the baseline data, reflect realistic benchmark percentages based upon the revisions that will be made to the teaching and learning experience. If we find that students are exceeding the targets early in the QEP assessment process (via formative assessment), we will adjust our benchmarks accordingly.

To facilitate the tasks as outlined, the university will adopt an E-portfolio system (to be determined) for QEP program participants. This system will allow students to upload designated problem-solving assignments/reflections and electronic versions of the MHU QEP Problem-Solving Survey to a personal repository that can be used to assess students' development as problem-solvers through time. As formative checks at the course-level it will allow individual instructors to give immediate feedback/suggestions followed by providing summative data at the end of each course. The system will also provide program-level assessment, which would be primarily summative in nature but allow the university to employ formative data-based programming (as described below) to ensure that future students meet or exceed expectations.

The QEP Director and the program assessment team (consisting of instructors that teach classes connected to the QEP) would review the portfolios from a sample to find patterns and themes in student performance and perceptions over time. This process would be primarily qualitative in nature and serve as a complement to the more quantitative analysis conducted through course-level assessment. While the results of course-level assessment would be compiled to give an overview of the success of the QEP, program-level assessment can provide a more holistic view of the program and allow the university to connect some of the proverbial dots that are unlikely to survive the aggregation of student performance data. This process would take place in the spring semester of each academic year. This will ensure that our sample can always include students entering their second semester.

Table 7-2. Assessment of In-Class Instruments

Course/Program	Assessment Method	Target
FYS 111	SLO 1: Assessed using the MHU PSM template (see Appendix) integrated into a common assignment developed for this purpose. Performance evaluated by degree to which response displays accurate knowledge and understanding of problem-solving process contained in AAC&U VALUE Rubric.	At least 70% of students will display an accurate knowledge of the MHU problem-solving process.
	SLO 2: Assessed using "Problem Solving Grid" exercise already in use. Performance evaluated using AAC&U VALUE Rubric for problem solving.	At least 70% of students will receive a score of 1 for each element evaluated using the AAC&U Problem Solving VALUE Rubric
	SLO 3: Assessed by common assignment developed for this purpose. Evaluated on the basis of whether or not the student did reflect on the value of the MHU problem-solving process, but content of that reflection used for program assessment of QEP's impact on student learning.	At least 60% of students will describe the MHU problem-solving process as valuable as measured by student reflection and a Likert survey.
FYS 112	SLO 1: Assessed using the MHU PSM template (see Appendix) integrated into a common assignment developed for use with SLO 2. Performance evaluated by degree to which response displays accurate knowledge and understanding of problem-solving process contained in AAC&U VALUE Rubric.	At least 80% of students will display an accurate knowledge of the MHU problem-solving process.
	SLO 2: Assessed by common assignment developed for this purpose. Performance evaluated using AAC&U VALUE Rubric for problem solving.	At least 75% of students will receive a score of 1 for each element evaluated using the AAC&U Problem Solving VALUE Rubric
	SLO 3: Assessed by common assignment developed for this purpose. Evaluated on the basis of whether or not the student did reflect on the value of the MHU problem-solving process, but content of that reflection used for program assessment of QEP's impact on student learning.	At least 65% of students will describe the MHU problem-solving process as valuable as measured by student reflection and a Likert survey.

Course/Program	Assessment Method	Target
Major Courses (targeted to reach second-year students)	SLO 1: Assessed using course assignment developed for use with SLO 2. Performance evaluated by degree to which response displays accurate knowledge and understanding of problem-solving process contained in AAC&U VALUE Rubric.	At least 75% of students will display an accurate knowledge of the MHU problem-solving process.
	SLO 2: Assessed by course assignment developed for this purpose. Performance evaluated using AAC&U VALUE Rubric for problem solving.	At least 70% of students will receive a score of 2 for each element evaluated using the AAC&U Problem Solving VALUE Rubric
	SLO 3: Assessed by common assignment developed for this purpose. Evaluated on the basis of whether or not the student did reflect on the value of the MHU problem-solving process, but content of that reflection used for program assessment of QEP's impact on student learning.	At least 70% of students will describe the MHU problem-solving process as valuable as measured by student reflection and a Likert survey.
I&I Courses (targeted to reach third- and fourth-year students)	SLO 1: Assessed using existing CAPS assignment used with SLO 2. Performance evaluated by degree to which response displays accurate knowledge and understanding of problem-solving process contained in AAC&U VALUE Rubric.	At least 80% of students will display an accurate knowledge of the MHU problem-solving process.
	SLO 2: Assessed using existing CAPS assignment. Performance evaluated using AAC&U VALUE Rubric for problem solving.	At least 70% of students will receive a score of 3 for each element evaluated using the AAC&U Problem Solving VALUE Rubric
	SLO 3: Assessed by common assignment developed for this purpose. Evaluated on the basis of whether or not the student did reflect on the value of the MHU problem-solving process, but content of that reflection used for program assessment of QEP's impact on student learning.	At least 75% of students will describe the MHU problem-solving process as valuable as measured by student reflection a Likert survey.

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APPENDICES

APPENDIX A

Membership of Executive Committee, Steering Committee, and Steering Committee Subcommittees

Name	Position
Dr. John Omachonu	Provost
Dr. Audrey Martin-McCoy	Director of Institutional Effectiveness and Assessment
Dr. Kim Reigle	Interim Director of Institutional Research
Dr. Marc Mullinax	Faculty Chair AY 2017/18 – 2019/20, Professor of Religion and Philosophy
Dr. Grainger Caudle	Senior Director of Planning and Strategy
Dr. Dave Rozeboom	Vice President of Student Life

*Dr. Tracy Parkinson became Provost in 2020. At that point, the Executive Committee was integrated into the Reaffirmation Leadership Team (RLT). The RLT received regular reports from the Steering Committee (below).

QEP Steering Committee:

Name	Position
Prof. Cathy Adkins, co-chair	Professor of Music; Executive Director of General Education
Ms. Marie Nicholson, co-chair	Registrar
Dr. Jonathan Rose, convener	Assistant Professor of Political Science; Coordinator, First Year Seminar II (FYS 112)
Mr. Ryan Bell	Director of First Year Academic Success and Advising; Instructor of General Studies; Coordinator, First Year Seminar I (FYS 111) (Joined SC AY 2020-2021, following departure of Kevin Trudell)
Dr. Chris Cain	Professor of Education; Director, Center for Engaged Teaching & Learning
Dr. Lucia Carter	Professor of History
Mr. John Chastain	Director of Donor Relations
Ms. Shannon Coleman	Associate Director of First Year Experience-Residence Life (left MHU May 2020; replaced by Kevin Trudell)
Ms. Samantha Fender	Senior Director of Marketing and Communications
Dr. Craig Goforth	Chair and Associate Professor of Criminal Justice
Dr. Amanda Knapp	Associate Professor of Chemistry; Chair of the Faculty AY 2020/21 – 2022/23
Ms. Carolyn Kuzell	Associate Director of Admissions
Mr. Jonathan McCoy	Director of Diversity, Equity, and Inclusion; Instructor of History
Ms. Andrea Owenby	Controller, Office of Finance and Administration (left MHU November 2021)

Name	Position
Dr. Scott Pearson	Dean, Division of Math and Sciences; Professor of Biology (retired, end AY 2019-2020)
Ms. Monica Gordy Polizzi	Assistant Director of Athletics
Dr. Kim Reigle	Associate Professor of English; Interim Director of Institutional Research; Coordinator, Interdisciplinary Studies Program
Mr. Roger Slagle	VP for Finance and Administration (served as needed, after taking the VP position in 2021)
Mr. Neil Tilley	Chief Financial Officer (left MHU January 2021)
Mr. Kevin Trudell	Assistant Director of Housing and Operations (left MHU during AY 2020-2021)

*QEP Steering Committee Subcommittees: **

Subcommittee	Members
Research	Cathy Adkins, Jonathan McCoy, Lucia Carter, Shannon Coleman, Monica Polizzi
Data Collection	Scott Pearson, Carolyn Kuzell, Chris Cain, Jonathan Rose, Monica Polizzi, Lucia Carter
Marketing	Samantha Fender, Monica Polizzi, Shannon Coleman, Carolyn Kuzell, Craig Goforth, Marie Nicholson
Budget	Neil Tilley (until January 2021), Craig Goforth, Marie Nicholson, John Chastain, Roger Slagle (AY 2021-2022)

•The above reflects original membership of the subcommittees, operating during Phases I and II of the QEP development process. During Phases III and IV, as well as during the report-writing period, members of the Steering Committee moved across subcommittees as needed.

APPENDIX B

MHU 2017-2022 Strategic Plan

STRATEGIC PLAN 2017-2022

I. ENROLLMENT FOR SUCCESS

MHU will grow as an institution by focusing retention efforts on current students, recruitment and marketing efforts on prospective students, and financial aid efforts on all students.

Goal 1: Increase retention and degree completion by providing adequate and diverse academic support resources and student life facilities that meet the needs of students. (See also 11.2, 111.1, 111.1)

► Coordinate and improve current tutoring, study hall, and other academic support programs for traditional students and for AGS across all sites.

► Focus resources to develop and implement support structures and programming for groups of students with the lowest retention rates.

► Enhance support for the Office of Disability Services by implementing a university-wide testing center.

► Prioritize the plan for a student center and other facilities that have a significant impact on the student experience, beginning with Wren Student Center and Chambers athletic facilities.

Goal 2: Strengthen institutional processes in order to provide necessary financial aid.

► Continue to improve the current financial aid model by annually increasing academic aid for incoming students to make competitive offers.

► Communicate cost of attendance information to allow students to plan for financial increases.

► Increase departmental, program, and other scholarships for continuing students.

► Make outside scholarship resources easily available through the implementation of a comprehensive source database.

Goal 3: Focus recruitment efforts on students who can thrive academically and socially at Mars Hill University. (See also IV.2)

► Focus marketing to highlight quality faculty, strong academic programs, liberal arts curriculum, and successful alumni.

► Increase collaboration between traditional student and AGS recruitment, including marketing and print materials.

► Involve faculty from high-demand programs in recruitment efforts.

► Develop a predictive model based on data and use it to guide recruitment efforts, goals, and targets for programs and teams.

II. QUALITY ACADEMIC ENVIRONMENT

MHU will strive to improve and enhance the current academic programs and seek opportunities to move into new and innovative academic arenas that better serve our students, the region, and the changing landscape of higher education.

Goal 1: Strengthen our commitment to liberal arts education and career development for the 21st century.

► Assess the sustainability, effectiveness, and efficiencies of our current academic programming to better position MHU as the preeminent, private liberal arts university in western North Carolina.

► Position AGS as a campus and regional incubator for innovative educational models, thus promoting the value of AGS and the university.

► Create and maintain a Teaching and Learning Center.

► Implement a fully integrated, comprehensive career development model to help students transition from university engagement to employability.

Goal 2: Develop and increase effective and proven academic support services to ensure students' academic success. (See also 1.1)

► Enhance existing and create new academic support services that retain students.

► Create the mission, purpose, and goals for a university-wide academic tutoring center.

- Increase support for students, faculty, and staff with disabilities and those across campus who serve individuals with disabilities.

Goal 3: Strengthen our commitment to quality academic programs-undergraduate and graduate. (See also IV.1)

- Develop budget planning processes to sustain academic excellence.
- Support newly developed and existing academic programs.

Goal 4: Establish new and strengthen existing programs and partnerships that engage students in the community, the region, and the world. (See also 111.2)

- Establish the expectation that MHU students will engage in a semester abroad or travel abroad experience.
- Integrate the various curricular, co-curricular, and interdisciplinary programs.
- Develop partnerships that support all university offerings.

III. ENGAGING STUDENT EXPERIENCE

Students will experience an ongoing sense of welcome throughout their careers at MHU by increasing opportunities for connections with campus resources and engaged involvement.

Goal 1: Improve sense of student ownership of their respective experiences at MHU. (See also 1.1)

- Encourage the development of a 21st century, web-based, student-led journalism platform.
- Offer opportunities for students to ask questions and receive public answers, such as an "Ask Administration" venue.
- Reinvigorate the AGS Student Advisory Council and have representation from AGS serve on SGA.

Goal 2: Increase opportunities for interaction between students and faculty/staff outside of classrooms and offices. (See also 11.4)

- Develop a variety of ways for students to interact with faculty/staff outside classrooms and offices.

- Offer staff and faculty mixer events tied to existing campus events such as Move in Day and Homecoming Week.

Goal 3: Develop co-curricular programs that are supportive of specific student populations.

- Develop co-curricular objectives and programing for each class year (first year, sophomore, junior, senior).
- Implement a standing AGS orientation and open house.
- Assess the student body to identify populations that are marginalized, underrepresented in higher education in general, and/or less likely to persist and graduate at MHU.
- Develop and implement programs and resources for those identified populations to be provided from visitation through to graduation

Goal 4: Expand student activities offerings. (See also 1.1)

- Expand club sports and intramural programs.
- Enhance use of the Outdoor Center.
- Establish an on-campus pool of vehicles to transport students to service sites, off-campus events, conferences, and retreats.
- Establish an annual calendar of AGS-specific community-building events such as retreats, family picnics, and a lecture series.

Goal 5: Enhance the quality of the MHU experience for student athletes.

- Increase coordination and cooperation between faculty and athletic staff/coaches for the purpose of enhancing retention and graduation rates of student-athletes.
- Develop and implement a comprehensive plan to address deficiencies in athletic facilities and to bring team budgets and scholarships up to par with the conference average.
- Strengthen the existing Life Skills Program to assist personal development of student athletes.

IV: EXPANDING AND ENHANCING RESOURCES

The MHU alumni office, advancement office, administrative offices, and Board of Trustees will work to increase the resources available for strengthening existing programs, establishing new ones, and maintaining and improving the campus infrastructure and facilities.

Goal 1: Broaden and strengthen financial resources. (See also 11.3, V.1)

▶ Actively seek new funding sources.

▶ Keep endowment growth a major priority.

Goal 2: Use strategic: marketing and communication to promote strengths of Mars Hill University. (See also 1.3, V.4)

▶ Define primary, secondary, and tertiary markets for traditional and AGS student recruitment.

▶ Optimize key marketing and communication tools: website, print, advertising, social media, digital message centers, and recruitment efforts.

▶ Define and promote the Mars Hill University brand.

Goal 3: Create a campus that is conducive to learning and living by ensuring technology and infrastructure meet the needs of the university. (See also V.2)

▶ Develop and implement a multi-year plan to ensure that the university is keeping pace with changing technology for instruction, resource management, and planning.

▶ Develop and communicate a multi-year facilities plan to rehabilitate existing buildings and athletic facilities that will meet needs of the future.

V. VALUING OUR FACULTY AND STAFF

MHU will strengthen employee morale by valuing faculty and staff through improved work environments, compensation, and benefits.

Goal 1: Improve compensation and benefits for faculty and staff. (See also IV.1)

▶ Increase employee salaries by implementing a plan proposed by the Budget Advisory Committee.

▶ Review and align employment policies and benefits.

▶ Design professional development opportunities and institute yearly evaluations for staff.

▶ Recognize, in diverse venues, the professional achievements of individuals and departments as well as commitment to the institution.

Goal 2: Improve work environment and processes. (See also IV. 3)

▶ Improve efficiency for accessing and managing resources at the department/office level.

▶ Ensure that employees have working equipment and sufficient supplies to complete job tasks efficiently.

▶ Provide and maintain a safe and healthy work environment for faculty and staff.

Goal 3: Increase communication among all levels of employees.

▶ Strengthen the Staff Personnel Committee and have it report to a member of the President's Leadership team.

▶ Share updated information and events online and through venues where all staff and faculty have access.

Goal 4: Recruit Diverse Faculty and Staff. (See also IV.2)

▶ Strengthen MHU visibility through advertising and networking to increase the applications, interviews, and hires of diverse faculty and staff.

▶ Retool the search process to increase opportunities to hire diverse faculty and staff.

High-Impact Educational Practices

★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★ ★

First-Year Seminars and Experiences

Many schools now build into the curriculum first-year seminars or other programs that bring small groups of students together with faculty or staff on a regular basis. The highest-quality first-year experiences place a strong emphasis on critical inquiry, frequent writing, information literacy, collaborative learning, and other skills that develop students' intellectual and practical competencies. First-year seminars can also involve students with cutting-edge questions in scholarship and with faculty members' own research.

Common Intellectual Experiences

The older idea of a "core" curriculum has evolved into a variety of modern forms, such as a set of required common courses or a vertically organized general education program that includes advanced integrative studies and/or required participation in a learning community (see below). These programs often combine broad themes—e.g., technology and society, global interdependence—with a variety of curricular and cocurricular options for students.

Learning Communities

The key goals for learning communities are to encourage integration of learning across courses and to involve students with "big questions" that matter beyond the classroom. Students take two or more linked courses as a group and work closely with one another and with their professors. Many learning communities explore a common topic and/or common readings through the lenses of different disciplines. Some deliberately link "liberal arts" and "professional courses"; others feature service learning.

Writing-Intensive Courses

These courses emphasize writing at all levels of instruction and across the curriculum, including final-year projects. Students are encouraged to produce and revise various forms of writing for different audiences in different disciplines. The effectiveness of this repeated practice "across the curriculum" has led to parallel efforts in such areas as quantitative reasoning, oral communication, information literacy, and, on some campuses, ethical inquiry.

Collaborative Assignments and Projects

Collaborative learning combines two key goals: learning to work and solve problems in the company of others, and sharpening one's own understanding by listening seriously to the insights of others, especially those with different backgrounds and life experiences. Approaches range from study groups within a course, to team-based assignments and writing, to cooperative projects and research.

Undergraduate Research

Many colleges and universities are now providing research experiences for students in all disciplines. Undergraduate research, however, has been most prominently used in science disciplines. With strong support from the National Science Foundation and the research community, scientists are reshaping their courses to connect key concepts and questions with students' early and active involvement in systematic investigation and research. The goal is to involve students with actively contested questions, empirical observation, cutting-edge technologies, and the sense of excitement that comes from working to answer important questions.

Diversity/Global Learning

Many colleges and universities now emphasize courses and programs that help students explore cultures, life experiences, and worldviews different from their own. These studies—which may address U.S. diversity, world cultures, or both—often explore "difficult differences" such as racial, ethnic, and gender inequality, or continuing struggles around the globe for human rights, freedom, and power. Frequently, intercultural studies are augmented by experiential learning in the community and/or by study abroad.

ePortfolios

ePortfolios are the latest addition to AAC&U's list of high-impact educational practices, and higher education has developed a range of ways to implement them for teaching and learning, programmatic assessment, and career development. ePortfolios enable students to electronically collect their work over time, reflect upon their personal and academic growth, and then share selected items with others, such as professors, advisors, and potential employers. Because collection over time is a key element of the ePortfolio process, employing ePortfolios in collaboration with other high-impact practices provides opportunities for students to make connections between various educational experiences.

Service Learning, Community-Based Learning

In these programs, field-based "experiential learning" with community partners is an instructional strategy—and often a required part of the course. The idea is to give students direct experience with issues they are studying in the curriculum and with ongoing efforts to analyze and solve problems in the community. A key element in these programs is the opportunity students have to both *apply* what they are learning in real-world settings and *reflect* in a classroom setting on their service experiences. These programs model the idea that giving something back to the community is an important college outcome, and that working with community partners is good preparation for citizenship, work, and life.

Internships

Internships are another increasingly common form of experiential learning. The idea is to provide students with direct experience in a work setting—usually related to their career interests—and to give them the benefit of supervision and coaching from professionals in the field. If the internship is taken for course credit, students complete a project or paper that is approved by a faculty member.

Capstone Courses and Projects

Whether they're called "senior capstones" or some other name, these culminating experiences require students nearing the end of their college years to create a project of some sort that integrates and applies what they've learned. The project might be a research paper, a performance, a portfolio of "best work," or an exhibit of artwork. Capstones are offered both in departmental programs and, increasingly, in general education as well.

LEAP

High-Impact Practices: Eight Key Elements and Examples

Performance expectations set at appropriately high levels

Example: A writing- or inquiry-intensive first-year seminar in which assignments, projects, and activities—such as multiple short papers, problem sets, or projects—challenge students to achieve beyond their current ability levels as judged by criteria calibrated to students' precollege accomplishment evidenced by placement tests or ACT or SAT scores.

Significant investment of time and effort by students over an extended period of time

Example: A multiple-part class assignment on which a student works over the course of the academic term—beginning with a synopsis of the problem or issue to be examined and the methods or procedures that will be used; followed subsequently with narrative sections describing the methods, findings, and conclusions which together culminate in a completed paper; concluding with demonstration or performance evaluated by an independent third party or faculty supervisor.

Interactions with faculty and peers about substantive matters

Example: Out-of-class activities in which students in a learning community or first-year seminar come together at least once weekly to attend an enrichment event—such as a lecture by a visiting dignitary and/or a discussion of common readings and assignments facilitated by an upper-division peer mentor.

Experiences with diversity, wherein students are exposed to and must contend with people and circumstances that differ from those with which students are familiar

Example: A service-learning field assignment wherein students work in a setting populated by people from different backgrounds and demographics, such as an assisted living facility or shelter for abused children, which is coupled with class discussions and journaling about the connections between class readings and the field assignment experience.

Frequent, timely, and constructive feedback

Example: A student–faculty research project during which students meet with and receive suggestions from the supervising faculty (or staff) member at various points to discuss progress, next steps, and problems encountered and to review the quality of students' contributions up to and through the completion of the project.

Periodic, structured opportunities to reflect and integrate learning

Example: Linked courses in a learning community wherein an instructor of one course designs assignments that require students to draw on material covered in one or more of the other linked courses, supplemented by a peer preceptor who coordinates student attendance and discussion at relevant campus events, or a capstone course in which students submit a portfolio and explain the relative contributions of the artifacts contained therein that represent the knowledge and proficiencies attained at various points during their program of study.

Opportunities to discover relevance of learning through real-world applications

Example: An internship, practicum, or field placement that requires that students apply the knowledge and skills acquired during their program of study, or supervisor-mediated discussions among student workers that encourage students to reflect on and see the connections between their studies and experiences in the work setting.

Public demonstration of competence

Example: An oral presentation to classmates of the required capstone seminar product that is evaluated by a faculty member and/or an accomplished practitioner, or a narrative evaluation of an internship, practicum, or field placement by the work setting supervisor and/or supervising faculty or staff member.

APPENDIX D- Post Forum Survey

Survey following Faculty/Staff presentation of Feb. 25, 2021)

Quality Enhancement Plan (QEP) Post-Forum Survey

On February 2021, the QEP Steering Committee held a Faculty/Staff Forum via Zoom. Our presentation included an update on the QEP development process, but focused primarily on the presentation of our two broad ideas as a focus for the QEP: Learning Communities and Problem-Solving.

Following the presentation, all current faculty and staff were invited to complete an online survey. Access to a summary Fact Sheet was also provided. The first question attempted to ensure that respondents had enough information from the presentation to provide usable input. Responses to this first question and summary reports for the other questions (forty-six respondents; response rate less than 30%) are provided below.

1. Did you attend the QEP Faculty/Staff forum on Feb. 25?
     a. yes (*n* = 39)
     b. no (*n* = 6)
     c. no, but I watched the recorded Zoom meeting (*n* = 1)

QEP Idea #1: Learning Communities

Operational definition: a small group of students who share common academic goals and work collaboratively in the classroom(s) with each other and with one or more instructors.

2. How likely do you think this idea is to improve graduation and retention rates? [1-5 scale, 1= Not at all 5= A great deal]
3. How do you think this idea would work in your department or program?
4. What do you think the pros and cons of this idea are?

Summary report: Although 41 respondents affirmed the Learning Communities idea (3-5 on the Likert scale), comments typically focused on what programs were already doing, rather than on changes that could be made or programmatic ideas that could be generalized across learning experiences. Several faculty/staff mentioned that learning communities already exist <u>within some majors</u>; however, they were concerned about adding an additional layer to student interaction. Others did not see how the idea could work in their programs. The survey did, however, include some concrete suggestions that the Steering Committee considered as they continued to develop the QEP:

- *paired classes*
- *increased number of experiential in-class activities*
- *Increased use of small-group work in classes*
- *connections across classes*
- *focus on General Education experiences*

Most commonly-mentioned benefits:

- *building community and sense of MHU identity*
- *making meaningful connections*
- *opportunities for collaboration*

Most commonly-mentioned concerns, other than those mentioned above:

- *logistical issues such as scheduling and implementation*
- *doing it "right" in terms of time, attention, resources, labor, forethought, buy-in, assessment*

QEP Idea #2: Problem-Solving

Operational definition: Project-based learning that emphasizes rigorous, active, and systematic application of the <u>process</u> of solving problems.

5. How likely do you think this idea is to improve graduation and retention rates? [1-5 scale, 1= Not at all 5= A great deal]
6. How do you think this idea would work in your department or program?
7. What do you think the pros and cons of this idea are?

Summary report: Fewer respondents affirmed the Problem-Solving idea (n=29, 3-5 on the Likert scale); however, the comments were consistently more concrete and focused on the viability of the idea. More specifically, respondents indicated that:

- *problem-solving is already a big part of our curriculum and, therefore, provides the opportunity to make it a more systematic part of all student experiences*
- *problem-solving skill applicable to both professional and personal lives*

Most commonly-mentioned benefits, in addition to those above:

- *easier to implement*
- *intentional development of important real-world skills and life-long learning*
- *potential for problem-based learning and collaboration*
- *opportunities for applying theory to practice, within both General Education and the major*

Most commonly-mentioned concerns, other than those mentioned above:

- *making sure there is something "new" in the QEP, beyond what we are already doing*
- *providing appropriate quantity and quality of professional development activities*

8. Do you have any other questions, concerns, or comments about either of these ideas?

Summary report: There were few responses to this question. Most of the questions, concerns, or comments aligned with the benefits and concerns outlined above. The other few responses were not useful in moving the QEP process forward (e.g., "I don't like either idea"; thanking the Steering Committee for its work, etc.).

APPENDIX E

QEP Development Process: Phase III Fact Sheet

Quality Enhancement Plan (QEP)

Fact Sheet summarizing the Faculty/Staff Forum presentation on Feb. 25, 2021

The QEP describes a carefully designed course of action that is intended to enhance student learning and/or the environment that supports student learning.

We Need YOU!

Faculty, Staff, Students, Administration, Trustees, Advisors, Alumnae, Community Partners, and all others who care about MHU: Ultimately, we ALL will be engaged in the QEP development process and will need to understand the Quality Enhancement Plan.

The PROCESS

Choice of broad goal:
✦ Fall, 2019: Survey administered to MHU community (student responses=264; non-student responses=173)
✦ Based upon survey responses, **our broad QEP GOAL: Increase Graduation by Raising Rates of Retention & Degree Completion**

Steering Committee:
✦ *What are best practices & current trends for retention?* Review of research and literature
✦ *Who leaves MHU, when do they leave, and (perhaps) why do they leave?* Collection & analysis of data:
✦ *What do we want a MHU graduate to know and be able to do?* Examination of MHU Mission, Strategic Plan, Core Values, Skills, and Dispositions

Results:
✦ Improving student quality of life and learning should be a systematic effort.
✦ Strategies already in place serve as a useful foundation.
✦ We lose most students early in their academic career (67% after 1st or 2nd semester, 25% after 3rd or 4th semester).
✦ The majority of students who leave <u>are</u> making academic progress.
✦ Examples of desired skills: MHU graduates can think critically & creatively, solve problems effectively, read for comprehension, write & speak effectively, demonstrate effective interpersonal interaction.
✦ Examples of desired dispositions: MHU graduates are responsible & resilient; can persevere for sustained periods of time; have emotional intelligence; can make connections; are committed to community; embrace diversity, inclusivity, and equality; have functional life skills; can be leaders.

The QEP Topic

The *Quality Enhancement Plan* (QEP) provides an opportunity for the entire MHU community to focus on one specific issue that can **improve student learning and success.** It is required for SACSCOC reaffirmation; however, its true value is in the potential to enhance the experience of our students! The QEP topic is identified through a comprehensive planning process, has broad-based support of institutional constituencies, focuses on improving specific student learning outcomes and/or student success, is supported by institutional resources, and can be assessed. MHU's broad goal is to **increase graduation by raising rates of retention and degree completion.**

The QEP Steering Committee is introducing two ideas that could lead to the final QEP.
✦ Either one has the potential for a unique, valuable MHU experience.
✦ Either one can help students understand what it means to <u>be</u> a part of MHU.
✦ Either one can help students understand the meaning and value of a liberal arts education.
✦ Either one can help students succeed.

The final choice, design, and implementation rely upon all of us!

Idea #1 Learning Communities	Idea #2 Problem-Solving
Operational definition: a small group of students who share common academic goals and work collaboratively in the classroom(s) with each other and with one or more instructors.	*Operational definition: Project-based learning that emphasizes rigorous, active, and systematic application of the process of solving problems.*
Value Added: Among other things, active involvement in various types of learning communities can ✦ create & foster a welcoming environment and sense of self as part of a larger learning community. ✦ increase interaction, involvement, & collaboration. ✦ encourage integration of knowledge & skills across learning experiences.	**Value Added:** Among other things, emphasizing and practicing the problem-solving process can ✦ develop a "soft skill" that is connected to the world of work, character development, and responsible citizenship. ✦ provide a common learning experience. ✦ encourage collaboration, connections, critical thinking, and creativity.
Examples of design ideas: ✦ Paired courses (e.g., FYS 111 & ENG 111) with shared theme ✦ First- and/or second-year experiences or projects that foster both learning and community ✦ Celebratory event "in the spirit of" SLAM	**Examples** of design ideas: ✦ Explicit skill development in first-year courses ✦ "Bridge the gap" between introduction in the first year and culmination in I&I courses ✦ Use an ePortfolio to demonstrate skill development across semesters

APPENDIX F

Summary Report of Constituency Chats

Instructions for QEP Constituency Conversations

Objectives of the small-group conversations:

► Provide all participants with the same information., using common materials & format.
► Facilitate and document brainstorming & discussion of potential design details.
► Treat both ideas equally (i.e., refrain from introducing personal bias).

Format:

► Welcome participants and explain overall objectives.
► Play narrated PowerPoint.
► Use discussion questions to facilitate conversation.
► Document ideas that are generated.

QEP Constituency Conversations

Discussion Questions

► What do you/your program/your department already do that supports either of these ideas? How might we integrate that more broadly . . . or use it as a model for other departments . . . or expand to wider, more diverse student populations?
► How can we put flesh on the skeleton? What components do you think would be effective, valuable, and manageable for enhancing the student experience?
► Are there possible challenges with these ideas that we are not addressing?
► Are there possible ways to implement these ideas that we seem to be overlooking?
► How can we fill the gap? (e.g., connect the first year to later academic experience in terms of both persistence and retention of knowledge and skills) Concern: Is this too much of a "leading question"?
► What supports do you/we need in order to implement either idea?
► As a closing statement(?) provide people with an opportunity to write up their ideal version of an implementation plan for one of the ideas.

QEP Constituency Chats

Summary Report of Emerging Themes, Patterns, & Ideas

Problem-Solving (PS)

Learning Communities (LC)

General Themes & Patterns:

► What is the difference between Learning Communities and Problem Solving. Why can't PS and LCs be combined in some way? (small-scale? large-scale?)
► Start "where we are."
    ▷ Some students (e.g., certain majors, athletes) already over-extended; can't afford any add-ons.
    ▷ Other students, however, need additional opportunities to create connections.
► Get students out of their rooms.

- ▶ Some programs already do/have both PS and LC.
    - ▷ How could they be done across other disciplines/majors/programs?
    - ▷ How can the ideas be expanded to co-curricular programs, as well as curricular?
- ▶ Crucial: Make PS and LCs connect to real-world problems.
    - ▷ How can we help students see the connections & help faculty/staff make connections?
    - ▷ We need to be more explicit & intentional re: why & how we are applying/practicing/emphasizing PS & LCs.
    - ▷ A sub-text & ongoing need: use accessible, student-friendly language to explain QEP, value of liberal arts, etc.!
- ▶ Recognition that PS and LCs exist in some form during FY and I&I, but need to "bridge the gap."
    - ▷ Sophomore experience of some kind frequently mentioned, although some concerns that must be careful to have academic experience/rigor/expectations.
    - ▷ Need effective way of "bridging" gap between FY and SY, not only during second year.
- ▶ Sense of belonging is at core of retention. Commonality = Community. LCs unlikely to be successful unless students have pre-existing interest.
- ▶ PS needs to focus on "adulting" and "real-world" problems.

Ongoing Concerns & Questions:
- ▶ Transfer students & commuters – how does this work for them?
- ▶ Is this mainly a GE program?
- ▶ How would this work in AGS? Does it have to?
- ▶ Getting people to be involved in the PS/LC and time commitments on students.
- ▶ Apathetic students; however, we need to recognize that apathy is only one reason for students choosing not to engage, etc.
- ▶ Additional workloads for faculty, staff, and students.
- ▶ Campus Communication disjointed. Students want more centralized and streamlined communication.
- ▶ Break down silos, but NOT as cost of what already working!
- ▶ How can we integrate emotional intelligence in PS (is a real-world skill & we need to articulate it as such!)
- ▶ Are we offering things students want to do? Offer choices that align with their values, interests, etc.
- ▶ Some still unsure/unconvinced that either idea can lead to increased retention & graduation.
- ▶ MUST keep things manageable.
- ▶ Micro-world assessment (e.g., retention per course/section, rather than large-scale; DWFs).
- ▶ Need better, clearer operational definitions.
- ▶ Possibly emphasize "collaborative learning" as core principle with LC.
- ▶ Elevator speech for why important to (a) have QEP, (b) learn & apply skills, etc.
- ▶ Make sure to give Tony & Tracy information that emerges from QEP conversations, especially if not used in QEP . . . can reinforce other discussions.
- ▶ Are there other models of LC we should look at?
- ▶ Student-athletes are engaged due to direction, leadership, guidance of coaches. Is there something similar for non-SAs?
- ▶ When the time comes, use student-to-student and peer-to-peer marketing for the QEP launch.

Concrete Ideas Worth Considering: PROBLEM-SOLVING	Concrete Ideas Worth Considering: LEARNING COMMUNITIES	Concrete Ideas Worth Considering: BOTH . . . or Misc.
Use PS already happening in majors, sports, advising, registrar, business, etc. . . . operationalize! make more systematic & explicit! more structured approach! common language!	Study Hall tables; Study Communities	E-portfolio via Handshake
Move from simple to complex problems . . . can transfer process to all MHU experiences . . . and beyond	FYS 111 & 112 cohort (require blocking?)	block of time each week for evening orgs, clubs, meetings
Have a process!	Student travel experiences	Mentorship (faculty / student and student to student)
FYS 111: Problem posed for students to "solve" = how to build community at MHU. Could begin to introduce process with this specific problem.	Students in major meet with each other outside of class in social event, engage, see the "big picture"	BOTH: block time per week for cohort to meet and do something "else" for collaboration
Question raised about importance of Critical Thinking. Possible to emphasize CT as part of PS?	"Buddy sport" system (athletes learn ops, duties of another sport/ team). Could idea be adapted for majors? residence halls? student organizations?	Expand SI (Supplemental Instruction) /SSS (Student Support Services)
PS is (should be) part of all disciplines. Possible to create more interdisciplinarity?	How incorporate PAWS? (Although students raised question about similar FY Connections program: Did it/will it actually help students connect?)	Re-name classes in terms of questions being raised
PS must be collaborative and interdisciplinary to be effective.	Possible to establish co-curricular structure for LCs?	Connect with alumni! Alumni Board interested
Utilize different PS methods, strategies? Maintain flexibility so will reflect any/all types of problems. PS is a universal tactic/need, but programs approach in different ways	Possible to add community-building as SLO for FYS	Increase opportunities for cohorts, esp. for students in majors without strong LC. ▶ Ex: cohort between two similar disciplines (e.g., REL/PHI & SOC) ▶ Ex: FYS 111 & 112. Same students across both.
Intro problem in FYS 111; carry over to FYS 112	Freshman class trip	Faculty also need to utilize LCs and a cross-disciplinary approach to collaboration.
Make this an institutional and systematic experience/process, beginning in FY and continuing throughout	Need more opportunities/events for non-athletes	Upper-class students visit FYS classes as "ambassadors"

Need broad understanding of "problem" and "project." Question = problem; project = problem; etc.		Alleviate the Sophomore Slump (even in athletics)!
Advising and change of advisors provide excellent opportunity for PS . . . advising cohorts within majors.		Target Sophomore curriculum
		Competition!
		Identify social issue . . . include students interested in working on the problem. Could be Sophomore Experience, or competition, or . . .
		Ethics Bowl as model for both PS and LC.
		Service projects/mission trips are model/examples of both PS and LCs.
		Sophomore Year: a "something" once per month; perhaps an off-shoot of FYS?

Constituency Chats Participants

Focus groups preceded by formal QEP presentation to faculty & staff on Feb. 25, 2021 .

13 separate focus groups during April, May, & June (in addition to some smaller conversations).

Protocols (to ensure common process):

- 16-minute narrated PPT (different for students)
- Common set of questions
- Two members of Steering Committee (with two exceptions)

Focus Group participation

- Participants, excluding members of the Steering Committee:
  - ▷ Approximately 78 staff
  - ▷ Approximately 31 faculty
  - ▷ Approximately 30 students
- Staff representation from:
  - ▷ Admissions
  - ▷ Advancement
  - ▷ Athletics
  - ▷ Blackwell Hall Staff
  - ▷ Career Services
  - ▷ Chaplain's Office
  - ▷ Counseling Services
  - ▷ Human Resources
  - ▷ Information Services
  - ▷ Marketing & Communication
  - ▷ Ramsey Center
  - ▷ Staff-Personnel Committee
  - ▷ Student Affairs
  - ▷ Student Success
  - ▷ Student Support Services
- Faculty representation from:
  - ▷ Both academic divisions (and all but two programs/majors)
  - ▷ Fine Arts (Music, Visual Arts)
  - ▷ Humanities (English, Foreign Language)
  - ▷ Math & Sciences (Biology, Computer Science, Math, Nursing)
  - ▷ Professional Programs (Business, Criminal Justice, Education, Social Work)
  - ▷ Social Sciences (Art Therapy, Political Science, Psychology, Sociology)
- Student representation from:
  - ▷ Marshals
  - ▷ First Year Mentors
  - ▷ Miscellaneous individuals & smaller, informal groups

APPENDIX G

FYS111 Problem-solving Assignment

FYS111 Problem-solving Essay Assignment (in two parts, submitted electronically)

Part 1, assigned during the first half of semester

Part 2, assigned during the second half of semester

Part 1: (attached grid handout)

1) Identify two problems, one academic, one co-curricular (outside of the classroom). (A problem is a personal issue that needs to be dealt with or a situation that needs to be improved).

2) Identify Strategies.

3) Propose two workable and achievable solutions to each problem. In other words, explain two possible ways to solve the issues you are facing.

4) Evaluate your solutions - choose one of your solutions and explain why it is better than the other one.

5) Implement a solution - craft a concrete plan of action to achieve the solution you chose (include specific steps and dates for each step).

Part 2:

6. Evaluate the outcome: Return to your original problem solving grid and complete the final step.

Also, craft a minimum **two-page** response to the following questions, in paragraph format (one paragraph per question and one page per problem).

A) To what extent did you implement the plan of action you laid out in part 1? Be honest and provide plenty of details to explain how you've actually applied the plan of action you created.

B) Did you solve your problem? Why or why not?

C) Do you think the solution you chose was the best one? Why or why not?

	Academic problem	Additional information:	Co-curricular problem (outside of the classroom)	Additional information:
Identify and clearly define the problem. *(A problem is a personal issue that needs to be dealt with or a situation that needs to be improved).* (Construct a problem statement with evidence of most relevant contextual factors.)		Context: What were the related contextual factors?		Context: What were the related contextual factors?
Identify Strategies to help solve the problem. (Identify approach(es) for solving the problem that apply within the specific context.)		Context: How do these strategies apply within the specific context?		Context: How do these strategies apply within the specific context?
Propose Possible Solutions From the strategies you have considered, propose two workable and achievable solutions to address each problem. In other words, explain two possible ways to solve the issues you are facing.	A. B.	How to your solution(s) directly address the problems?	A. B.	How to your solution(s) directly address the problems?
Evaluate potential solutions (For each column, choose one of your solutions and explain why it is better than the other one).		In your evaluation of the solution, consider the history of problem, your logic, feasibility of solution, and impacts.		In your evaluation of the solution, consider the history of problem, your logic, feasibility of solution, and impacts.

Implement a solution Craft a concrete plan of action to achieve the solution you chose (include specific steps and dates for each step).	1. 2. 3. 4.	How will your solution addresses multiple factors of the problem?	1. 2. 3. 4.	How will your solution addresses multiple factors of the problem?

The following is included in Part 2 of the assignment and will be completed at a later date.

Evaluate the outcome (Review the results or potential results relative to the problem defined with some consideration of need for further work.)		Did your solution work? Why or why not? What additional work do you need to do?		Did your solution work? Why or why not? What additional work do you need to do?

APPENDIX H

Ideas and Innovations (I&I) Problem-solving Assignment

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IDEAS & INNOVATIONS:
INTERDISCIPLINARY COLLABORATIVE PROBLEM-SOLVING
SIGNATURE ASSIGNMENT

</div>

Course:

<div align="center">

Rationale and Purpose of this Assignment

</div>

This assignment is designed to bring your general education experience at MHU full circle—the problem-solving approaches you learned in your first-year courses, disciplinary perspectives, and your growing experience working with other students outside of your major discipline have all prepared you for this interdisciplinary course and its collaborative assignment.

Why collaborative, interdisciplinary problem solving? (and what do these things mean?)

> ***Collaboration*** involves working with others to achieve a shared goal. It means figuring out strengths and weaknesses of the individuals in the group to use the former and make sure the latter do not interfere with achieving the group goal. It is coming together to make something greater than the individuals involved. Effective collaboration involves every member making meaningful and intentional contributions that reflect their best work towards the greater goal.
>
> To work in an ***interdisciplinary*** way means crossing the established boundaries of the disciplines (I.e., majors & minors) that constitute the academy, and to greater and lesser degrees, shape our lives outside of the academy. How can scientists, artists, educators, etc., in training (college students like yourselves, and any major can be included here of course) bring their disciplinary expertise and skills, the lenses through they are learning to view the world, to the table to work collaboratively?
>
> ***Problem solving*** is the process of designing, evaluating, and implementing a strategy to answer an open-ended question or achieve a desired goal (AAC&U VALUE rubric definition). There are several key steps to the process of problem solving which are delineated below.

Research consistently shows that more diverse groups solve problems faster, more efficiently, and more creatively, leading to many positive outcomes for both the group members and their employers. Additionally, these are the skills employers want. For example, a survey by the National Association of Colleges and Employers (NACE) found that **the top two desired skills in an employee are <u>the ability to work in a team</u> and <u>problem-solving</u>**. Practicing these skills while in college is one of the best ways to make sure you're preparing yourselves for a meaningful career in which you can work successfully with others to achieve the goals of your community/school/company (etc.).

<div align="center">

Problem Solving

</div>

Problem solving is sometimes called a "soft skill," meaning it's not something you just memorize and then either know or don't know. Instead, it's a process, and it takes a lot of practice to get good at. This may be why it's considered such a desirable trait by employers. While there is not necessarily one right or wrong way to approach solving a big problem, there are some common steps that help the process along. In general, you can think about problem solving as involving the following steps:

Stage 1: *Defining the problem*. This is your "get organized" step, and involves thinking about what the problem is, all of the angles of the problem that need to be addressed, and what the roadblocks or causes

of the problem are, in addition to evaluating your team for strengths and skills; in a word, "contexts"! You can't design a solution if you can't define your problem adequately. This stage often involves a lot of thinking and brainstorming and may involve several discussions with your group.

Stage 2: *Identifying strategies*. This is your "gather information" step. You'll need to do a lot of research about both the problem and potential options for solving the problem. A big component of this step is the "every-idea" brainstorming, where you try to come up with literally every possible idea you can, so you have a sense of your options. You'll probably start seeing pros and cons for several of your ideas at this point but won't make any final decisions until the end of stage 3. That means at this point, there are still no bad ideas! No strategy is out of the question yet.

Stage 3: *Proposing solutions*. This is your "narrowing down options" step. After stage 2, you'll probably start getting an idea for which ideas are floating to the top as the best options. You should start fleshing out the top couple of possible solutions to look for unanticipated pitfalls or complexities as well as less obvious benefits you may not have thought of before. This step will likely involve both additional research and discussion with your group. By the end of this part of the process, you should pick what strategy your group wants to pursue to solve the problem.

Stage 4: *Finalizing your solution*. This is the step where you make and present a final product or solution to the problem. Once your group has picked your final solution for the problem, you'll need to hammer out all the intricacies to make sure it's an airtight solution. Then, you'll prepare those details so they can be presented, both in writing and orally. In a real project, this is also the step where the solution to the problem would be implemented.

Stage 5: *Evaluation and review of results*. After a solution to a problem has been implemented, you need to make sure it works, and see if there are improvements to be made. This involves checking that your solution solved the initial problem and critiquing the implementation to look for flaws or fixes. In some cases, this is used to adjust the implemented plan to improve it; in other cases, the information may be used to inform future problem solving for related projects.

Assignment Components and Due Dates

Each of the above 5 stages of problem solving has a graded assignment associated with it that you will need to complete and submit as a group (except stage 5, which is an individual assignment), culminating in a final written proposal and presentation due on the last day of class.   Along the way, there will also be smaller, participation-associated assignments, often due at the end of classes where your group worked together on this project. Those will be assigned as they come up.

> **DUE:**
> Stage 1 assignment: group introductions & role assignments, defining the problem
> Stage 2 assignment: brainstorming strategies
> Stage 3 assignment: comparing best strategies and deciding which strategy to pursue
> Stage 4 assignment: written and oral presentation of solutions
> Stage 5 assignment: peer critiques of presentations plus a self-reflection

GUIDANCE & SUGGESTIONS

The **assignment template** is a bare bones document that includes rationale, definitions, and assignment components. Each of the five component assignments will need to be delineated for your students in whatever way works for you. Assignments from two of our pilots, BIO310 and MUS350, are most easily adaptable for this assignment; the examples from HIS325 provide excellent in-depth problem-solving ideas, but do not necessarily parallel the five-stage process outlined in the assignment sheet template.

Bottom line: use the template as your starting point, and please don't drop any of it! It is designed to be added to, not sampled. In order to be able to assess the students' work, and to meet our course SLOs, we need to keep these components. How to weight the component elements for **grading purposes** is up to you—but try to both make it clear that each component is essential, AND weight the group paper and presentation heavily enough to indicate its importance.

Assignment Components:
Stage 1 assignment: group introductions & role assignments, and defining the problem
Stage 2 assignment: brainstorming strategies
Stage 3 assignment: comparing best strategies and deciding which strategy and solution to pursue
Stage 4 assignment: written and oral presentations of work
Stage 5 assignment: peer critiques of presentations plus a self-reflection

Assigning Groups:
If you have disciplinary diversity, great! Use that.
If NOT, try using FOCUS results, Clifton Strengths (if they don't have these from their FYS/GE classes, get the codes from Jimmy Knight and have them take it. It won't take long). See the samples on SharePoint of handouts you can use with students to help with this. Help them articulate the diverse skills each of their majors brings to the table, if you can.

Figuring out the PROBLEM:
Options and the spectrum between:
- ➢ Assign the problem to the class—have each group work on a component of it.
- ➢ Give each group a distinct problem to "solve" of your choosing.
- ➢ Give them a restricted choice, allowing each group to choose one.
- ➢ Brainstorm as a class to come up with the problems, then assign to the groups or let them choose.
- ➢ Let them choose (wide open, but you will need to scaffold this a bit for them, most likely)

How to explore CONTEXT?
Discuss elements that are essential to understand (general context components are on the assignment sheet).

Provide them with **a list of resources**, if you don't want to get bogged down in too much individual research.

Introducing Problem Solving Strategies:
Look to the AAC&U rubric for guidance, and see what the SharePoint resources have to offer. Distinguish between strategies and solutions! Offer class time each class period for small group discussion, then ask for something to be turned in via moodle before they leave—notes, or something (not necessarily a formal assignment component).

Evaluating & Implementing Solutions:
This is another good place to use resources and research. Literature review, perhaps, if it fits with your course? Application of theories you have been learning in the class?

Consider "what if" issues here, get creative. Use charts and worksheets to help them do the comparisons.

Presenting their findings (the written and oral presentations):
This part MUST be a group effort (our SLOs indicate this).

Gauge your class in how much instruction you think they will need on how to write collaboratively and produce an effective group oral presentation. See the collaborative writing resources links posted to our SharePoint site.

While there is no set length requirement, this written product should be long enough to effectively present their process, the strategies and solutions they considered, why they chose the one they did, etc., etc. This can be a business-like proposal, a formal essay, or some variation or combination of those, but it must allow the group to write collaboratively AND to touch on all aspects of their work (again, we can use the AAC&U rubrics as guides in delineating the parts of the written and oral components).

APPENDIX I

Logic Model

A Logic Model Template

MHU QEP GOAL(S): **MHU students will develop, improve, and recognize the value of problem-solving skills**

INPUTS ➤	OUTPUTS ➤	OUTCOMES

INPUTS	ACTIVITIES	PARTICIPANTS	Goals	Impacts
Faculty Training Development Technology/Materials Funds (as outlined in budget) Planning Meetings Director Search Fellowships Leadership Curriculum Development Assessment Development Marketing & Advertisement	Faculty PSM Training Implementation Assessment Implementation Curriculum Implementation Coordinate Participating Academic Programs Hire a director On-board Faculty and Student Fellows Implement problem-solving events and student P.D.	**Primary:** Traditional students **Secondary:** Non-traditional students Faculty Staff **Tertiary:** Stakeholders Community	Students will develop PSM knowledge and understanding by: 1. Defining the MHU PSM 2. Detailing the steps in the MHU PSM 3. Applying the PSM in both real-life and theoretical problems 4. Analysing and evaluate uses of the PSM in multiple context 5. Reflecting on the value of the PSM in multiple personal and professional contexts	Students will: 1. Be lifelong masterful problem-solvers and employ these skills in their professional and personal lives 2. MHU will be noted as an institution that prepares our students for the world of work 3. Have a realistic perception of their Problem-Solving skills

OUTCOME EVALUATION
Application of the MHU Problem Solving Template Common Assignments MHU QEP Problem-Solving Survey AAC&U Rubric Assessment activities and targets found in Table 7.1

APPENDIX J

AAC&U VALUE Rubric for Problem-Solving

PROBLEM SOLVING VALUE RUBRIC
for more information, please contact value@aacu.org

The VALUE rubrics were developed by teams of faculty experts representing colleges and universities across the United States through a process that examined many existing campus rubrics and related documents for each learning outcome and incorporated additional feedback from faculty. The rubrics articulate fundamental criteria for each learning outcome, with performance descriptors demonstrating progressively more sophisticated levels of attainment. The rubrics are intended for institutional-level use in evaluating and discussing student learning, not for grading. The core expectations articulated in all 15 of the VALUE rubrics can and should be translated into the language of individual campuses, disciplines, and even courses. The utility of the VALUE rubrics is to position learning at all undergraduate levels within a basic framework of expectations such that evidence of learning can by shared nationally through a common dialog and understanding of student success.

Definition
Problem solving is the process of designing, evaluating and implementing a strategy to answer an open-ended question or achieve a desired goal.

Framing Language
Problem-solving covers a wide range of activities that may vary significantly across disciplines. Activities that encompass problem-solving by students may involve problems that range from well-defined to ambiguous in a simulated or laboratory context, or in real-world settings. This rubric distills the common elements of most problem-solving contexts and is designed to function across all disciplines. It is broad-based enough to allow for individual differences among learners, yet is concise and descriptive in its scope to determine how well students have maximized their respective abilities to practice thinking through problems in order to reach solutions.

This rubric is designed to measure the quality of a **process**, rather than the quality of an **end-product**. As a result, work samples or collections of work will need to include some evidence of the individual's thinking about a problem-solving task (e.g., reflections on the process from problem to proposed solution; steps in a problem-based learning assignment; record of think-aloud protocol while solving a problem). The final product of an assignment that required problem resolution is insufficient without insight into the student's problem-solving process. Because the focus is on institutional level assessment, scoring team projects, such as those developed in capstone courses, may be appropriate as well.

Glossary
The definitions that follow were developed to clarify terms and concepts used in this rubric only.

- Contextual Factors: Constraints (such as limits on cost), resources, attitudes (such as biases) and desired additional knowledge which affect how the problem can be best solved in the real world or simulated setting.
- Critique: Involves analysis and synthesis of a full range of perspectives.
- Feasible: Workable, in consideration of time-frame, functionality, available resources, necessary buy-in, and limits of the assignment or task.
- "Off the shelf" solution: A simplistic option that is familiar from everyday experience but not tailored to the problem at hand (e.g. holding a bake sale to "save" an underfunded public library).
- Solution: An appropriate response to a challenge or a problem.
- Strategy: A plan of action or an approach designed to arrive at a solution. (If the problem is a river that needs to be crossed, there could be a construction-oriented, cooperative (build a bridge with your community) approach and a personally oriented, physical (swim across alone) approach. An approach that partially applies would be a personal, physical approach for someone who doesn't know how to swim.
- Support: Specific rationale, evidence, etc. for solution or selection of solution.

PROBLEM SOLVING VALUE RUBRIC
for more information, please contact value@aacu.org

Definition
Problem solving is the process of designing, evaluating, and implementing a strategy to answer an open-ended question or achieve a desired goal.

Evaluators are encouraged to assign a zero to any work sample or collection of work that does not meet benchmark (cell one) level performance.

	Capstone 4	Milestones 3	Milestones 2	Benchmark 1
Define Problem	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is superficial.	Demonstrates a limited ability in identifying a problem statement or related contextual factors.
Identify Strategies	Identifies multiple approaches for solving the problem that apply within a specific context.	Identifies multiple approaches for solving the problem, only some of which apply within a specific context.	Identifies only a single approach for solving the problem that does apply within a specific context.	Identifies one or more approaches for solving the problem that do not apply within a specific context.
Propose Solutions/Hypotheses	Proposes one or more solutions/hypotheses that indicates a deep comprehension of the problem. Solution/hypotheses are sensitive to contextual factors as well as all of the following: ethical, logical, and cultural dimensions of the problem.	Proposes one or more solutions/hypotheses that indicates comprehension of the problem. Solutions/hypotheses are sensitive to contextual factors as well as the one of the following: ethical, logical, or cultural dimensions of the problem.	Proposes one solution/hypothesis that is "off the shelf" rather than individually designed to address the specific contextual factors of the problem.	Proposes a solution/hypothesis that is difficult to evaluate because it is vague or only indirectly addresses the problem statement.
Evaluate Potential Solutions	Evaluation of solutions is deep and elegant (for example, contains thorough and insightful explanation) and includes, deeply and thoroughly, all of the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is adequate (for example, contains thorough explanation) and includes the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is brief (for example, explanation lacks depth) and includes the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.	Evaluation of solutions is superficial (for example, contains cursory, surface level explanation) and includes the following: considers history of problem, reviews logic/reasoning, examines feasibility of solution, and weighs impacts of solution.
Implement Solution	Implements the solution in a manner that addresses thoroughly and deeply multiple contextual factors of the problem.	Implements the solution in a manner that addresses multiple contextual factors of the problem in a surface manner.	Implements the solution in a manner that addresses the problem statement but ignores relevant contextual factors.	Implements the solution in a manner that does not directly address the problem statement.
Evaluate Outcomes	Reviews results relative to the problem defined with thorough, specific considerations of need for further work.	Reviews results relative to the problem defined with some consideration of need for further work.	Reviews results in terms of the problem defined with little, if any, consideration of need for further work.	Reviews results superficially in terms of the problem defined with no consideration of need for further work

APPENDIX K

MHU PSM Template

MHU PSM Template (used as a guide to develop assignments)

Be certain your assignment requires students to:	Identify guidelines for the assignment	Have students explain further:
Identify and clearly define the problem. (Construct a problem statement with evidence of most relevant contextual factors.)		
Identify Strategies to help solve the problem. (Identify approach (es) for solving the problem that apply within the specific context.)		
Propose possible solution (s) (Explain workable and achievable ways to solve the issues you are facing.)		

Evaluate potential solutions (Choose one of your solutions and explain why it is better than the other one - includes the following in your considerations history of problem, reviews logic/ reasoning, feasibility of solution, and weighs impacts of solution.)		
Implement a solution (Implantation should be in a manner that addresses multiple factors of the problem.)		
Evaluate the outcome (Review the results relative to the problem defined with some consideration of need for further work.)		

Scoring Criteria that will be use in assessment of assignment:

Did the student work product reflect accurate identification, definitions, and explanations of the steps of the MHU Problem Solving Process as defined above. A "YES" reflects accuracy across all steps of the process.

Identification:	YES	NO	Partial N/A
Definition:	YES	NO	Partial N/A
Explanations:	YES	NO	Partial N/A

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APPENDIX L

QEP Problem-Solving Student Likert Survey

MHU QEP PROBLEM-SOLVING SURVEY

1. How confident are you that you can construct a clear and insightful problem statement with supportive evidence? (SLO 1)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

2. How confident are you that you can identify multiple approaches for solving a given problem? (SLO 1)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

3. How confident are you that you can propose a solution that indicates a deep understanding of the complexity of a given problem? (SLO 1, 2)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

4. How confident are you that you can evaluate solutions to a given problem in ways that are thorough and insightful? (SLO 1, 2)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

5. How confident are you that you can implement the solution to a given problem in a way that thoroughly addresses the complexity of that problem? (SLO 1, 2)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

6. How confident are you that you can thoroughly evaluate the effectiveness of the solution? (SLO 2)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

7. How confident are you that you can apply the problem-solving process in your academic life? (SLO 2, 3)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

8. How confident are you that you can apply the problem-solving process in your personal life? (SLO 2, 3)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

9. How confident are you that you can accurately discuss the connection of the problem-solving process as a valuable skill in both your professional and personal life? (SLO 3)
   a. extremely confident
   b. moderately confident
   c. slightly confident
   d. not at all confident

10. How confident are you that you can accurately discuss the connection between the problem-solving process and your chosen major/degree? (SLO 3)
    a. extremely confident
    b. moderately confident
    c. slightly confident
    d. not at all confident