QUALITY ENHANCEMENT PLAN

2018

LUBBOCK CHRISTIAN UNIVERSITY

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I. EXECUTIVE SUMMARY

Lubbock Christian University's Quality Enhancement Plan, "Fostering Academic Tenacity," emerged from a robust institutional process that offered constituents from across the university community broad latitude to identify potential issues, needs, or opportunities that could be addressed through a QEP. From the August 2016 Faculty Conferences to the August 2017 meetings of our interdisciplinary Topic Selection Committee, and numerous meetings with students, the faculty, the staff, the Board of Trustees, and the Executive Leadership Team all along the way, **this process has been comprehensive and inclusive**.

A significant number of suggestions revealed a particular concern about the ability of students to effectively adjust to changes, persevere through difficulty, or cope with academic and professional demands. During their first year of college, many undergraduate students face significant challenges that increase their risk of dropping out of school. Some challenges are beyond the control of the institution, such as limited financial resources, or the need to balance family or work obligations, but many of them are due to day-to-day experiences on campus (in social or academic settings) that cause students to question whether they belong or will be able to be successful in college.

The Topic Selection Committee began researching growth mindset and metacognitive development, in connection with existing high-impact practices. A preliminary literature review revealed a correlation between student mindset and academic success and persistence. Students with a growth mindset are more likely to choose self-regulated strategies and show greater metacognitive acuity more often than do students with a fixed mindset. **Therefore, the purpose of this QEP is to instill and foster academic tenacity among beginning undergraduate students in order to support persistence.**

However, metacognitive skills are often lacking in college students and must be developed if they are to be fully realized and leveraged to work in conjunction with a growth mindset. **Our goals are to instill and foster academic tenacity in beginning undergraduate students and to develop learning environments that support a growth mindset and academic tenacity.**

Our first learning outcome **is that students will be able to demonstrate satisfactory knowledge and understanding about fundamentals of growth mindset in Phase I courses** (our freshman university seminar classes). This will be assessed using a pre- and post- Implicit Theory of Intelligence questionnaire. A second learning outcome is that **students will develop and strengthen key metacognitive skills that support academic tenacity in Phase II courses** (English, Math, and Bible classes from our university core). This will be assessed using a pre- and post- Metacognitive Awareness Inventory. A related operational outcome is that **retention rates for freshmen to sophomore level students will improve**, as they develop academic tenacity.

A key operational outcome for our goal of developing supportive learning environments is that **faculty and staff will develop knowledge and skills that promote academic tenacity in students**. This will be assessed during the Learning Academy Training process and as participating Learning Scholars from among our faculty engage in professional development. The Academy will also offer training opportunities for the Library Faculty, Student Academic Services, the Counseling Center, the Tutoring Center, and the University Writing Center.

A QEP Director has been named, a Steering Committee has been formed, and the budget has been approved for the implementation of this 5-year initiative.

II. INSTITUTIONAL PROCESS

QEP Topic Selection

The QEP topic selection process began in August 2016 with multiple focused and specific opportunities for input by all institutional stakeholders. During focus-group activities, constituents were given broad latitude to identify potential issues, needs, or opportunities that could be addressed through the QEP process. Examples of this robust institutional process for identifying potential QEP topics are given below:

1. Focus groups and discussion at 2016-2017 Faculty Conferences: Faculty members met by individual department and spent time identifying potential QEP topics. Faculty then gathered by college and discussed the identified potential QEP topics. Major themes that emerged from these focus groups were compiled, presented to the entire faculty, and submitted to the Topic Selection Committee (see definition below).

2. Executive Leadership Team (ELT): The ELT is a committee comprised of individuals in leadership positions from across campus and represents faculty, staff, and administration. This group was asked to engage their personnel and solicit ideas for a potential QEP. Information gathered was compiled and submitted to the Provost.

3. Student Leadership Council (SLC): The SLC consists of the presidents of all LCU student organizations, including the student body president and the inter-club council president. Upon explanation of the components and foundation of the QEP selection process, the student leaders were led through a brainstorming discussion about potential areas of growth and topic ideas for consideration. The Vice President for Student Affairs facilitated the discussion and compiled the feedback for submission to the Topic Selection Committee.

4. Staff Meetings: Staff leaders represented on ELT were asked to solicit potential QEP topic ideas from their respective areas. Staff leaders included the topic in their meeting agendas, and each staff leader reported the resulting ideas and potential topics back to the Provost.

5. Board of Trustees: In the Board of Trustees (BOT) meeting on September 23, 2016, the QEP topic selection process and topic selection timeline was introduced to BOT members. At this time, BOT members were encouraged to send topic ideas to the Provost over the coming months. Information gathered was compiled and included in the topic selection process. The Topic Selection Committee presented preliminary ideas at the BOT meeting on February 3, 2017. Questions, comments and feedback were solicited from BOT members at this time and given to the Provost.

6. Faculty Meeting: The Topic Selection Committee presented preliminary ideas at the full faculty meeting held on February 24, 2017. Questions, comments and feedback were solicited from faculty at this time.

7. ELT Update: The QEP selection committee presented an update on the topic selection process to the Executive Leadership Team on May 26, 2017.

By the end of November 2016, data had been collected from all constituency groups, compiled into a document, and distributed to the QEP Topic Selection Committee. This document identified over 65 potential topics.

Topic Selection Committee: This committee directed the selection of the QEP.

> Rod Blackwood – University Provost
> Toby Rogers – Dean of Professional Studies
> LaNell Harrison – Associate Professor, Nursing
> Bart Durham – Associate Professor, Natural Sciences
> Laurie Doyle – Professor, Fine Arts
> Randal Dement – Vice President of Student Affairs
> Yvonne Harwood – Director of Center for Student Success

The topic selection committee met for the first time in December of 2016 and began weekly meetings on January 16, 2017. The first action of the committee was to consider and analyze information obtained through the institutional process of stakeholder input.

Topic Selection: Responses gathered from across campus (faculty, staff, and students) produced the following eight themes:

a. Preparation for After-College Life (30 instances)
b. Experiential Learning or High Impact Practices (25 instances)
c. Successful Student Transition to College (21 instances)
d. Creating Community on Campus (21 instances)
e. Emotional Intelligence, Self-Efficacy, Persistence, Self-Awareness (17 instances)
f. Communication (10 instances)
g. Ethics (7 instances)
h. Faith & Spiritual Foundation (6 instances).

Figure 1 (below) illustrates the frequency of topics suggested by faculty, staff, and students.

Figure 1: QEP Topic Word Cloud

QEP suggestions revealed an emphasis on learning, combined with a level of concern about the ability of students to effectively adjust to changes as they transition to and from college, and as they cope with academic and professional demands. Over 15 suggestions focused on self-awareness, perseverance, resiliency, emotional intelligence, time-management, prioritization or other related metacognitive factors, and two departments suggested teaching students to overcome failure. The consensus suggested a preliminary focus on increasing tenacity among undergraduate students in order to promote engagement and improve learning as they overcome challenges while at LCU and into the future.

Institutional Data: During this process of reflecting upon the results of our data gathering, the Topic Selection Committee also looked closely at how institutional data could help identify needs that could be addressed with the QEP. Of particular interest was improving retention for beginning undergraduate students, especially those in underrepresented groups (African American and Hispanic students) and those who come to LCU as low income, or first-generation students. Institutional data indicated a significant gap in retention rates between students in underrepresented groups, low income, and first-generation students, and other demographic categories (see Figure 2).

Figure 2: LCU Retention and Graduation Rates (10-Year average)

10-Year Freshman Cohort		
Students	Year 1 Retention Rate	Graduation Rate
Total Cohort	66.56	41.29
African American	51.11	13.35
Hispanic or Latino	57.42	24.66
White European	70.75	48.58
First Generation	58.22	28.81
Low Income	60.72	30.36
Middle Income	66.27	40.08
High Income	71.96	50.91

After studying all the feedback received, as well as institutional data, the committee began researching the topic of growth mindset and metacognition in connection with existing high-impact practices. A preliminary literature review revealed a correlation between student mindset and academic success and persistence, attributes that are consistent with our university mission of preparing students for lives of purpose and service. After receiving feedback from a faculty member who specializes in teacher training for mindset development in students, the committee concentrated its attention on the concept of **academic tenacity**.

After many meetings, discussions, and analysis, then, the topic selection committee chose the potential topic of **Academic Tenacity as the focus of the QEP**. Simply put, Academic Tenacity is about working hard, and working smart, for a long time. More specifically, it is about the mindsets and metacognitive skills that allow students to 1) look beyond short-term concerns to longer-term or higher order goals, and 2) withstand challenges and setbacks to persevere toward these goals. Academic Tenacity is a multifaceted concept that includes not only growth mindset, but also metacognition and resiliency.

LCU Mission, Vision, and Strategic Plan: As the Topic Selection Committee deliberated, its work was guided by the university's mission, vision and strategic goals. In the fall of 2013, the LCU community of faculty, staff, and administration began a process of reflection, assessment, and goal setting that culminated in the university's Strategic Plan for 2015-2020, entitled LCU 2020: Envisioning Our Future. This vision is the product of many discussions among constituencies from across the campus, and it includes input from faculty, staff, executive leadership, the president, and the board of trustees.

> *Mission*
> Lubbock Christian University is a Christ-centered, academic community of learners, transforming the hearts, minds, and hands of students for lives of purpose and service.

> *Vision*
> Lubbock Christian University will be a leading Christian university, known for its academic excellence and its commitment to faith that seeks understanding, where wisdom is pursued, vocation is discerned, and service is fostered.

> *Strategic Priorities and Goals*
> One of the chief priorities outlined in the Strategic Plan is "Pursue the Highest Standards of Academic Excellence," and its stated goals include the aim to "Develop programs and initiatives to improve student persistence and prepare students for success beyond college" and to "Continue to invest in learning and teaching resources needed to support student learning and faculty teaching and scholarship."

The specific goals and learning outcomes of LCU's QEP align perfectly, then, with the university's larger priorities, its vision, and its mission. Fostering, promoting, and supporting academic tenacity will have implications for students in the classroom and throughout their "lives of purpose and service."

The Topic Selection Committee presented this potential QEP topic, along with possible learning outcomes and strategies, to the faculty and to the Board of Trustees early in the spring 2017 semester. Both groups responded enthusiastically to this topic and its alignment with LCU's identity and mission.

QEP Steering Committee: Having established a firm consensus on the topic of Academic Tenacity, the function of the Topic Selection Committee began to shift to the process of writing the QEP. Changes were made in the composition of the group, as faculty were added who would contribute expertise to the development and writing of the plan, and a Steering Committee was formed.

> Rod Blackwood – University Provost
> Toby Rogers – Dean of Professional Studies
> Bart Durham – Associate Professor, Natural Sciences
> Jennifer Dabbs – Associate Professor, Sociology
> Carlos Perez – Associate Professor, Family Studies
> Kenneth Hawley – Professor, English
> Cathy Box – Associate Professor, Education
> Randal Dement – Vice President of Student Affairs
> Yvonne Harwood – Director of Center for Student Success

These members of this Steering Committee met weekly or bi-weekly throughout the late spring, summer, and early fall of 2017.

Backward Design Process: Wiggins and McTighe's (2005) backward design served as a useful framework for the development of the QEP and provided a practical approach to planning and assessment. Backward design begins with the end in mind. After determining our topic and focus statement, we identified desired results (Student Learning Outcomes) and success criteria, determined acceptable evidence of success (assessments), then planned the learning experiences, consistent with the backward design model. See Appendix A.

This approach to planning helped us focus on intended outcomes, rather than on the content or curriculum, and ensured that the planned activities and assessments aligned with our program goals. In addition, we utilized a Program Logic Model to represent the theory of action of our new initiative. See Appendix B.

The program logic model is an analytic technique that "deliberately stipulates a complex chain of events over an extended period of time. The events are staged in repeated cause-effect-cause-effect patterns, whereby a dependent variable (event) at an earlier stage becomes the independent variable (causal event) for the next stage" (Yin, 2009, p. 149). Yin states that in a program logic model there is typically an intervention, immediate outcome, intermediate outcome, and ultimate outcome (2009, p. 150).

Design and application of the model ensures that each facet of the QEP is purposefully planned and assessed, and that no critical components are missing or incomplete. Program logic models "provide a way of presenting a prima facie argument that the program is likely to function as intended" (Wiliam, 2016), and they can identify areas that may need to be adjusted.

Getting Started

Fall 2017 – All-Faculty Professional Development Conference: At the beginning of each academic year, faculty and staff participate in several days of training and preparation for the upcoming year. During these Fall 2017 faculty conferences, LCU President Tim Perrin announced to a joint gathering of faculty and staff that our QEP Director will be Dr. Cathy Box, Associate Professor of Education. Dr. Box earned her Ph.D. in Curriculum and Instruction with a specialization in math and science education from Texas Tech University in 2008, and her scholarly work has focused on formative assessment or assessment for learning. She served as a member of LCU's QEP Topic Selection and Steering Committees and has been involved in the development of the plan from its inception.

Multiple sessions in our Faculty Conference schedule were devoted to engaging the faculty in important concepts related to academic tenacity and the QEP. A foundation of knowledge was established by implementing learning activities that were designed to update faculty on the brain and its neuroplasticity, and to then reveal subsequent implications for teaching and learning. Approximately 90 full-time faculty members, deans, and other administrators participated.

Figure 3: Fall 2017 Faculty Conferences
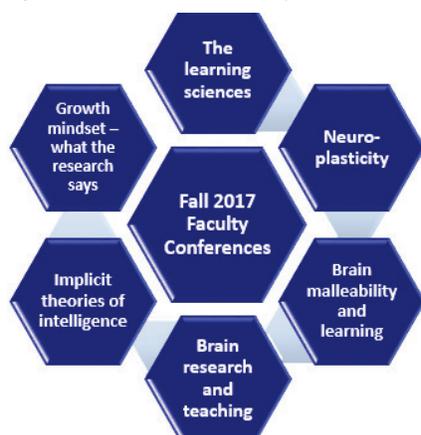
Each member of the QEP team served as facilitators of various sessions or activities. The learning cycle approach to instruction served as a framework for the Tuesday morning session and was designed to engage the faculty and put the learning in their hands. After sharing their own learning experiences via discussion and a public backchannel, they participated in a challenging activity that illuminated coping mechanisms we engage when faced with difficulty. This was followed by a jigsaw activity that provided them the opportunity to investigate the topics in Figure 3 (left).

Each expert group within the jigsaw reviewed scholarly literature and watched a short video related to their chosen topic, working as a group to answer essential questions that focused their learning. They then returned to their home groups and taught each other key concepts or ideas, co-constructing knowledge about how people learn and what that means to us and our students as we strive to promote and support academic tenacity. A whole group discussion ensued, with faculty members leading the discussion and sharing their newfound knowledge and related implications.

The Director of the Center for Student Success followed the jigsaw activity with a PowerPoint presentation that elaborated on implicit theories of intelligence and how they are realized in LCU students. In addition, a faculty member from Behavioral Sciences updated us on emotional intelligence and how a student's emotional quotient impacts behavior and learning.

The structure and processes of the QEP initiative were explained in detail, and departments were given time to discuss their interest and desired level of participation. The purpose was to empower the faculty as partners in the process and provide a level of ownership. Each department shared its ideas with the group, and a rich discussion ensued, as faculty identified those classes from their respective curricula that they believed would benefit most from this QEP initiative on Academic Tenacity. With great enthusiasm and thoroughness, the faculty brainstormed and debated which of their lower-division and upper-division courses functioned as essential foundation classes, crucial gateway classes, and culminating capstone classes—all in the context of fostering academic tenacity in our beginning students and preparing them for successful completion of their degrees. Preliminary suggestions from each department are listed in Appendix F.

Following faculty conferences, we administered a Qualtrics survey to obtain feedback from participants related to 1) the quality of the training, 2) their priorities related to QEP goals, and 3) their level of interest in becoming a Learning Scholar. This information will be used to direct future activities related to the Learning Academy and other QEP events. We also developed an EquipLCU Moodle page that will serve as a repository for documents and relevant materials and is accessible to all faculty and staff.

LCU institutional data, recommendations from faculty, and discussions with department chairs led to the identification of key courses and faculty members for the pilot year of 2017-2018. Cohort I will focus on Phase II, introductory freshmen level courses from our University Core, including ENG1301, ENG1302, MAT1311, and BIB1310.

- Jana Anderson, English (ENG 1301: Composition Studies)
- Micah Heatwole, English (ENG 1301: Composition Studies)
- Shenai Alonge, English (ENG 1301: Composition Studies)
- Matt Byars, English (ENG 1302: Composition and Literature)
- Ann Sims, Mathematics (MAT 1311: College Algebra)
- Keith Rogers, Mathematics (MAT 1311: College Algebra)
- Ashley Cherry, Mathematics (MAT 1311: College Algebra)
- Shannon Rains, Bible (BIB 1310: Introduction to the Old Testament)

In addition, two library faculty members, Barbara Slate and Karlee Vineyard, joined the group as volunteers, strengthening the LCU community of learners in this endeavor. This group of faculty members will serve as the first cohort of Learning Scholars and participate in the EquipLCU Learning Academy during the 2017-2018 academic year. One and a half hour seminars will be held approximately every other week during the year, during which time the Learning Scholars will build the knowledge and skills needed to create learner-centered classrooms that optimize learning and support academic tenacity. They will implement their new learning framework in the targeted courses in the fall of 2018 and provide feedback and evidence of mastery at the end of the Fall 2018 semester. This pilot group will serve as a valuable resource as they provide feedback about the strength and weaknesses of the Learning Academy which will be used to refine and strengthen the program for the future. See Appendix E for the proposed Learning Academy curricular plan.

Fall 2017 - Staff: QEP Director, Dr. Cathy Box, had the opportunity to speak to the entire staff at the Fall 2017 Staff Conferences about the initiative and update them on the focus and purpose of the new QEP. In addition, the director met with the Staff Senate President, Kim Wheeler, to engage in dialogue about the important role staff members play in promoting academic tenacity on our campus. As a result, Staff Senate met and brainstormed ideas that resulted in concrete ideas for training and implementation. The staff expressed a desire to receive formal training about academic tenacity and to partner purposefully with the faculty, working alongside them as we build a community of learners. Finally, staff senate members were encouraged to meet with their departments and continue to seek concrete ways to promote academic tenacity and support students, faculty, and other staff members in this endeavor.

Fall 2017 – Students: Dr. Box met with LCU's 2017-2018 Student Senate to get feedback and engage in dialogue about the students' role in creating a culture on campus that promotes persistence and perseverance. Student Senate members provided concrete ideas for implementation of curriculum in Phase I classes and were encouraged to reach out to other student groups to find ways that they could participate in promoting tenacity on campus.

The concept of growth mindset was introduced to the student body through a chapel presentation by Dr. Box, supported by an informative video that was created by LCU's marketing team.

Phase I – UNI 1170 Instructors: UNI 1170 is the University Skills class that is required for all freshmen and was chosen as the venue for Phase I of the QEP. After Dr. Box met with UNI 1170 coordinators Dr. Laurie Doyle and Yvonne Harwood to coordinate a plan for implementation, she then met with the instructors of the course to share information about the goals and learning outcomes and to get feedback to inform the process.

Inaugural Lunch and Learn: Dr. Janet Zadina, an educational neuroscientist, visited the campus and provided a plenary session for all faculty, staff, and students entitled "Using Brain Research to Orchestrate Learning." A subsequent lunch was provided for 45 faculty members, who were invited to ask her targeted questions about the malleability of the brain, how it affects learning, and other advances in neuroscience.

Marketing and Communication: During the process of developing this QEP, the Topic Selection Committee met with members of the Marketing and Communication staff and shared the nature of the initiative. LCU's MarCom department then returned to a subsequent meeting with sample logos and plans for sharing the concept with the students across campus. From 2008 to 2013, LCU implemented its previous QEP, EquipLCU: Critical Thinking and Writing. The EquipLCU name was retained from this earlier QEP, since the university community, particularly the faculty, were already familiar with EquipLCU as the office from which the QEP effort is coordinated. The committee also found that the name suggested the function of the Quality Enhancement Plan, as it aims to equip all of LCU—not just the faculty or staff but also the student body.

The plans for conveying the essential quality, purpose, and theme of the QEP to the students, however, required a different approach. In consultation with our marketing team, the committee decided that the main logo will be used to identify the initiative for faculty and staff, as it describes the university as a place where academic tenacity is fostered:

Throughout the campus buildings and on the digital announcement screens posted across the university, though, we will use a logo designed for students, one that emphasizes the process of growth that the students will participate in during their time here:

This part of the marketing and communication piece of the QEP implementation will encourage students to see learning as a process that involves determined persistence, as an experience of growth that comes as we meet the inevitable challenges with expectation rather than anxiety.

The publicity campaign will also include banners that will decorate the walkways throughout the campus community. The samples below illustrate how notable quotations and relevant scripture verses will be paired with the "Pursue. Persist. Grow." theme and feature the existing "Be Blue" stamp that accompanies many LCU marketing efforts:

LCU's MarCom team designed a webpage (https://lcu.edu/resources/equip-lcu/) specific to the QEP that will promote the initiative, plus serve as a gathering place for information and relevant updates. Coordination with the marketing and communication staff will continue to be essential to our efforts, not only as we roll out the initiative and explain its theme, but also as we share with our university community how the Quality Enhancement Plan resonates with our mission and identity as a Christian institution.

III. DEVELOPMENT OF THE PLAN

LITERATURE REVIEW

Background Information and Rationale

During their first year of college, many undergraduate students face significant challenges that increase their risk of dropping out of school. Some of these challenges are beyond the control of the institution, such as limited financial resources, or the need to balance family or work obligations, but many of them are due to day-to-day experiences on campus (in social or academic settings) that cause students to question whether they belong or will be able to be successful in college (Hennessey, 2016; O'Keeffe, 2013; Silva & White, 2013).

Susceptible students are those who contend with social or economic disadvantages, including ethnic minorities, the academically disadvantaged, students with disabilities, students of low socioeconomic status, probationary students, and first generation college students (Collier & Morgan, 2008; Heisserer & Parette, 2002). Many of these students can experience negative outcomes even when they enter college with identical academic qualifications (Aronson, Fried, & Good, 2002; David S. Yeager et al., 2016, p. 1).

> Being the first in one's family to attend college or being a member of an underrepresented group increases the persistence and pervasiveness of these worries [related to success and belonging] because these students are aware of negative stereotypes about their ability to succeed in college (Hennessey, 2016, p. 1).

A recent summary of the National Student Clearinghouse Research Center's report on national college completion rates (Zinshteyn, 2016) projected that the total number of first generation, lower-income, and non-white students enrolling in college will increase significantly over the next few decades. **Figure 4** (below) shows the demographic data for LCU over recent years.

Figure 4: Percentage of LCU Student Ethnicities (2007-2015)

LCU ethnicity percentages over time
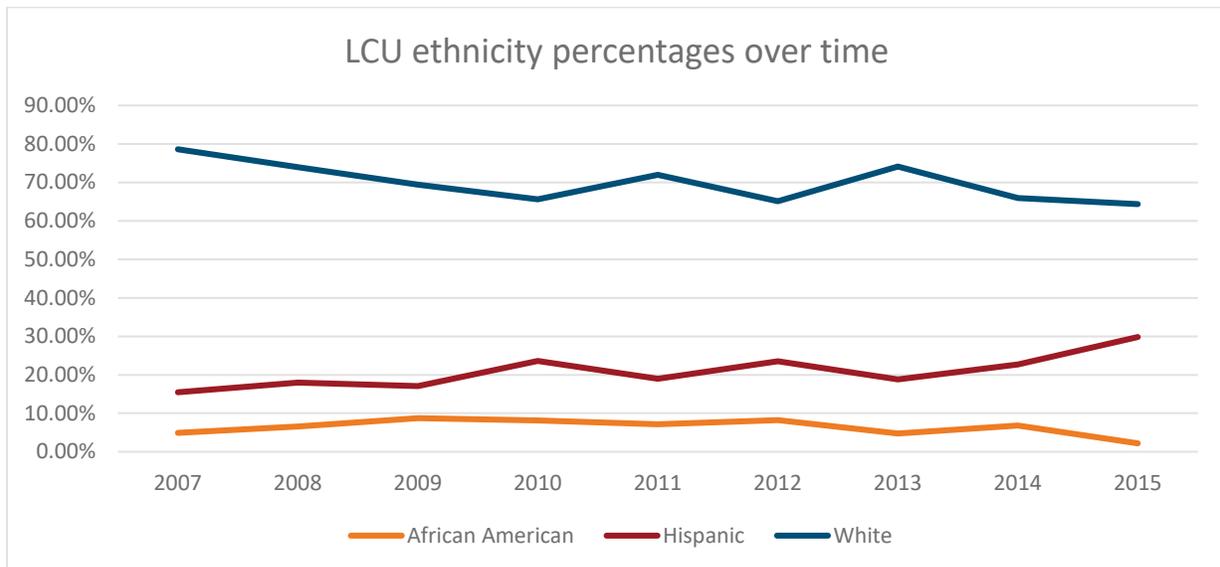
Congruent with national findings, **Figure 4** illustrates that the percentage of Hispanic students enrolled at Lubbock Christian University rose approximately 14% while the percentage of white students dropped approximately 14% between 2007 and 2015.

Additionally, as illustrated in **Figure 5** (below), while first generation students surprisingly dropped approximately 9% recently, the overall percentage of low and middle-income students rose while the percentage of high-income students dropped.

Figure 5: LCU Students - Socioeconomic Status and First-Generation Status (2007-2015)
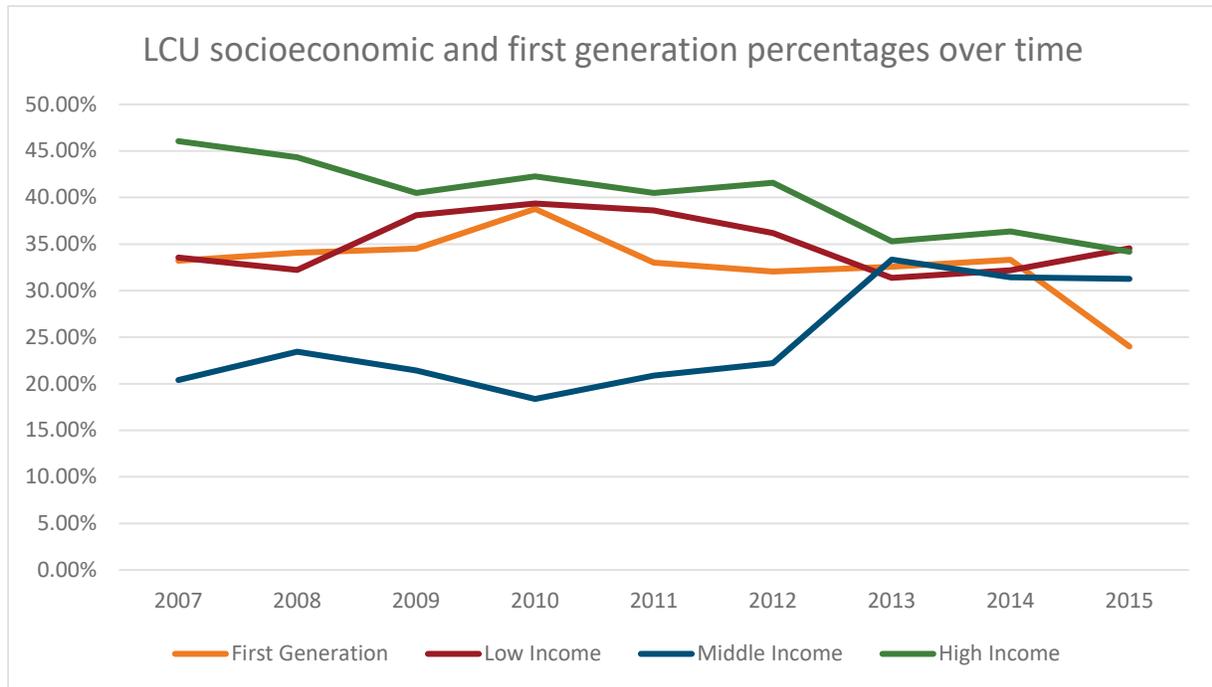
Figures 3 and 4 provide evidence that our student population is becoming more diverse and that more and more students are matriculating from low and moderate incomes. Notice in Figure 2 (p. 5) that our Year 1 (freshman to sophomore) retention rates are low, especially for the racially diverse, first generation, and low to middle income student. So, to support an ever-changing population of students and address problems related to retaining them, it is important for us to purposefully attend to factors that affect their potential for academic success and ability to persevere through adversity.

Therefore, the purpose of this Quality Enhancement Plan (QEP) is to instill and foster academic tenacity among beginning undergraduate students in order to support persistence.

Academic Tenacity

Non-cognitive factors that promote long-term academic success and that are relevant to our purpose can be brought together under the label of *academic tenacity.* Academic tenacity refers to the mindsets and metacognitive skills that allow students to look beyond short-term concerns to longer-term or higher-order goals, and then withstand challenges and setbacks to persevere toward these goals" (C. Dweck, Walton, & Cohen, 2014, p. 4). According to Dweck, students

who are academically tenacious, 1) feel that they belong academically and socially, 2) see school as relevant to their future, 3) work hard and can postpone immediate pleasures, 4) are not derailed by intellectual or social difficulties, 5) seek out challenges, and 6) remain engaged over the long haul.

Growth Mindset

Decades of research by psychologist Dr. Carol Dweck of Stanford University and others has resulted in groundbreaking findings related to implicit theories of intelligence and how they affect learning and learning behaviors.

> These implicit theories refer to the two different assumptions people may make about the malleability of personal attributes; they may believe that a highly valued personal attribute, such as intelligence or morality, is a fixed, nonmalleable trait-like entity (*entity theory)*, or they may believe that the attribute is a malleable quality that can be changed and developed (*incremental theory).* To illustrate, an entity theory of intelligence is the belief that intelligence is a fixed trait, a personal quality that cannot be changed. Individuals who subscribe to this theory believe that although people can learn new things, their underlying intelligence remains the same. In contrast, an incremental theory of intelligence conceives of intelligence as cultivatable (i.e., individuals may become more intelligent through their efforts). (Carol S. Dweck, Chiu, & Hong, 1995, p. 267)

These findings are summarized in *Mindset: The New Psychology of Success* (Carol S. Dweck, 2006) and termed "fixed" and "growth" mindsets. In short, students who hold an incremental view of intelligence or a growth mindset believe they can improve through effort and tend to pursue learning goals. They focus on learning new concepts and improving their competence. When tasks become challenging, students with a growth mindset appear to experience less anxiety, put forth more effort, and increase their engagement. Students who hold an entity view of intelligence or a fixed mindset tend to pursue performance goals; they are concerned with demonstrating their intelligence, getting a good grade, and prefer tasks that will verify that they are smart and capable. When tasks become challenging, fixed mindset students often become debilitated and disengage (Aronson, 2002, Dweck, 2006).

Much research has been conducted in the field of neuro- and cognitive science that reveals that the brain is indeed very malleable and changes over time (Fitzgerald & Laurian-Fitzgerald, 2016; Sousa, 2006), supporting the incremental theory of intelligence. Ludvik (2016), in *The Neuroscience of Learning and Development*, outlined advances in neuroscience research related to learning. Citing Wickens (2014), she stated:

> These discoveries would have been impossible without the advent of modern technology to provide data along with new conceptual insights to interpret (and extrapolate) their significance. Both neuroimaging and microscopy have unveiled the increasingly complex and intricate ways in which the brain works. In interpreting these data in novel approaches, scientists have come to understand that these connections between neurons, or neuronal pathways, are endlessly changing and are essential in normal brain functioning, specifically for learning and development (p. 31).

Modern research offers us, then, a scientific basis for what we believe to be true about the potential of our students to grow and learn. "What we find is people really do change their brain functions in response to experience," said Kurt W. Fischer, the director of Harvard University's Mind, Brain, and Education Program. "It's just amazing how flexible the brain is. That plasticity

has been a huge surprise to a whole lot of people" (Sparks, 2012). Such insights into the science of learning have great potential to shape the attitudes and behaviors of both faculty and students.

Best Practices

Research has demonstrated that growth mindset and metacognitive skills can be best developed in students through discovery and application. The length of time spent learning about these topics may be less important than the guided application of the concepts. Based on relevant literature, critical components in the development of academic tenacity include 1) instilling an understanding of growth mindset through a brief informational introduction, 2) applying what was learned to a specific situation, 3) setting expectations for feedback as a process of growth, revision, and opportunity for learning, 4) supporting metacognitive development through student self-assessment of existing skills and needs, and 5) setting process-based learning or mastery goals as opposed to strictly outcomes-based performance goals.

Growth mindset is especially important in subject areas where many incoming students may be insecure, like mathematics. Blackwell, Trzesniewski, and Dweck (2007) researched intervention strategies to increase growth mindset and academic success in math among low-achieving middle school math students whose grades had been progressively declining. Their study found improvement in motivation to complete challenging math problems. It also revealed a rebounding grade pattern among low-achieving middle school math students who were included in a series of eight short seminars that focused on how the brain changes during learning, the malleability of intelligence, and study skills. Importantly, other low-achieving math students participated in a similar eight-week seminar with identical study skills and brain development information but no information about the malleability of intelligence, and the grade pattern for this group continued to decline. This study utilized an extended, eight-week seminar style of instruction, but research has shown that shorter methods of instruction may be equally effective if students apply the information.

Several studies have examined the use of shorter, web-based instruction to facilitate student development of growth mindset (Paunesku et al., 2015; D. Yeager et al., 2013). For example, Yeager, Walton, et. al. (2013) found that students who completed a web-based instruction and application lesson on the malleability of intelligence a few weeks before high school graduation were more likely to persist and maintain full-time enrollment at the end of their first year in college. Yeager and Paunesku also used this brief web-based instruction and application design for beginning undergraduates at a large university. The training included specific information about transitioning to the university for all students, but an experimental group had instruction and an application exercise for growth mindset. Students who completed the growth mindset exercise were more likely to persist through the first academic year, successfully completing full-time each semester. These results were more pronounced among African-American beginning students.

The web-based instruction used in these studies included a one-time, brief, informational session on the malleability of intelligence as well as specific knowledge about the transition to college. Students wrote about what they learned, and then applied this information in a short writing exercise to encourage another student who was struggling.

Paunesku, et al., (2015) also used a web-based instruction and application design in a study of mindset intervention and academic improvement in high-school and college students. Groups of

high-school students with low grades showed an overall increase in GPA of 0.18 after completing the mindset intervention, as well as increasing the percentage of classes successfully completed by 7%. Similarly, among community college students, Paunesku et al., (2015) found increased GPAs among underrepresented Latino/a students who completed the mindset intervention. These studies indicate that instilling mindset awareness through information and relevant application, even with web-based delivery, can positively impact student persistence, progress, and overall GPA.

Improving academic performance is critical to the success of beginning undergraduate students, but another important factor for students transitioning to college is social fit at the new institution. Mindset interventions, like those used to increase academic performance have been associated with higher levels of engagement and academic success among minority, African American students at a university where most of the students are white (Aronson, Fried, and Good, 2002). Intervention strategies are like those described above, involving learning briefly about mindset strategies and malleability of social belonging, and applying this information to a reflective exercise (writing a letter or reflective writing). Introducing students to growth mindset thinking about social belonging has been associated with higher levels of satisfaction regarding students' perceived "fit" at the institution, as well as satisfaction with and higher academic success in their courses (Aronson, Fried, and Good, 2002). Interventions such as these have also been shown to help students remain engaged and optimistic about other people, even when experiencing conflict (David S Yeager & Dweck, 2012). This is a critical skill for beginning undergraduates.

After students become aware of the malleability of intelligence and the benefits of growth mindset, specific instructor strategies for feedback and assignment corrections have been found to foster support for these ideas. Before an assignment, reminding students that the assignment is an opportunity to practice, and the more they practice the more proficient they will become, has resulted in students attempting more difficult assignments, and progressing to higher levels of proficiency earlier than peers who did not receive this instruction (Williams, Paunesku, Haley, & Sohl-Dickstein, 2013). Students have been found to be twice as likely, or more, to revise and resubmit assignments when the returning of graded assignments is prefaced by a reminder that while the course has high expectations, the instructor believes that students are capable of meeting those expectations, and when the instructor then provides constructive feedback to show the student opportunities to improve their grades by correcting and resubmitting (Yeager, et al., 2013).

Among minority, African-American students in this study, the impact was even more dramatic. In groups without the intervention, 17% of students would submit revised essays, compared to 72% of students who chose to resubmit after receiving the feedback intervention. These interventions were not difficult to implement and dramatically changed student response to critical feedback. The growth mindset is fostered in students when professors supplement existing feedback methods with messages about improving, learning, and developing with time and effort, and when they then allow students to revise submitted work based on the critical but helpful feedback (Rattan, Savani, Chugh, & Dweck, 2015).

Metacognition

It is essential to recognize the importance of metacognition in the learning process as we attempt to instill and foster academic tenacity in students. Effective learning requires metacognition. Although there are many definitions in the literature, metacognition can be broadly defined as having knowledge about cognition, and control over/regulation of one's own

cognitive systems (Händel, Artelt, & Weinert, 2013; Vrugt & Oort, 2008). "Knowledge about cognition refers to the knowledge about memory, comprehension, and the learning process that an individual can verbalize. Thus, it includes knowledge about the strengths and weaknesses of one's own memory and learning, about cognitive requirements of tasks (i.e., their complexity and difficulty), as well as knowledge about ways and means of attaining cognitive learning and achievement goals. Metacognitive knowledge about strategies means knowledge about effective methods of learning" (Händel et al., 2013, p. 165).

Regulation of cognition refers to a set of activities that empowers students in their own learning and corresponds to knowledge about the way students plan, implement strategies, monitor, correct errors, and evaluate their own learning (Mytkowicz, Goss, & Steinberg, 2014; Schraw & Dennison, 1994; Vrugt & Oort, 2008). Students who regulate their own learning through metacognition can monitor their current level of understanding, predict their own performance on various tasks, and manage learning processes that lead to understanding.
Growth mindset has been clearly linked with metacognition. Students who hold a growth mindset tend to utilize more effective study practices (Cury, Da Fonseca, Zahn, & Elliot, 2008; Jones, Slate, & Blake, 1995) and monitor their own learning. They are more likely to set learning goals (Conley & French, 2014), discover gaps in their understanding, decide whether and when to engage in learning tasks, know how to focus their study time, and make decisions related to strategy use (Ehrlinger, Johnson, Banner, Dunning, & Kruger, 2008). In addition, they have a willingness to engage in positive study strategies (Blackwell et al., 2007) and tend to provide a more accurate self-assessment than those who hold a fixed mindset.

These findings suggest that students with a growth mindset are more likely to choose self-regulated strategies and show greater metacognitive accuracy more often than do students with a fixed mindset. However, metacognitive acuity is often lacking in college students and must be developed if they are to be fully realized and leveraged to work in conjunction with a growth mindset. Lamar and Lodge (2014) assert that many first-year students enter higher education without the knowledge and regulative assets necessary for academic success. In their work, they discuss the overarching need for higher education, in general, to provide first-year students with an introduction to, and with experience in applying, metacognitive strategies.

Metacognition has also been strongly linked with improved college GPAs, college readiness, and retention (Conley & French, 2014; Lamar & Lodge, 2014; Mytkowicz et al., 2014; Vrugt & Oort, 2008). This is due in part to the idea that it places an emphasis on learning or mastery goals (a desire to acquire knowledge or master new skills) as students work toward developing a deep understanding of the material, rather than on performance goals (an emphasis or desire to demonstrate high ability and make a good impression). Research indicates that students who hold performance goals use fewer self-regulated learning strategies (Bartels & Magun-Jackson, 2009; Vrugt & Oort, 2008) and thus experience reduced achievement.

In addition to increased learning, metacognition is also an important component of student persistence. Conley and French (2014) characterized persistence as having a passion for a goal and the ability to self-regulate to achieve that goal. It encompasses the notions of grit (Duckworth, Peterson, Matthews, & Kelly, 2007) and academic tenacity (Dweck, et al., 2014), in that students with persistence know when and how to seek help and they work to overcome obstacles on their own. They value hard work and seek mastery and understanding over performance. "Students with persistence have the mind-set to overcome challenges; these students see failure differently than those with low persistence and a fixed mind-set" (Conley & French, 2014, p. 1028). Silva and White extend the definition to include the concept of

productive persistence – a package of skills and tenacity that students need to succeed in an academic setting (Silva & White, 2013), despite challenges that arise.

Best Practices

Growth mindset and academic tenacity are supported by the development of key metacognitive skills among students. Best practices for metacognitive development have been found to be effective in the development of general student behaviors like study skills or goal-setting, as well as content knowledge in specific disciplines. Research indicates that a critical component in the development of metacognitive skills is student self-reflection and self- assessment (Lamar & Lodge, 2014; Locke & Latham, 2006; Tanner, 2012).

Goal setting strategies are important for students as they develop the ability to reflect on their learning and assess their progress. Student goals associated with academic success should incorporate student self-evaluation of previous success and failure with instruction on the malleability of ability with effort (Locke and Latham, 2006). Learning or mastery goals that focus on skills or knowledge to be gained rather than performance goals that focus solely on the grade students want to receive are more effective at helping students adapt to change and persist through difficulty. Students who work toward learning or mastery goals gain higher levels of satisfaction in their academic program and progress and earn higher GPAs (Latham & Brown, 2006; Locke & Latham, 2006).

Student reflection on what is already known about the topic, or what might be learned in the process, or what they think they need to learn before beginning a learning experience, followed by self-reflection on the learning process after receiving feedback on assignments have been identified as best practices for learning, and have been shown to improve learning and academic performance (Lamar and Lodge, 2014; Tanner, 2012). Students who have the opportunity to reflect on their goals and critically assess why learning a particular skill or topic is valuable to their success, demonstrate higher levels of engagement in assignments (Lamar and Lodge, 2014). Repeating this opportunity throughout a course allows students to practice self-assessment and self-evaluation of their own learning to identify areas of weakness.

The intervention methods used in research to help students develop growth mindset and metacognition have potential for practical application. A critical component in the practices described above is student reflection on and application of learning. Instilling growth mindset in beginning undergraduate students is not simply a matter of teaching students about growth mindset, rather the process requires opportunities for students to reflect upon what they have learned (perhaps through a simple writing assignment) and to think through the application of that information to a specific situation in their own experience or that of another person.

Classroom feedback and assignment structures can also be used to support and further develop growth mindset in students. Reminding students that academic expectations are high and providing feedback to help them develop the skills necessary to meet those expectations is a critical process for supporting the development of growth mindset. Pedagogy that supports growth mindset cannot simply pay lip service to the idea that feedback is a learning opportunity, rather students must have actual opportunity to incorporate instructor feedback through revision or correction opportunities.

Similarly, the metacognitive intervention methods described above are possible in a classroom setting and require opportunities for student application. Student metacognitive self-awareness encompasses a range of activities involved in planning, monitoring, and evaluating one's own

learning and academic progress. Implementing assignments and opportunities for students to articulate learning- or process-related goals for specific topics will enable them to reflect on current understanding, to plan for learning new or difficult concepts with the support of time management and study skills, to monitor learning throughout the topic, and reflect on learning. Lamar and Lodge (2014) argue that increased student retention and attitudes that support life-long learning are more likely when students have had the opportunity to "select and understand the strategy they employ to engage with the task," "reflect on the learning they have engaged with," and integrate student perception of learning in selecting strategies for learning new topics (p. 101).

The ultimate goal of metacognition research is to devise methods that will improve student performance in the classroom. Research on how best to teach metacognition knowledge and skills has evolved in the last three decades. Although current research confirms that metacognitive training is effective across disciplines and age groups (Cassata & French, 2006; Dunlosky & Lipko, 2007; Hattie, 2009; Vrugt & Oort, 2008), studies related to instruction in the educational core areas of English and math courses are critical to this QEP project.

Metacognition Training and English Writing Courses

Butterfield, Hacker and Albertson (1996) examined the development of research on metacognitive training and text revision from the 1970s to the early 1990s. Their meta-analysis of existing studies revealed that by the mid-1990s, researchers were testing strategies to teach metacognitive understanding to students with the goal of improving writing in English courses. Systematic research on the effectiveness of these strategies, however, suffered from a variety of methodological problems. Although the research indicated training in metacognitive skills could potentially improve a student's ability to write and revise papers, there was no clear data on which strategies might be most effective. The following decade elicited more authoritative research showing clear connections between metacognitive training and writing performance. Recent studies have revealed key elements that are critical to student adoption of more sophisticated metacognitive strategies when writing.

One early study frequently cited in the literature is Englert, et al.(1991), which evaluated the effectiveness of an instructional program entitled Cognitive Strategy Instruction in Writing (CSIW). CSIW is designed to develop students' metacognitive knowledge about writing using teacher modeling of inner dialogue, scaffolding, procedure-oriented think sheets, and peer collaboration. One hundred and eighty-three fifth grade students from twelve schools participated in a year-long experiment to test the effectiveness of CSIW. Students were divided into experimental and non-experimental groups. The non-experimental students received standard instruction. The CSIW students were given think sheets designed to make writer self-talk evident. Separate think sheets were created for each letter in the acronym POWER, which stands for Planning, Organizing, Writing, Editing, and Revising. Teachers introduced various forms of textual analysis and then modeled the writing process for each type of text. The students would produce a group paper of the same type and then finish with an independently produced paper. The think sheets were used as a reference throughout. This teaching strategy was repeated for each type of writing examined during the school year. The results indicated that students using CSIW improved in their writing skills and understanding of their audience. They were also able to generalize their learning to writing assignments outside the experiment. All students benefitted from the program, but learning-disabled students improved faster than non-learning-disabled students.

In a follow-up study, Englert, et al. (1992) replicated the study with 15 learning disabled and 15 non-learning-disabled students in upper elementary school, with a greater emphasis on uncovering the students' self-talk during writing. This study found once again that students benefitted from the use of think sheets, teacher scaffolding, and peer dialogue. Also, learning disabled students showed greater gains than non-learning-disabled students, although all students improved in their performance. Studies like Englert, et al., which indicate greater improvement for learning disabled students, led to several studies focusing on the impact of metacognitive techniques on this population.

Yarrow and Topping (2001) used an experimental design to test the effectiveness of a paired writing system in developing metacognitive skills. The paired writing system makes use of student collaboration and teacher scaffolding to improve student writing. The system developed by Topping incorporates six steps: 1) Generating Ideas, 2) Drafting, 3) Reading, 4) Editing, 5) Production of a Best Copy, and 6) Evaluating. A mixed-ability class of 28 ten- to eleven-year-old students were randomly divided into matched groups. The treatment group was rank ordered in terms of ability and then divided in two. Students in the top half of the treatment group were assigned the tutor role, and students in the bottom half were assigned the learner role. All students received training in the paired writing process, but the experimental group received additional training. The researcher displayed the flow chart with each step being explained and modeled by the researcher. Children could ask questions for clarification and then practice the steps working in their assigned pair groupings.

The teacher and researcher monitored the groups as they worked. Coaching was provided when necessary and was followed with praise for successfully completing the task. A standardized sequence of explanation, demonstration, clarification, practice, monitoring, coaching, and reinforcing was repeated for each step of the process. Both groups were given a six-week time frame to produce five pieces of writing. Four paired writing sessions per week were allotted for the intervention team. The results indicated that metacognitive content of the Paired Writing System led to improvements in writing for the treatment and the non-treatment group. Although both tutors and learners showed greater improvement than the non-treatment group, students taking the learner role in the pairs showed the most significant gains. Both tutors and learners in the paired groupings generalized their learning to a post-intervention writing context. The quality of student writing did diminish when the helping pairs were disbanded, but writing products were still better than before the experiment began.

These three studies illustrate the types of metacognitive training strategies that have evolved in the English writing courses. The strategies rely on teacher explanation, teacher modeling, teacher scaffolding, group interaction, and final movement toward independent writing. A meta-analysis by Hattie (2009) supports these findings, suggesting that metacognitive training can be highly successful if it is done in small groups, with varied instructional strategies, with teacher modeling, and with strong teacher support. Hattie also finds that remedial students benefit the most from this type of training, probably due to a lack of solidified study techniques.

Metacognition Training and Math Courses

Research on metacognitive training in math classes has also become commonplace over the years. Although teacher explanation, scaffolding, and group work are used, innovative tools have emerged as a means of facilitating metacognitive training for math students of all ages. Perels and Schmitz (2009) conducted an experiment in which 95 eighth grade students were trained to use standardized diaries to self-monitor their performance when completing homework. The performance of these students was compared to a control group. The diaries

consisted of a series of questions designed to measure self-regulation and self-efficacy during the planning stage, action stage and post-action stage of completing homework. It was found that metacognitive skills increased in those students using the diaries. Self-regulation, self-efficacy, and math performance all increased. It was reported that training by the teacher in the use of the diaries was critical to the studies success. The goal was to use the diaries for a short period of time until self-regulation techniques were engrained into the students' study repertoire.

Bol, et al. (2016) implemented an experiment designed to explore the impact of Self-Regulated Learning (SRL) on students' metacognition and achievement in developmental math courses offered at a community college. Students from sixteen classrooms were randomly assigned to experimental or control groups. Zimmerman's (2002) cyclical model formed the core around which four SRL exercises were designed. The model takes learners through a process of planning (goal setting, strategy selection, and assessment of self-efficacy), performance (staying on task, self-instruction, and self-monitoring), and self-reflection (assessing goal attainment, self-reaction, and adjusting for future success). These exercises were completed weekly. The same exercise was performed for three weeks in a row. Teachers trained students in SRL. On a weekly basis students set goals, reviewed a study habits checklist to be applied during the week, completed a time management schedule, and maintained a journal that reflected on how well they met the previous week's goal and on their goal for the upcoming week. Work was submitted in an online program called MyMathLab. MyMathLab detected problems with students' independent work as they completed tasks on the program. The results indicated that SRL training improved math grades, metacognitive skills, time management, and study environment management.

Metacognition training has been found to be an effective means to increase math performance with students of all ages. Pennequin, Sorel, & Mainguy (2010) examined the effects of metacognition training on the ability to solve mathematical word problems among 32 adults aged sixty and over. The sample was divided into a control and an experimental group. One-hour training sessions were conducted for participants over a 5-week period. Only the experimental group received training in metacognitive strategies. The training was conducted with an instructor and at least two other students to facilitate discussion. Training was found to significantly increase metacognitive knowledge, metacognitive skills, and math performance. These studies emphasize the importance of teacher modeling, scaffolding, monitoring progress, and peer interactions in metacognitive instruction, in combination with learning tools such as computer programs and diaries that enhance the learning process.

Academic Environments

Research related to educational initiatives and reform traditionally focus on inputs and outputs but often neglect what goes on in the classroom. "It stands to reason that the classroom climate and the learning context that teachers and their students co-create will impact the effectiveness of any intervention that is introduced with the intent of improving student outcomes" (Schmidt, Shumow, & Kackar-Cam, 2015). There is strong evidence that classroom teachers play a critical role as facilitators of change (Battista, 1994; Cuban, 1990; McGrath et al., 2016; Orit Avidov & Tamar, 2017), and as a result, are a central component of educational reform. Wenglinsky (2000) claimed that "changing the nature of teaching and learning in the classroom may be the most direct way to improve student outcomes" (p. 11). Cuban (2007) asserted that teachers are the gatekeepers to learning and crucial to student growth. Overall, it is quite evident that student learning and success are directly dependent upon what teachers do in the classroom (Hanushek, 2004).

In addition to developing a growth mindset in students early in their college career, it makes sense to provide a classroom environment that supports and promotes students in their efforts. Teaching faculty need to have a growth mindset about themselves and their students, understand principles related to growth mindset and metacognition, utilize practices that instill and support adaptive mindsets, and implement assessment measures that allow for more rapid learning from practice. For example, teaching practices congruent with a metacognitive approach to learning include those that focus on sense-making, self-assessment, and reflection on what worked and what needs improving (Bransford, Brown, & Cocking, 2000).

Training faculty to have a growth mindset is an essential component of effective, large-scale implementation. Rheinberg (as cited in Carol S Dweck, 2007) found that when teachers had a fixed mindset, the students who entered their class as low achievers left as low achievers at the end of the year. When teachers had a growth mindset, however, many of the students who had started the year as low achievers moved up and became moderate or even high achievers (Carol S. Dweck, 2010). Teachers with a growth mindset will model growth mindset approaches to teaching and learning and will provide growth mindset praise that has shown to encourage and support, whereas fixed mindset praise has been shown to have detrimental effects on the learner and the learning process.

> In fact, adults are always sending messages that shape students' mind-sets. For more than a decade, my collaborators and I have studied the effects of praising students' intelligence as opposed to praising their effort. When adults praise students' intelligence after a student performs well, they send a fixed mindset message: you're intelligent and that's what I value in you. When adults praise effort (or strategies), however, they send a growth mindset message: you can build your abilities through effort. What happens when students have been praised for their intelligence or their effort and then they encounter difficulty? The differences are remarkable. Those who are praised for intelligence lose their confidence and motivation, their performance plummets, and they are ashamed of their difficulty (almost 40% of them lie about their score). But those who are praised for effort remain undaunted and their performance continues to improve. In fact, many of them enjoy the challenge (Carol S. Dweck, 2010, p. 28).

The learning environment within a classroom, then, is shaped by the instructor's mindset, and the teacher's approach to challenging and encouraging students can either weaken or strengthen their ability to cope successfully with the difficulties they will inevitably face.

Training faculty to create learner-centered environments

Of particular importance to creating a learning environment that supports adaptive mindsets is an understanding of how students learn. An in-depth study of *How People Learn: Brain, Mind, Experience, and School* (Bransford et al., 2000) has the potential to accomplish this goal. This seminal work published by the National Research Council provides significant findings about learning and links those findings to practice. Prior to its release in 2000, most educators operated under behaviorist theories that viewed learning as a process of forming connections between stimuli and response and that relied on the measurement of observable data. Behaviorism neglected, however, the inner mental processes related to learning, as they were considered elusive and subjective. Thus, educators subscribed to instructionism, believing that students learned through listening to their teacher, memorization, and drill and practice, and that learning was evidenced through recitation of declarative knowledge.

Beginning in the 1970s, a technological revolution ensued, and new experimental tools and methodologies made it possible for scientists to actually test their theories about learning, giving birth to a new field – cognitive science. The cognitive sciences include knowledge drawn from neuroscience, anthropology, linguistics, philosophy, developmental psychology, computer sciences, and socio-cognitive studies and their combined knowledge base is referred to as the *learning sciences* or the *science of learning*.

The findings of these learning science researchers revolutionized what we know about the processes of the mind during learning. They discovered that instructionism was deeply flawed and released three key findings:

1. Students come to the classroom with preconceptions about how the world works. If their initial understanding is not engaged, they may fail to grasp the new information and the new concepts that are taught, or they may learn them for purposes of a test but revert to their preconceptions outside the classroom.

2. To develop competence in an area of inquiry, students must: (a) have a deep foundation of factual knowledge, (b) understand facts and ideas in the context of a conceptual framework, and (c) organize knowledge in ways that facilitate retrieval and application.

3. A "metacognitive" approach to instruction can help students learn to take control of their own learning by defining learning goals and monitoring their progress in achieving them.

There is evidence that many teachers, administrators, and policy makers are embracing the learning sciences and implementing learner-centered strategies in their classrooms. *The Cambridge Handbook of the Learning Sciences* (Sawyer, 2006) provides an in-depth look at the findings described in *How People Learn* (Bransford et al., 2000) and offers numerous examples of these principles in practice and would serve to supplement individual concepts as required by various faculty members in different disciplines.

How People Learn also strongly promotes the use of formative assessment or Assessment *for* Learning (AfL). Black & Wiliam (1998) described formative assessment as "all those activities undertaken by teachers, and by their students in assessing themselves, which provide information to be used as feedback to modify the teaching and learning activities in which they are engaged. Such assessment becomes 'formative assessment' when the evidence is actually used to adapt the teaching work to meet the needs" (p. 2). Thus, formative assessment is not a strategy, event, or instrument, but rather an approach to assessment that involves both the teacher and the student, and evidence from the assessment *forms* what comes next in the learning process.

The role of the student as partner in the assessment process distinguishes formative assessment from most other types of assessment. Chappuis (2009) defined it as "formal and informal processes teachers and students use to gather evidence for the purpose of improving learning" (p.5). In effect, it is any assessment in which promoting student learning is the first priority (Black, Harrison, Lee, Marshall, & Wiliam, 2003, p. 2), in contrast to summative assessments, which are "assessments that provide evidence of student achievement for the purpose of making a judgment about student competence or program effectiveness" (Chappuis, 2009, p. 5), such as course semester or final exams, and state-mandated, standardized tests.

Formative assessment reinforces and supports classroom practices consistent with the growth mindset model. "In mathematics for example, if students are working on short, closed questions that have right or wrong answers, and they are frequently getting wrong answers, it is hard to maintain a view that high achievement is possible with effort. When tasks are more open, offering opportunities for learning, students can see the possibility of higher achievement and respond to these opportunities to improve. This change is consistent with other work in formative assessment" (Boaler, 2013, p. 143).

An in-depth study of *Seven Strategies of Assessment for Learning* (Chappuis, 2015) has the potential to help faculty develop the repertoire of practices needed to effectively implement formative assessment or AfL strategies that support metacognition and a growth mindset. In Chappuis' book, she describes research-based strategies that are formulated around three essential questions: Where am I going? Where am I now? and How can I close the gap? These strategies are designed to be easily adapted into existing curriculum.

Where Am I Going?
Strategy 1: Provide students with a clear and understandable vision of the learning target.
Strategy 2: Use examples and models of strong and weak work.

Where Am I Now?
Strategy 3: Offer regular descriptive feedback during the learning.
Strategy 4: Teach students to self-assess and set goals for next steps.

How Can I Close the Gap?
Strategy 5: Use evidence of student learning needs to determine next steps in teaching.
Strategy 6: Design focused instruction, followed by practice with feedback.
Strategy 7: Provide students opportunities to track, reflect on, and share their learning progress.

This recursive model allows faculty to see the learning process from the students' perspective, as they understand that 3 questions that structure the approach are being asked by the students. This model also empowers students, then, to take an active role in their learning:

The seven strategies described here are designed to help students better understand their learning goals, recognize their own skill level in relation to the goals, and take responsibility for reaching the goals. By expanding our formative assessment practices to systematically involve students as decision makers, teachers acknowledge the contributions that students make to their own success and give them the opportunity and structure they need to become active partners in improving their learning (Chappuis, 2005).

Central to such a model is an appreciation for the value of self-assessment, as the students take ownership of their learning and of their progress toward the goals that they have set for themselves.

Assessment Instruments

Instruments used to measure the success of the interventions described in the literature fall into three primary categories: 1) instruments gathering student self-reported beliefs about the malleability of intelligence or their use of metacognitive strategies, 2) student artifacts incorporating growth mindset or metacognitive strategies to complete assignments, or 3) institutional data such as course completion rates or GPAs.

Instruments used to measure increases in growth mindset use a Likert scale for students to rate the level to which they agree with statements about the malleability of intelligence (e.g., *"You have a certain amount of intelligence and you can't do much to change it," "You can learn new things but can't change intelligence,"* or *"Your intelligence is something about you that you can't change very much"*) (Aronson, et al., 2002; Paunesku, et al., 2015). The number of questions used to assess growth mindset development with this type of instrument varied from two to six questions in the literature (Aronson et al., 2002; Blackwell et al., 2007). Blackwell, et al. (2007) incorporated questions to rate student agreement on a Likert scale with positive and negative views of effort (e.g., *"The harder you work at something, the better you will be at it,"* or *"To tell the truth, when I work hard at my schoolwork, it makes me feel like I'm not very smart"*).

Studies of the impact of metacognitive interventions on student success have used different types of assessment instruments, depending upon the skills being evaluated. Latham and Brown (2006) utilized a self-efficacy questionnaire assessing individual student beliefs that he or she could successfully accomplish a portion of, all of, or more than his or her established goals for the year—measuring the impact of different types of goals on individual self-efficacy beliefs. Blackwell, et al. (2007) used the Patterns of Adaptive Learning Survey (PALS) to assess student personal goal and task goal orientation. Mytcowicz, et al. (2014) utilized an existing assessment instrument, the Metacognitive Awareness Inventory to assess the development of student self-awareness of learning, planning strategies, and implementation, monitoring, and evaluation of learning strategies. *Assessing the factorial validity of the MAI in an Asian Country: A confirmatory factor analysis* (Teo & Lee, 2012*)* questioned the validity of the MAI; however, Young and Fry (2008) assert that the results are promising. "Given the positive correlations between the MAI and end of course grades as well as GPA, it can be a tool for professors to use to screen students in need of direct instruction related to metacognition" (p. 8). However, Conley and French, (2014) note that existing standardized instruments tend to be less informative about student metacognitive development than samples of student work that demonstrate knowledge and application of these skills.

While these types of instruments are valuable research tools, they may be less effective measures of student growth in these areas or application of these concepts in academic situations (Yeager, Paunesku, Walton, et al., 2013). Yeager et al. (2013) argue, "many measures of self-reported mindsets, even if unbiased, cannot be administered repeatedly and they are not likely to be sensitive to short-term changes in student behavior because they assess global beliefs rather than concrete actions" (p. 27). In light of this, an effective assessment of student understanding and application for both growth mindset and metacognition is through analysis of student assignments incorporating these concepts. Growth mindset reflection and application activities, like writing about how the brain changes during learning, or writing an encouraging letter to a struggling student explaining that intelligence is malleable and that effort is positive, may be a better indicator of students' beliefs about learning than a standardized mindset assessment. Likewise, the work produced when students outline learning goals and strategies for learning, as well as reflect on their own learning, may be better indicators of metacognition (Conley & French, 2014; Locke & Latham, 2006; Tanner, 2012).

Finally, the literature reviewed assessed the effectiveness of the interventions used to produce specific outcomes in academic success, motivation, progress, and retention by assessing institutional data, such as increases in full-time enrollment (Yeager, Walton, Powers, et al., 2013); course withdrawal rates (Paunesku, et al., 2015); rates of successful completion for full-time enrollment (Yeager, Paunesku, Walton, et al., 2013). The literature indicates that successful incorporation of strategies to develop and support growth mindset and metacognition have positive results in all three levels of assessment: 1) student self-reported beliefs as measured by assessment instruments, 2) student application of these concepts in coursework, and 3) resulting changes in institutional data.

Conclusion

The literature is quite clear that instilling a growth mindset in students, teaching them metacognitive skills, and providing a supportive, learner-centered environment has great potential for promoting academic tenacity among students in order to support persistence. In so doing, we create an academic community of learners, transforming the hearts, minds, and hands of students for lives of purpose and service.

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IV. GOALS, LEARNING OUTCOMES, AND ASSESSMENTS

Focus Statement

The purpose of this Quality Enhancement Plan (QEP) is to instill and foster academic tenacity among beginning undergraduate students in order to support persistence.

Many students do not approach their first years of college with a growth mindset and with the metacognitive skills that would support a tenacious pursuit of intellectual development, and so they find themselves unequipped for the kinds of challenges, setbacks, and stressors that are common to the beginning college student experience. Those who see intelligence as fixed and innate, rather than shaped by effort and determined commitment, might conclude that their frustration, confusion, or academic failure is confirmation of their lack of ability or intelligence—proof of their worst fears and doubts and evidence that they do not belong in college.

However, if such students could understand instead that intelligence can be stretched, grown, formed, and developed, then perhaps they would meet the inevitable challenges of the college experience with grit and tenacity, facing their disappointments with the belief that they possess the capacity to grow. As we introduce a growth mindset in Phase I UNI 1170 courses and develop their use in the Phase II courses taken by most of our beginning students, we expect that these more academically tenacious students will positively impact our freshman to sophomore retention rates.

Our goals, learning outcomes, and assessment measures (See Appendix H for a concise Assessment Plan) with success criteria and achievement targets are outlined below, reflecting our intention to promote a growth mindset in beginning undergraduate students (Phase I) as well as equip them with metacognitive skills, and situate them in learning environments that allow them to put a growth mindset to use (Phase II). Note that the success criteria are designated as summative and formative. Summative data will be used for QEP reporting purposes; however, the primary purpose of formative assessment is to empower students as self-regulated, lifelong learners and to create an environment that deepens the learning, resulting in students who can think critically about the content and about their own learning. A secondary purpose of formative assessment is to inform and drive changes in instruction as warranted (See Learning Academy Curriculum, Appendix E), using artifacts from those activities as evidence of mastery.

Furthermore, the university is implementing an additional layer – Phase III – that will not be included in the measurement and reporting of this QEP but will contribute to the culture of learner-centered instruction that promotes academic tenacity and equips students with skills and mindsets that lead to persistence and perseverance. Phase III will support faculty who teach upper-division or other courses not included in Phase II but who choose to participate in the initiative in order to enhance their own classroom instruction. We anticipate that participation in the QEP by Phase III faculty will have a positive effect on high-impact practices such as undergraduate research, internships and capstone courses – a concern revealed during the topic selection process. Inclusion of this third phase reveals a level of commitment from the university, demonstrating its belief in the power of the skills and mindsets promoted by the QEP and a desire to broaden its impact beyond QEP accreditation requirements.

Goal 1
Instill and foster academic tenacity in beginning undergraduate students.

Rationale: Students who work hard and work smart over a long period of time possess the kind of academic tenacity that will enable them to persevere through any short-term setbacks or problems and focus on the long-term goals that they have set for themselves. Such mindsets and metacognitive skills can be shaped and fostered, as students can be taught and encouraged to practice the adaptive behaviors that lead to academic success.

Learning Outcome 1.1
Students will be able to demonstrate satisfactory knowledge and understanding about fundamentals of growth mindset in Phase I courses.

All incoming freshmen are enrolled in our Phase I University Seminar course, UNI 1170, with individual sections offered by each major and another section provided for undecided majors, for a total of 17 different sections. While the content of each class may include some material specific to a given major and its requirements or expectations for its students, the primary curriculum will be readings, exercises, and experiences that engage students in the fundamentals of growth mindset—an opportunity to instill attributes of academic tenacity. The faculty who teach each of these sections will participate in training sessions that explore the curriculum and establish a common approach to fostering growth mindset within their respective classes. The curriculum will be piloted in the spring of 2018 with a single UNI1170 class and feedback will be used to refine and strengthen the learning framework for its inaugural implementation in fall of 2018.

Assessment for Learning Outcome 1.1
Implicit Theory of Intelligence questionnaire. See Appendix C.

Students enrolled in UNI 1170 will answer a pre-Implicit Theory of Intelligence questionnaire on the first day of UNI 1170 and a post-Implicit Theory of Intelligence questionnaire at the end of the semester. This short, 3-question survey utilizes a 6-point Likert scale to determine mindset, and the pre- and post- results from these surveys will demonstrate the degree to which the mindsets of those students enrolled in UNI 1170 have changed after having been exposed to course content related to growth mindset, the malleability of the brain, expectations for feedback, social belonging, and tenacity. Results will be analyzed and used as feedback to strengthen the course for future cohorts of students and for QEP reporting purposes.

Success Criteria for Learning Outcome 1.1
1) Summative
   a. Pre- and post-Implicit Theory of Intelligence questionnaire results will show a 5% increase in student mindsets as they shift from a fixed to a growth mindset.

2) Formative
   a. Students will describe how people learn, including knowledge about the malleability of the brain and implicit theories of intelligence through written assignments.
   b. Students will share their knowledge about the power of a growth mindset through a service project.

    c.   Students will increase their sense of belonging and value through classroom activities.
    d.   Students will demonstrate an ability to respond productively to feedback.
    e.   Faculty will provide feedback to improve UNI1170 curriculum through a Qualtrics survey.
    f.   Students in Phase I courses will provide feedback through university course evaluations.

Learning Outcome 1.2

Students will develop and strengthen key metacognitive skills that support academic tenacity in Phase II courses.

Phase II courses are those core classes that are typically challenging for beginning students, such as MAT 1311: College Algebra, ENG 1301: Composition Studies, ENG 1302 Composition and Literature, and BIB 1310 Introduction to the Old Testament (see Appendix F). Curriculum in these courses will be taught by Learning Scholars and will include activities specifically designed teach important metacognitive skills that lead to self-regulated learning. Students will be given the opportunity to hone their skills through assignments and projects that purposefully include metacognitive practices, receiving valuable feedback from faculty and peers as they develop behavioral skills that support their academic success.

Assessment for Learning Outcome 1.2

Metacognitive Awareness Inventory. See Appendix D.

Students enrolled in Phase II courses taught by our Learning Scholars will take a 52-item online assessment at the beginning of the semester (pre-test) and at the conclusion of the semester (post-test). The survey questions provide students an opportunity to reflect on their own learning behaviors in five Regulation of Cognition categories: planning, information management strategies, comprehension monitoring, debugging strategies, and evaluation of their own learning. Pre-test results will be used by the students to self-assess and set goals, and by the Learning Scholars and QEP to measure the degree to which students report changes in their regulatory behaviors over the course of the semester. Analysis of the data will be used by the Learning Scholars to strengthen the implementation of metacognitive strategies for future semesters and by the QEP for quality assurance purposes.

Success Criteria for Learning Outcome 1.2

1) Summative
    a.   Pre- and post-Metacognitive Awareness Inventory results will show a 5% increase in at least one 'Regulation of Cognition' strategy per course.

2) Formative
    a.   Students will identify their own personal strengths and weaknesses related to self-regulatory learning through a self-assessment activity.
    b.   Students will develop and strengthen key metacognitive skills that contribute to their academic success through activities specifically designed to develop those skills.

Operational Outcome 1.1
Retention rates for freshmen to sophomore level students will improve.

Assessment for Operational Outcome 1.1
Retention rates for beginning undergraduate students.

Each year, our Office for Institutional Effectiveness maintains data on student retention rates, and this information can be used to measure the effect of our QEP upon those transitioning from their freshman to sophomore years.

Success Criteria for Outcome 1.1
1) Summative
   a. Improve retention for minority, first generation, and low to moderate income students by 10% and overall retention by 3%.

2) Formative
   a. Reduce the number of drops, withdrawals, and failures from Phase II courses.

Goal 2
Develop learning environments that support a growth mindset and academic tenacity.

Rationale: Providing a learning environment that supports adaptive mindsets and teaches students effective learning behaviors has the potential to empower students in their own learning as they practice and hone their skills.

Operational Outcome 2.1
Faculty and staff will develop knowledge and skills that promote academic tenacity in students.

A Learning Academy will be established in which selected Phase II and Phase III Learning Scholars participate, receiving year-long training that focuses on growth mindset, metacognitive skills, and learner-centered environments that support them. The Learning Scholars will use practice-centered inquiry to investigate learning frameworks that support and reinforce best practices and make appropriate changes to their curriculum for the following fall semester. Additionally, professional development opportunities such as Lunch & Learn events will be offered throughout the fall and spring semesters, encouraging faculty and staff to gain knowledge from each other as LCU builds a community of learners related to the focus of this QEP.

Assessments for Operational Outcome 2.1
(1) Number of participants in the Learning Academy, number of professional development opportunities, and attendance by faculty and staff.
(2) Written reflective analysis of syllabi pre- and post- Learning Academy.
(3) Reflection piece by Learning Scholars at the conclusion of their implementation semester.

Records will be kept that document involvement by faculty and staff in various professional development opportunities during the year. More in-depth evidence will be gathered from Learning Scholars at the end of their third semester that demonstrates an understanding of important principles related to academic tenacity and the ability to put

such approaches into practice. They will write an analysis of their respective course syllabi, pre- and post-Learning Academy, noting changes made in view of the training they have received. They will also write a reflection piece after the implementation of the strategies in the courses for which they received the training, considering the methods, approaches, assignments, and assessments that best reinforced the growth mindset and the relevant metacognitive skills*.

Success Criteria for Operational Outcome 2.1
1) Summative
   a. We will document the number of Learning Scholars with a target of 8 per academic year (and a total of 40 over the implementation period). We will provide at least 4 Lunch and Learn professional development events per year with a goal of at least 75% of faculty and staff participating in at least one event per year.
   b. All Faculty Scholars' syllabi will reveal a move toward learning frameworks that implement best practices in their field, achieving an average score of 3 or better on the Syllabus portion of the Growth Portfolio scoring guide. See Appendix I.
   c. All Faculty Scholars will demonstrate a scholarship of teaching by reflecting on their goals and achieving an average score of 3 or better on the Goal Reflection portion of the Growth Portfolio scoring guide. See Appendix I.

2) Formative
   a. Learning Scholars will:
      i. Set personal goals and monitor their growth toward those goals.
      ii. Describe how people learn.
      iii. Distinguish between entity and incremental theories of intelligence.
      iv. Determine which metacognitive skills are most relevant to their students.
      v. Discover best practices that help develop metacognitive skills in their students.
      vi. Work collaboratively with their colleagues to design learning frameworks for their courses that support metacognitive skills.
      vii. Engage in practice centered inquiry to determine if the strategies they implement result in optimum student learning.
   b. Learning Scholars will provide feedback to improve the Learning Academy curriculum through a Qualtrics survey.
   c. Students in Phase II courses will provide feedback through university course evaluations.
   d. Learning Scholars will evaluate student work products related to their goals.
   e. Testimony of faculty, staff, and students through electronic media (e.g., webpage, features of the month) will provide a qualitative narrative that helps determine impact.
   f. We will collect data related to 1) the number of students seeking tutoring from the CAA, and 2) help from the writing center in order to monitor related effects of the QEP on student behavior.

V. IMPLEMENTATION OF THE PLAN

Implementation Strategy

The narrative below provides a description of the specific actions that LCU will take to achieve the goals of the proposed QEP.

Action 1: Student Mindset Survey
On the first day of UNI 1170, freshmen will take an online 3-question survey that utilizes a Likert scale to determine their mindset prior to a mindset intervention (pre-Implicit Theory of Intelligence questionnaire). See Appendix C.

Action 2: Learning Academy
In order to execute the proposed QEP strategies, a Learning Academy will be established to provide training and support for faculty participating in QEP programs. This Learning Academy will deliver Phase-specific content training to faculty based on their specific roles within the QEP implementation.

> **Phase I Faculty Training:**
> All faculty teaching UNI 1170 will be admitted into this portion of the Learning Academy. These faculty members will receive specific training designed to teach them about growth mindset principles and to provide them with guidelines for implementing the curriculum that will introduce first-time undergraduate students to the concepts of growth mindset and related topics.
>
> Curriculum for Phase I will be developed by the QEP director and then piloted through a single UNI 1170 class in the spring led by Ms. Harwood, and the curriculum and instruction will be adjusted accordingly for the 17 sections of UNI 1170 for the Fall of 2018. Feedback will be sought from faculty members and students at the completion of the course to improve the design and delivery of the instructional material for future UNI1170 classes.
>
> **Phase II Faculty Training:**
> Phase II faculty training is intended for faculty who teach core courses in which students historically struggle. In addition to one faculty member teaching sections of BIB 1310: Introduction to the Old Testament, all faculty teaching ENG 1301: English Composition, ENG 1302: Writing About Literature, and MAT 1311: College Algebra will receive the Phase II training prior to the Fall 2018 implementation of the QEP. Other courses may be added if deemed appropriate upon evaluation of the first year of the program. These four courses were selected due to the historically large percentage of beginning undergraduate students enrolled and their potential for the incorporation of metacognitive pedagogy.
>
> Phase II training will consist of specific and intense training on cognitive science and how people learn, as well as how to incorporate elements of metacognition and growth mindset into instructional pedagogy. Faculty teaching Phase II courses will be provided with a stipend and will be asked to complete several specific QEP data-gathering tasks during their courses.

Phase III Faculty Training:
Individual departments will be encouraged to identify courses and within their areas that would be suitable for implementation of growth mindset and metacognitive strategies that are in-line with the scope of the QEP. Faculty teaching these courses will be eligible for training through the Learning Academy.

Open Professional Development:
The creation of a campus-wide environment that supports the broad implementation QEP is important. Although the primary focus and data collection responsibilities for the QEP will be with faculty teaching Phase I UNI 1170 and the selected Phase II core courses, all faculty will have access to training in growth mindset and metacognition theory and pedagogy through Phase III training and frequent professional development sessions. The Learning Academy will maintain regular professional development opportunities for all interested LCU personnel.

Thinking Critically Initiative:
Since 2011, Susan Blassingame (Dean of the College of Liberal Arts and Education) has organized campus events for students, faculty, and staff that would foster discussion about important issues and promote critical thinking about complex topics such as civil discourse, civic engagement, and ethical responses to issues of poverty and justice. For 2017-2018, the theme of "Thinking Critically about Success" has intersected usefully already with the development of our QEP, co-sponsoring faculty, staff, and student events featuring Dr. Janet Zadina, an educational neuroscientist.

Emerging from what was from 2008-2013 our QEP on Critical Thinking and Writing, this interdisciplinary and co-curricular initiative will continue to cultivate its collaborative relationship with our QEP initiative, hosting speakers, discussion forums, film screenings, and other activities for students in all majors and for the LCU community at large.

Support Services Training:
Faculty, staff, and students in several important campus support services will receive training in concepts related to the QEP in order to maximize the beneficial reach of the QEP. This list consists of but is not limited to the Library Faculty, Student Academic Services, the Counseling Center, the Tutoring Center, and the University Writing Center. This training will broaden the impact of the QEP across campus.

Resource Center:
The Learning Academy will serve as a repository and access point for the significant amount of research, tutorials, training, lesson plans, syllabi, and other documents and materials related to growth mindset and metacognition. All faculty will have access to these materials as a resource for incorporating these practices into their own instruction.

Faculty Development Grants:
Each semester, all LCU faculty will have the opportunity to apply for an EquipLCU Grant to support their professional development, especially as they attend conferences and present research related to pedagogy. Funding will provide reimbursement for faculty traveling to relevant scholarly conferences, for materials that support their classroom instruction, or for faculty to develop a plan for revising the course material and/or pedagogical approach for a given class.

Action 3: Phase I Student Instruction

Faculty teaching UNI 1170 will used video assignments to standardize curriculum and use discussion rubrics across all classes. Several assignments, class exercises/ tests/ videos will relate to growth mindset, the malleability of the brain, expectations for feedback, social belonging and tenacity, each according to their specific discipline. At the end of the semester, faculty will administer the post-Implicit Theory of Intelligence questionnaire to gather data. See Appendix C.

Action 4: Phase II Student Instruction

Phase II classes will foster and support a growth mindset by focusing on metacognitive skills and abilities that support learning, and by teaching in a manner that is learner-centered and that provides opportunities for students to show mastery of content incrementally throughout the semester. Learning Scholars teaching Phase II classes will administer the Metacognitive Awareness Inventory at the beginning of the semester (pre-) and choose one metacognitive skill as their focus. These faculty teaching Phase II classes will also incorporate assignments that are learner-centered and utilize the growth mindset and metacognitive strategies. At the end of the semester, our Learning Scholars will administer the Metacognitive Awareness Inventory (post-) to their students. See Appendix D.

Action 5: Campus-wide Student Activity

A variety of venues will be used to broaden the message to the student body about our QEP. For example, two chapel talks per semester will be reserved for the QEP to have students share their experiences about overcoming obstacles, social belonging, growth and fixed mindsets, grit, perseverance, and tenacity. Student success stories will be featured on our web page as well as on screens across campus.

VI. Timeline and Resources

QEP Timeline

Fall 2017 – Formation Year				
August	**September**	**October**	**November**	**December**
Actions Present QEP draft to faculty at Fall Faculty Conferences	Submit QEP draft to Dr. Baird	Establish EquipLCU Grant Committee	Meet with Phase I faculty	Submit QEP comprehensive document to Provost
President selects QEP Director	Virtual conference with Dr. Baird	EquipLCU Grant Committee establishes guidelines and criteria	Faculty and staff Lunch and Learn	
Recruit Phase II and III Cohort 1 Learning Scholars	Present QEP to student body			
	Present QEP draft to Board of Trustees			
	Cohort 1 Learning Scholars training			
Assessments and Analysis				Document PD opportunities and attendance numbers

Spring 2018				
January	**February**	**March**	**April**	**May/June**
Actions Launch EquipLCU web page	EquipLCU Grant proposals due	Recruit Phase II and III Learning Scholars – Cohort 2	Announce Phase II and III Learning Scholars – Cohort 2	Cohort 1 attends Teaching Professor Conference
	Faculty and staff Lunch & Learn		Faculty and staff Lunch & Learn	
	SACSCOC Onsite Visit			
	Pilot Phase I curriculum		Adjust Phase I Curriculum	
Cohort 1 Learning Scholars training continued				
Assessments and Analysis				Document PD opportunities and attendance numbers

Fall 2018 – First Implementation Year					
	August	**September**	**October**	**November**	**December**
Actions	Train Phase I faculty during Fall faculty conferences	Faculty and staff Lunch & Learn	EquipLCU grant proposals due	Faculty and staff Lunch & Learn	
	Cohort 1 Learning Scholars provide breakout sessions at Fall Conferences	Provide online growth mindset training for support services			
	Phase I - Fall 2018 Fr. take pre-Implicit Theory of Intelligence questionnaire				
	Phase I – Fall 2018 Freshmen growth mindset instruction				
	Phase II – Fall 2018 Freshmen enrolled in Phase II classes				
	Cohort 1 Learning Scholars implement new learning frameworks				
	Phase II and III faculty training – Cohort 2 Learning Scholars				
Assessments and Analysis	Cohort 1 administer pre-MAI in target courses				Phase I - Freshmen take post-Implicit Theory of Intelligence questionnaire
					Analyze data from pre-post Mindset Inv.
					Cohort 1 administer post-MAI in target courses
					Cohort 1 faculty syllabi analysis
					Cohort 1 reflection piece analysis
					Cohort 1 Pre- and post- MAI analysis
					Year 1 retention rates analysis
					Document PD opportunities/ attendance numbers

QEP Budget Projections

QEP Cost for Academic Year 2017-2018			
Item	Number	Cost/Item	Total
QEP Director	1	10,000	10,000
Supplies	1	2,500	2,500
Conference Travel and Fees (Director & Scholars)	9	1,350	12,150
Meals	1	1,350	1,350
Resources	1	1,630	1,630
Print and copy/postage	1	250	250
Learning Scholars' stipends	8	2,000	16,000
Gifts/certificates	1	1,500	1,500
Marketing	1	2,000	2,000
EquipLCU Grants	1	9,000	9,000
Total Start-up Cost			**56,380**

Explanation of Expenditures

- QEP Director: this cost represents a stipend for the Director during the QEP start-up year.

- Supplies, Print and copy/postage, and Marketing: all include materials and services related to routine administrative needs. Supplies primarily relate to teaching materials for Learning Scholars. Start-up costs will be higher in the first year and reduced in the following years (except for print and copy expenditures).

- Conference Travel and Fees: this fund covers the cost related to registration and travel for all funded Learning Scholars and the Director to the annual Teaching Professor Conference that provides faculty an opportunity to learn about the latest thinking on improving teaching and learning in higher education. Estimated at $1,350 per person. Scholars will broaden their repertoire of teaching strategies that have the potential to directly benefit students and their colleagues as well. They will be asked to share a strategy that they learned with their colleagues at breakout sessions at LCU fall faculty conferences and at Lunch and Learn events throughout the year.

- Meals: these funds will provide four Lunch and Learn events for 25 faculty and staff, 2 per semester at $13.50 a plate, led by Learning Scholars who share pedagogical strategies that benefit colleagues and students.

- Resources: we plan to fund eight scholars per year, but other interested faculty main join as well (with no remuneration). This budget also provides funding for resources for up to two additional scholars per year (but no stipend).
    - *MindsetWorks* online training fee 10 @ $60.00 each = $600.00
    - *How People Learn* 10 @ $21.19 each = $211.90
    - *Seven Strategies of Assessment for Learning* 10 @ $31.75 each = $317.50
    - Content specific resource (based on content field) 10 @ $50.00 each = $500.00

- Learning Scholar Stipend: Scholars are funded at $2,000 per Scholar per year (with an additional $500 awarded the following year).

- Gifts/certificates: covers honorariums, gifts and gift certificates for speakers and other guests, and door prizes (books or teaching materials) for Lunch & Learn events.

- EquipLCU Grants: Proposals are accepted twice per academic year: October 15 and February 15 and are considered by the EquipLCU Grants committee using the rubrics provided. Recipients of these awards will be asked to share their experiences with other faculty through break-out sessions at faculty conferences, semi-annual lunch and learn events, or other selected venues. See Appendix G.

Travel Grants
Travel grants are awarded to faculty to support attendance at conferences that focus on pedagogy, or ones that have a strand that does so – either discipline specific or related to higher education in general. Funding would cover conference registration fees, travel, meals, and lodging up to $1,000.00 per grant.

Materials Grants
This grant provides funding needed to purchase materials that have the potential to enrich the classroom and create a learner-centered environment for students. Up to $1,000.00 per grant.

Research and Development Awards
This stipend supports faculty in their efforts to redesign courses or create curricula to include research-based strategies that are learner-centered, or to support faculty who are involved in scholarly work related to pedagogy, including research or publication endeavors. Awarded at $1,500.00 each.

QEP Cost for Academic Year 2018-2019	
QEP Director Salary	39,258
Support Staff	10,000
Supplies	1,000
Travel (Director & Scholars)	12,150
Meals	1,350
Resources	2,230
Print and copy/postage	250
Learning Scholars' stipends	16,000
Learning Scholars' previous year stipends	4,000
Gifts/certificates	1,500
Marketing	1,000
EquipLCU Grants	9,000
Academic Year Total	**97,738**

For Academic Year 2018-2019
- QEP Director and support staff – This cost represents a shift in responsibility of funding of the Director salary, plus an addition of support staff. Dr. Rod Blackwood, Provost Emeritus, will assume the role of support staff, working with the director to carry out the duties of effectively implementing the QEP.
- There is a reduction in allocations for Supplies and Marketing.
- Resources line item was increased by $600 to include training for eleven UNI1170 faculty members through MindsetWorks at $60 each. (There are 17 sections of UNI1170 but only 11 different faculty members who teach them.)

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- 2017-2018 Faculty Scholars final stipend is included.
- Everything else remains the same.

QEP Cost for Academic Year 2019-2020	
QEP Director Salary	39,258
Support Staff	10,000
Supplies	1,000
Travel (Director & Scholars)	12,150
Meals	1,350
Resources	1,630
Print and copy/postage	250
Learning Scholars' stipends	16,000
Learning Scholars' previous year stipends	4,000
Gifts/certificates	1,500
Marketing	1,000
EquipLCU Grants	9,000
Academic Year Total	97,138

QEP Cost for Academic Year 2020 – 2021	
QEP Director Salary	39,258
Support Staff	10,000
Supplies	1,000
Travel (Director & Scholars)	12,150
Meals	1,350
Resources	1,630
Print and copy/postage	250
Learning Scholars' stipends	16,000
Learning Scholars' previous year stipends	4,000
Gifts/certificates	1,500
Marketing	1,000
EquipLCU Grants	9,000
Academic Year Total	97,138

QEP Cost for Academic Year 2021-2022	
QEP Director Salary	39,258
Support Staff	10,000
Supplies	1,000
Travel (Director & Scholars)	12,150
Meals	1,350
Resources	1,630
Print and copy/postage	250
Learning Scholars' stipends	16,000
Learning Scholars' previous year stipends	4,000
Gifts/certificates	1,500
Marketing	1,000
EquipLCU Grants	9,000
Academic Year Total	97,138

QEP Cost for Academic Year 2022 – 2023	
QEP Director Salary	39,258
Support Staff	10,000
Supplies	1,000
Travel (Director & Scholars)	12,150
Meals	1,350
Resources	1,630
Print and copy/postage	250
Learning Scholars' stipends	16,000
Learning Scholars' previous year stipends	4,000
Gifts/certificates	1,500
Marketing	1,000
EquipLCU Grants	9,000
Academic Year Total	**97,138**
Five Year Total QEP Cost (2018 – 2022)	**486,290**

For Academic Year 2019-2020, 2020-2021 and 2021-2022
- Resources line item was reduced by $600 from the 2018-2019 budget as training for UNI1170 was a one-time expenditure.
- Everything else remains the same.

VII. APPENDICES

Appendix A: QEP Backwards Design Plan

Lubbock Christian University **Quality Enhancement Plan – 2018**
Stage 1: Identify Desired Results
Background Information
University Mission: Lubbock Christian University is a Christ-centered, academic community of learners, transforming the hearts, minds, and hands of students for lives of purpose and service. In order to accomplish this mission, our students must be prepared to understand their need and ability to persist during difficult experiences.
QEP Focus Statement: The purpose of this Quality Enhancement Plan (QEP) is to instill and foster academic tenacity among beginning undergraduate students in order to support persistence.
Understandings (Overarching Understandings or Core Ideas)
Academic Tenacity: Academic tenacity is about working hard, and working smart, for a long time. More specifically, academic tenacity is about the mindsets and metacognitive skills that allow students to: 1) look beyond short-term concerns to longer-term or higher-order goals, and 2) withstand challenges and setbacks to persevere toward these goals (Dweck, Walton, and Cohen, 2014).
Fixed Mindset: an entity theory of intelligence that views intelligence as fixed. Students who hold an entity view of intelligence tend to pursue "performance goals"; they are concerned with demonstrating their intelligence and prefer tasks that will verify that they are smart and capable. When tasks become challenging, entity theorists tend to become debilitated and disengage (Aronson, 2002, Dweck, 2006).
Growth Mindset: the incremental theory of intelligence that view intelligence as malleable. Students who hold an incremental view of intelligence tend to pursue "learning goals." They tend to be more concerned with learning new concepts and improving their competence. When tasks become challenging malleable theorists appear to experience less anxiety, put forth more effort, and increase their engagement (Aronson, 2002, Dweck, 2006).
Resiliency: Resilience is the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress — such as family and relationship problems, serious health problems or workplace and financial stressors. It means "bouncing back" from difficult experiences (American Psychological Association) or the "dynamic process encompassing positive adaptation within the context of significant adversity" (Luthar, Cicchetti, & Becker, 2000, p. 543).
Metacognition: people's ability to predict their performances on various tasks and to monitor their current levels of mastery and understanding. Teaching practices congruent with a metacognitive approach to learning include those that focus on sense-making, self-assessment, and reflection on what worked and what needs improving (Bransford, et al, 2002). It enables students to better manage their cognitive skills and to determine weaknesses that can be corrected by constructing new cognitive skills.
Persistence: According to Conley and French (2014) persistence is related to but different from resilience (Luthar, Cicchetti, & Becker, 2000), and also encompasses the notions of grit (Duckworth, Peterson, Matthews, & Kelly, 2007) and academic tenacity (Dweck et al., 2011).
Productive Persistence: the package of skills and tenacity that students need to succeed in an academic setting (Silva et al, 2013).

Relevant Literature:

Aronson, J., Fried, C. B., & Good, C. (2002). Reducing the Effects of Stereotype Threat on African American College Students by Shaping Theories of Intelligence. *Journal of Experimental Social Psychology, 38*(2), 113.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school*. Washington, D.C.: National Academy Press.

Conley, D. T., & French, E. M. (2014). Student Ownership of Learning as a Key Component of College Readiness. *American Behavioral Scientist, 58*(8), 1018-1034.

Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087-1101.

Dweck, C. S. (2006). *Mindset: The New Psychology of Success*. New York: Ballantine Books.

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Mytkowicz, P., Goss, D., & Steinberg, B. (2014). Assessing Metacognition as a Learning Outcome in a Postsecondary Strategic Learning Course. *Journal of Postsecondary Education and Disability, 27*(1), 51-62.

Schraw, G., & Dennison, R. S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology, 19*(4), 460.

Shapiro, D., Dundar, A., Wakhungu, P.K., Yuan, X., Nathan, A., & Hwang, Y. (2016, November). Completing College: A National View of Student Attainment Rates – Fall 2010 Cohort (Signature Report No. 12). Herndon, VA: National Student Clearinghouse Research Center.

Silva, E., White, T., & Carnegie Foundation for the Advancement of, T. (2013). *Pathways to Improvement: Using Psychological Strategies to Help College Students Master Developmental Math*. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=ED580148&site=eds-live&scope=site

Yeager, D. S., & Dweck, C. S. (2012). Mindsets That Promote Resilience: When Students Believe That Personal Characteristics Can Be Developed. *Educational Psychologist, 47*(4), 302-314.

Young, A., & Fry, J. D. (2008). Metacognitive Awareness and Academic Achievement in College Students. *Journal of the Scholarship of Teaching and Learning, 8*(2), 1-10.

Zinshteyn, Mikhail (2018). Colleges face a new reality, as the number of high school graduates will decline. http://hechingerreport.org/colleges-face-new-reality-number-high-schools-graduates-will-decline/

Misconceptions

A growth mindset in and of itself will improve student achievement and retention. (Cite source)

Metacognition is thinking critically or deeply about content.

Supporting information

"...students who believe (or are taught) that intellectual abilities are qualities that can be developed (as opposed to qualities that are fixed) tend to show higher achievement across challenging school transitions and greater course completion rates in challenging math courses" (Yeager and Dweck, 2012, p. 302)

Metacognitive skills include regulation of cognition such as 1) planning - goal setting, allocating resources prior to learning, 2) Information management strategies – skills and strategy sequenc3es used to process information more efficiently such as organizing, elaborating, summarizing, selective focusing, 3) Comprehension monitoring – assessment of one's learning or strategy use, 4) Debugging strategies – strategies used to correct comprehension and performance errors, and 5) Evaluation – analysis of performance and strategy effectiveness after a learning episode (Schraw and Dennison, 1994).

"Dweck and her colleagues found that an eight session course in study skills had virtually no effect on students' academic performance. But, when the course added lessons to address specific psychological factors of learning—namely, students' mindsets about whether intelligence is innate or developed through effort—the results were startlingly different. The workshop not only changed the way students understood intelligence and its relationship to effort, but also boosted their motivation, participation, and academic performance (Silva et al, 2013).

"The nation's colleges and universities will soon face a demographic reckoning: A new report projects that the total number of high school graduates will decline in the next two decades, while the percentage of lower-income and nonwhite students will increase.... For higher education institutions to continue at that pace or boost it, they'll need to find new ways of educating a student body increasingly composed of people who are the first in their family to enter college." Analysis by Zinshteyn of the Signature Report 12 Completing College: A National View of Student Attainment Rates – Fall 2010 Cohort by Shapiro, et al, 2016.

Goals	Student Learning Outcomes	Stage 2: Assessments
Goal 1: Instill and foster academic tenacity in beginning undergraduate students.	Learning Outcome 1.1: Students will be able to demonstrate satisfactory knowledge about fundamentals of growth mindset in Phase 1 courses.	LO1.1A: Mindset Assessment Profile.
	Learning Outcome 1.2: Students will develop and strengthen key metacognitive skills that support academic tenacity in Phase 2 courses.	LO1.2A: Metacognitive Awareness Inventory.
	Operational Outcome 1.1: Retention rates of freshmen to sophomores will improve.	OO1.1A: Retention rates for beginning undergraduate students.
Goal 2: Develop learning environments that support a growth mindset and academic tenacity.	Operational Outcome 2.1: Faculty and staff will develop knowledge and skills that promote academic tenacity in students.	OO2.1A: Number of participants in the Learning Academy, number of professional development opportunities and attendance by faculty and staff. OO2.2A Analysis of syllabi pre- and post-Learning Academy. OO2.3A Reflection piece by Learning Scholars post-implementation of strategies.

Stage 3: Planning the Learning Experiences - Strategies

Phase 1 – UNI 1170
Taken by all incoming freshmen

Phase 2 – Designated university core courses
A Learning Academy will be established that provides support and training for faculty. Will assist in university core classes in which beginning students traditionally struggle such as MAT 1311, ENG 1301 and 1302, BIB 1310 and 1320, and ESS 1200.

Phase 3 – Additional upper-level university courses
The Learning Academy will support faculty who teach courses other than the designated Phase 2 courses, who choose to participate in the initiative in order to enhance their own classroom instruction.

Implementation

During Admission	Incoming freshmen will take a short, 8 question survey that utilizes a Likert scale to determine mindset prior to arriving on campus (pre- Mindset Assessment Profile)
Phase 1	Goal: UNI 1170 will be used to introduce and educate students about how the brain changes during learning, positive factors related to a growth mindset, and dangers inherent in maintaining a fixed mindset. Desired behavioral outcomes include persistence, grit, resiliency, and tenacity.

Process:
- Faculty training for all UNI 1170 instructors.
- Use EDPuzzle Video assignments to standardize the curriculum and gather student data.
- Each UNI 1170 will incorporate assignments that relate to a growth mindset (specific to their discipline).
- Administer the post-Mindset Assessment Profile at the end of the semester.

Phase 2 and Phase 3

Goal: Phase 2 and 3 classes will foster, support and reinforce a growth mindset by focusing on metacognitive skills and abilities that support self-regulated learning, and by teaching in a manner that is learner-centered and provides opportunities for students to show mastery of content incrementally throughout the semester.

Process:
- Establish a Learning Academy to train faculty.
- Learning Scholars in Phase 2 will
  - administer the Metacognitive Awareness Inventory at the beginning of the semester (pre-).
  - choose two metacognitive skills as their focus.
  - use practice-centered inquiry to investigate learning frameworks that support and reinforce best practices.
  - incorporate assignments that are learner-centered and utilize the growth mindset and metacognitive strategies.
  - administer the Metacognitive Awareness Inventory at the end of the semester (post-).

Assessments

Summative (for reporting purposes)

LO1.1A: Mindset Assessment Profile – 8 questions. Pre and post UNI 1170 (Phase 1)

LO1.2A: Metacognitive Awareness Inventory. Pre and post Phase 2 courses

OO1.1A: Retention rates for beginning undergraduate students. Yearly report

OO2.1A: Number of participants in the Teaching Academy, number of professional development opportunities and attendance. Yearly report

OO2.2A: Analysis of syllabi pre- and post-Learning Academy

OO2.3A Reflection piece by Learning Scholars post-implementation of strategies

Formative (for improvement purposes) (See Program Logic Model diagram for points of reference)

Faculty Activities: Qualtrics survey to determine quality of UNI1170 training

Faculty Activities: Qualtrics survey to determine quality of Teaching Academy training

Faculty Activities: Qualtrics survey at end of year to determine benefits of other PD opportunities during the year (lunch and learns, etc)

Faculty intermediate outcomes: Student evaluations of Phase 1&2 courses
Student activities: EDPuzzle responses in UNI1170
Faculty and Student activities: Work product from classroom assignment in UNI1170
Faculty and Student activities: Work product from classroom assignment in Phase 2 courses
Ultimate outcomes: Qualitative narratives – testimony of faculty and students through electronic media (webpage – feature of the month, etc)
Student intermediate outcomes: Institutional data (attendance, drops, grades)

Faculty Development Ideas

In order to train our faculty, Mindset Works, co-founded by Dr. Carol Dweck offers workshops and seminars designed to translate research into practice that are offered face to face or online. https://www.mindsetworks.com/programs/default MindsetMaker is an online professional development for educators.

Use Harvard study to teach faculty http://www.edweek.org/ew/articles/2012/08/08/33neuroscience_ep.h31.html http://www.edweek.org/ew/articles/2012/06/06/33teachers.h31.html

http://www.bioedonline.org/lessons-and-more/resource-collections/neuroscience-the-learning-brain-and-brainlink/

Resources:
Benassi, V. A., Overson, C. E., & Hakala, C. M. (Eds.) (2014). *Applying Science of Learning in Education*. American Psychological Association. http://pdf.poojaagarwal.com/Pyc_Agarwal_Roediger_2014_APA.pdf#page=220

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Chappuis, J. (2014). *Seven Strategies of Assessment for Learning*. New York, NY: Pearson.

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Sawyer, R. K. (Ed.) (2014). *The Cambridge Handbook of the Learning Sciences*. New York, NY: Cambridge University Press.

Potential Tool:
Intellectual Achievement Responsibility Scale is designed to determine whether a person credits or blames his own behavior for his academic results, or whether he attributes those outcomes to external agents.

Appendix B: Program Logic Model

PROGRAM-LOGIC MODEL FOR EQUIPLCU FACULTY AND STUDENTS

Goal 1: Instill and foster academic tenacity in beginning undergraduate students
Goal 2: Develop learning environments that support a growth mindset and academic tenacity

Key
*Opportunity for formative assessment
Highlighted area indicates learning or operational outcomes (LO, OO)
A – Summative assessments/outcome

Inputs/resources
Administrative support and oversight
QEP Administrators and supporting staff
Funding for training modules and other resources
Training for Phase 1 faculty
Learning Academy to train Phase 2&3 faculty
Potential resources: Growth Mindset - Dweck
How People Learn - National Academies Press
Seven Strategies of Assessment for Learning – Chappuis
Online: Mindset Works

Faculty Activities
Faculty conf. training - How People Learn*
UNI 1170 Faculty train in GM (Ph.1)*
8-10 Learning Scholars (Ph 2-core, Ph 3-other) participate in PD through Learning Academy*
Other PD opportunities for all faculty during AY*

Student Activities
Participate in Ph1 course and learn about GM (introduced)* LO 1.1A
Participate in Ph2 courses that focus on developing metacognitive skills (reinforced)* LO 1.2A
Participate in Ph3 courses and apply metacognitive skills when available (expanded)
Other campus activities

Immediate outcomes (Faculty)
Phase 1 faculty understand brain basics and GM) OO 2.1
Learning Scholars (Phase 2&3) understand how people learn, principles of growth mindset and metacognition OO 2.1
Faculty and staff develop a growth mindset about themselves and students

Immediate outcomes (students)
An understanding of the malleability of the brain and how that affects their learning LO 1.1
The ability to self-regulate their learning LO 1.2
A feeling of empowerment over their own learning (self-efficacy)

Intermediate outcomes (Faculty)
Active participation by faculty in PDs OO 2.1A
Uniform implementation of GM curric in Phase 1 (introduce)*
Develop and implement learning frameworks that support GM in Phase 2 core classes (reinforce) OO 2.2A, 2.3A
Develop and implement learning frameworks that support GM in Phase 3 UD classes (expand)*

Intermediate outcomes (students)
Improved attendance*
Fewer drops*
Higher grades*
Improved freshmen to sophomore retention rates in beginning undergraduate students OO 1.1 and OO1.1A

Ultimate outcome
Learning environments that support a growth mindset and academic tenacity

Ultimate outcome
Academic tenacity in beginning undergraduate students

Assumptions: 1) Learning outcomes and their related classroom assignments are relevant to students' lives and can be valued as such, and
2) Students feel valued as part of the LCU community

Appendix C: Implicit Theory of Intelligence Questionnaire

Respondents indicate their agreement with these statements on a 6-point scale from 1 (*strongly agree)* to 6 (*strongly disagree)*

1.Your intelligence is something about you that you can't change very much.
2.You have a certain amount of intelligence and you can't do much to change it.
3.You can learn new things, but you can't really change your basic intelligence.

Appendix D: Metacognitive Awareness Inventory

Metacognitive Awareness Inventory (MAI)

Check True or False as appropriate. Use the Scoring Guide after completing the inventory.
Contact Pamela Runge, Student Success Specialist at 443-412-2429 to discuss strategies to increase your metacognitive awareness.

	True	False
1. I ask myself periodically if I am meeting my goals.		
2. I consider several alternatives to a problem before I answer.		
3. I try to use strategies that have worked in the past.		
4. I pace myself while learning in order to have enough time.		
5. I understand my intellectual strengths and weaknesses.		
6. I think about what I really need to learn before I begin a task		
7. I know how well I did once I finish a test.		
8. I set specific goals before I begin a task.		
9. I slow down when I encounter important information.		
10. I know what kind of information is most important to learn.		
11. I ask myself if I have considered all options when solving a problem.		
12. I am good at organizing information.		
13. I consciously focus my attention on important information.		
14. I have a specific purpose for each strategy I use.		
15. I learn best when I know something about the topic.		
16. I know what the teacher expects me to learn.		
17. I am good at remembering information.		
18. I use different learning strategies depending on the situation.		
19. I ask myself if there was an easier way to do things after I finish a task.		
20. I have control over how well I learn.		
21. I periodically review to help me understand important relationships.		
22. I ask myself questions about the material before I begin.		
23. I think of several ways to solve a problem and choose the best one.		
24. I summarize what I've learned after I finish.		
25. I ask others for help when I don't understand something.		
26. I can motivate myself to learn when I need to		
27. I am aware of what strategies I use when I study.		
28. I find myself analyzing the usefulness of strategies while I study.		
29. I use my intellectual strengths to compensate for my weaknesses.		
30. I focus on the meaning and significance of new information.		
31. I create my own examples to make information more meaningful.		

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	True	False
32. I am a good judge of how well I understand something.		
33. I find myself using helpful learning strategies automatically.		
34. I find myself pausing regularly to check my comprehension.		
	True	False
35. I know when each strategy I use will be most effective.		
36. I ask myself how well I accomplish my goals once I'm finished.		
37. I draw pictures or diagrams to help me understand while learning.		
38. I ask myself if I have considered all options after I solve a problem.		
39. I try to translate new information into my own words.		
40. I change strategies when I fail to understand.		
41. I use the organizational structure of the text to help me learn.		
42. I read instructions carefully before I begin a task.		
43. I ask myself if what I'm reading is related to what I already know.		
44. I reevaluate my assumptions when I get confused.		
45. I organize my time to best accomplish my goals.		
46. I learn more when I am interested in the topic.		
47. I try to break studying down into smaller steps.		
48. I focus on overall meaning rather than specifics.		
49. I ask myself questions about how well I am doing while I am learning something new.		
50. I ask myself if I learned as much as I could have once I finish a task.		
51. I stop and go back over new information that is not clear.		
52. I stop and reread when I get confused.		

Schraw, G. & Dennison, R.S. (1994). Assessing metacognitive awareness. *Contemporary Educational Psychology, 19,* 460-475.

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REGULATION OF COGNITION

PLANNING	PLANNING	SCORE
--Planning, goal setting, and allocating resources *prior* to learning	4. I pace myself while learning in order to have enough time.	
INFORMATION MANAGEMENT STRATEGIES	6. I think about what I really need to learn before I begin a task.	
--Skills and strategy sequences used to process information more efficiently (e.g., organizing, elaborating, summarizing, selective focusing)	8. I set specific goals before I begin a task.	
COMPREHENSION MONITORING	22. I ask myself questions about the material before I begin.	
--Assessment of one's learning or strategy use	23. I think of several ways to solve a problem and choose the best one.	
DEBUGGING STRATEGIES	42. I read instructions carefully before I begin a task.	
--Strategies used to correct comprehension and performance errors	45. I organize my time to best accomplish my goals.	
EVALUATION		
--Analysis of performance and strategy effectiveness after a learning episode	TOTAL	7

INFORMATION MANAGEMENT STRATEGIES	SCORE	COMPREHENSION MONITORING	SCORE
9. I slow down when I encounter important information.		1. I ask myself periodically if I am meeting my goals.	
13. I consciously focus my attention on important information.		2. I consider several alternatives to a problem before I answer.	
30. I focus on the meaning and significance of new information.		11. I ask myself if I have considered all options when solving a problem.	
31. I create my own examples to make information more meaningful.		21. I periodically review to help me understand important relationships.	
37. I draw pictures or diagrams to help me understand while learning.		28. I find myself analyzing the usefulness of strategies while I study.	
39. I try to translate new information into my own words.		34. I find myself pausing regularly to check my comprehension.	
41. I use the organizational structure of the text to help me learn		49. I ask myself questions about how well I am doing while learning something new.	
43. I ask myself if what I'm reading is related to what I already know.			
47. I try to break studying down into smaller steps.			
48. I focus on overall meaning rather than specifics.			
TOTAL	10	TOTAL	7

DEBUGGING STRATEGIES	SCORE	EVALUATION	SCORE
25. I ask others for help when I don't understand something.		7. I know how well I did once I finish a test.	
40. I change strategies when I fail to understand.		18. I ask myself if there was an easier way to do things after I finish a task.	
44. I re-evaluate my assumptions when I get confused.		24. I summarize what I've learned after I finish.	
51. I stop and go back over new information that is not clear.		36. I ask myself how well I accomplish my goals once I'm finished.	
52. I stop and reread when I get confused.		38. I ask myself if I have considered all options after I solve a problem.	
		49. I ask myself if I learned as much as I could have once I finish a task.	
TOTAL	5	TOTAL	6

Harford Community College
Learning Center 7/9/14

Appendix E: Learning Academy Curriculum

The Learning Academy
Lubbock Christian University QEP, 2017 – 2018

Identify Desired Results (Stage 1)

Lubbock Christian University is a Christ-centered, academic community of learners, transforming the hearts, minds, and hands of students for lives of purpose and service. In order to accomplish this mission, our students must be prepared to understand their need and ability to persist during difficult experiences.

Focus Statement: The purpose of this Quality Enhancement Plan (QEP) is to instill and foster academic tenacity among beginning undergraduate students in order to support persistence.

The purpose of the Learning Academy is to address Goal 2 of our QEP to help faculty develop learning environments that support a growth mindset and academic tenacity.

Operational Outcome 2.1: Faculty and staff will develop knowledge and skills that promote academic tenacity in students

Understandings	**Skills (Success Criteria)**
Overarching Understanding	Learning Scholars will:
The brain is malleable and students have the potential to learn given the right mindset, tools, and environments.	• set personal goals and monitor their growth toward those goals • describe how people learn • distinguish between entity and incremental theories of intelligence • determine which metacognitive skills are most relevant to students in their content area • discover best practices that help develop metacognitive skills in their students • work collaboratively with their colleagues to design learning frameworks for their courses that support metacognitive skills • reflect on their practice (practice-centered inquiry) to determine if the strategies they implement result in optimum student learning
Related Misconceptions	
• A growth mindset in and of itself will improve student achievement and retention. • Metacognition is thinking critically or deeply about content. • It is very difficult to "unlearn" something once it has been hardwired into the brain. (Discovered during faculty conferences)	

Knowledge (Learning Targets)	Primary Assessment Evidence (Stage 2)
We are learning that: • there are two theories of intelligence – entity and incremental (or fixed and growth mindsets). Fixed mindsets see ability, intelligence or traits as static and growth mindsets see them as cultivatable. • metacognition is a person's ability to predict their performances on various tasks and to monitor their current levels of mastery and understanding. • learner-centered classroom environments have the potential to support a growth mindset and academic tenacity.	**Growth Portfolio**: Scholars will set two personal goals related to promoting and supporting academic tenacity through their course design, and document evidence of growth through analysis of syllabi changes and reflection.

Other Evidence: (Stage 2)
• Written unit that fits within their syllabus • Student's Metacognitive Awareness Inventory pre and post results • Student Evaluations at the end of the course • Faculty testimony ("Share Your Story") • Work product from students?

Resources
Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How people learn: Brain, mind, experience, and school.* Washington, D.C.: National Academy Press Chappuis, J. (2015). *Seven strategies of assessment for learning* (2nd ed.). Hoboken, N.J.: Pearson Education, Inc. **MindsetMaker Online Professional Development, www.mindsetworks.com**

The Learning Experience (Stage 3)

	Virtual/Independent (Prior to face-to-face Seminar)	Seminar
Week 1 Sept 18	• Sign up for an account at www.mindsetworks.com • Log in and enter Access Code in My Programs • Log in to MindsetMaker™ • Watch 10-minute Introduction video in which students discuss their effort and achievement • Take "What's My Students' Motivational Profile?" online assessment • How People Learn Ch 1 – Learning – From Speculation to Science – Discussant _____	• Seminar Goals – Traffic light I Cans • Teaching Profile survey • Roundtable discussion – Evidence of Mindsets in their students • Roundtable discussion – How People Learn
Week 2 Oct 2	• Take "What's My Mindset" survey in Module 1 • Watch "Module 1: Motivating Mindsets" video • Give either whole class or individual mindset tool • How People Learn, Chapters 2 and 3. Discussant • Administer MAI to students (to inform next steps)	• Plan for Mindset Assessment Profile Tool for whole class activity or Mindset Interview Protocol for individual student. • Teacher-centered vs Learning-centered – Sage on the Stage activity
Week 3 Oct 16	• Complete "What's your classroom mindset?" part 1 • Watch Module 2 – Messages that Motivate • How People Learn, Chapters 4 and 5. Discussant _____	• Plan for Growth Mindset Framing or Feedback Tool or Effective Effort Rubric for whole class activity or individual student from "Module 2 Toolkit and activities" • Apple activity – introduction to Constructivism and How People Learn
Week 4 Oct 30	• Complete "What's your classroom mindset?" part 2 • Watch Module 3 – The Malleable Mind • How People Learn, Chapters 6 and 7. Discussant _____	• Plan for Student Interest Inventory, Mindset Games, Goal-Setting Lesson, Grading for Growth in a High Stakes World for whole class activity or Student Interest Inventory for individual student from "Module 3 Toolkit and Activities." • Constructivism lecture/discussion

Evidence Portfolio

Year 1: During the Learning Academy year, you will have the opportunity to work with colleagues to co-construct knowledge about learning environments that support academic tenacity and participate in practice-centered inquiry. You will document growth by providing relevant artifacts related to your progression through the Learning Academy. Please include:

- Your original syllabus
- All iterations of your backwards design, revised unit, and revised syllabus
- Preliminary data collected from the Metacognitive Awareness Inventory (2 semesters prior to implementation)
- Your stated goals for the Implementation Semester

Year 2: At the beginning of the implementation semester, you will administer the Metacognitive Awareness Inventory. You will implement the new strategies and lesson plans in your instruction and focus on the goals you have set. At the end of the semester you will administer the MAI again to determine if progress has been made.

Please expand your portfolio to include a written reflection that describes:

1. An analysis of MAI pre- and post- data (we will help you with this)
2. A reflection on the goals that you set including:
   - Artifacts that provide evidence of putting these goals into practice. Artifacts may include (anonymous) student work, teacher handouts, pictures, correspondence, lesson plans, etc. that serve as evidence of implementation of each goal
   - For each goal, provide 1) a brief paragraph that describes your evidence and justifies its use related to each goal and
   - A brief paragraph that reflects on the impact of putting it into practice. Did it enhance learning? If so, why do you think that is? If not, why not? What would you do differently next time?
3. A written reflection related to the changes that have taken place in your classroom. You may want to use one or more of the questions that follow to focus your reflection.
   - What specific evidence of improvement do you see in your own classroom instruction? Comment on your proficiency in providing learner-centered, rather than teacher-centered instruction in your classroom. What criteria did you use to judge the quality of instruction?
   - What are you doing differently in the classroom as a result of what you have learned?
   - How has your thinking about learning changed?
   - What has been the impact of your new curriculum on your students?

Appendix F: Classes Identified by Faculty for QEP Initiative

DEPARTMENT	PHASE II COURSE(S)	PHASE III COURSE(S)
Natural Sciences	BIO2401 Human A&P	BIO3303 Cell and M. Biology NRC3323 Ecology
Exercise and Sports Sciences	ESS1200 Personal Fitness	ESS2314 Human Movement ESS3371 Physiology of Ex. ESS4330 Internship in ESS ESS4380 Senior Research
Communication and Fine Arts	ART1305 2-D Design COM2340 Comm for the Prof FOL1401 Beginning Spanish MUS1305 Elem Music Theory MUS1105 Sight Singing THA1361 Intro to Acting	COM3371 Group Comm COM3374 Nonverbal Comm FOL2301 Interm. Spanish THA4301 Directing Methods
Social Work and Criminal Justice	CRJ2302 Fund. Of TX Criminal J	SWK3320 Research Methods SWK3304 Social Welfare Pol SWK4620 Field Presentations SWK3310 Statistics CRJ4140 Senior Assessment
Business	FIN3300 Prin of Finance I ECO2301 Prin/Macroeconomics ACC2301 Prin/Fin Accounting IST1350 Comp Programming I	IST3300 Advanced Spreadsheets BUA3305 Prin/Marketing
Chemistry and Biochemistry	CHE1307 General Chemistry	PHY1303 Physics I PHY1304 Physics II CHE3301 Org. Chemistry I CHE3302 Org. Chemistry II UGR4388 Honors Research
Humanities	ENG1301 Composition Studies ENG1302 Comp and Literature HIS2301 US History I ENG2307 Literature and Life	HUM4380/4330 ENG3302 Intro to Eng Studies ENG3308 Technical Writing GEG2300 Reg World Geog GOV4352 Public Policy HIS3330 History of Africa ENG3311 American Novel
Biblical Studies	BIB1310 Intro to OT BIB3305 Christian Heritage	BIB4360 Capstone
Mathematics	MAT1311 College Algebra	MAT1403 Calculus II
Nursing	ENG1301 Composition Studies ENG1302 Comp and Literature BIO2401 Human A&P	BIO3300 Genetics Statistics
Education	ENG1301 Composition Studies ENG1302 Comp and Literature HIS2301 US History I	EDS4340 Rdng Writing Thinking EDS4350 Design and Delivery REA3340 Rdng Writing Conn REA4360 Rdng Across Curric
Behavioral Sciences	PSY1300 General Psychology	PSY2340 Psychology of Div PSY3315 Ethics PSY3320 Research Methods

Appendix G: Pedagogy Grants

EquipLCU Pedagogy Funding Opportunities

In order for LCU to instill and foster academic tenacity in our students, faculty must consider learning frameworks that support students in their efforts to persist in the classroom. These monetary awards are intended to support faculty in two ways: 1) to provide funding for training or materials that faculty need to widen their repertoire of pedagogical strategies, or 2) to provide Research and Development awards for faculty who desire to redesign curriculum or courses to meet the needs of 21st century learners or participate in scholarly work related to teaching and learning, such as conducting research or working on publications. Three funding options are offered:

1) Travel Grants
2) Materials Grants
3) Research and Development Awards

Travel Grants
Travel grants are awarded to faculty to support attendance at conferences that focus on pedagogy, or ones that have a strand that does so – either discipline specific or related to higher education in general. Funding would cover conference registration fees, travel, meals, and lodging up to $1,000.00 per grant.

Materials Grants
This grant provides funding needed to purchase materials that have the potential to enrich the classroom and create a learner-centered environment for students. Up to $1,000.00 per grant.

Research and Development Awards
This stipend supports faculty in their efforts to redesign courses or create curricula to include research based strategies that are learner-centered, or to support faculty who are involved in

The purpose of the Quality Enhancement Plan (QEP) is to instill and foster academic tenacity among beginning undergraduate students in order to support persistence.

Goal: To develop learning environments that support a growth mindset and academic tenacity.

Contact person:
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806-720-7581

scholarly work related to pedagogy including research or publication endeavors. Awarded at $1,500.00 each.

- Recipients of these awards will be asked to share their experiences with other faculty through break-out sessions at faculty conferences, semi-annual lunch and learns, or other selected venues. Travel and Material grant amounts are specific to incurred costs up to $1,000.00, and the Research and Development awards are provided as $1,500.00 stipends.

- Proposals are accepted twice per academic year: October 15 and February 15 and are considered by the EquipLCU Grants committee using the rubrics provided.

EquipLCU Travel Grant Proposal
1. Applicant's name
2. Name, date(s), and location of the conference or event
3. A description of the conference and sessions related to pedagogy that are offered
4. A description of how attendance at the conference will contribute to your scholarship of teaching (scholarship of teaching involves an inquiry approach to implementation in which you use the results to improve what goes on in the classroom)
5. A description of how attendance at the conference will benefit students, especially as you work to design classroom environments that support academic tenacity in students
6. A budget justification including specific expenses and projected costs

EquipLCU Materials Grant Proposal
1. Applicant's name
2. The course/course number(s) and number of students that will be affected
3. A description of the materials that you wish to purchase and how they will be used in the classroom
4. A description of how these materials will contribute to your scholarship of teaching
5. A description of how these materials will benefit students, especially as you work to design classroom environments that support academic tenacity in students
6. A budget justification including specific expenses

EquipLCU Research and Development Award
1. Applicant's name
2. A detailed description of 1) the course and course curriculum that you want to change, or 2) the scholarly work in which you are involved
3. An annotated bibliography (with 3 – 5 resources) that reflects the research that supports the changes to your curriculum or the scholarly work in which you are involved
4. The goals of the project and specific plans for progress and completion
5. A description of how completing this project will
   a. contribute to your scholarship of teaching
   b. benefit students, especially as you work to design classroom environments that support academic tenacity in students
   c. benefit the LCU community, including other faculty or departments

EquipLCU Travel Grant Rubric			
5	3	1	Score
The conference has a strong pedagogical focus and I have the potential to learn a great deal about best practices in teaching	The conference offers some sessions related to pedagogy and I have the potential to learn about best practices in teaching	The conference has no (or very little) pedagogical focus	
I provided a detailed and compelling description of how my participation in this conference will contribute to my scholarship of teaching	I provided a description of how my participation in this conference will contribute to my scholarship of teaching	My description of how this conference will contribute to my scholarship of teaching was unclear or unrelated	
I provided a detailed and compelling description of how my participation in this conference will benefit students, especially related to learning environments that foster academic tenacity	I provided a description of how my participation in this conference will benefit students, with some emphasis on learning environments that foster academic tenacity	My description of how this conference will benefit students was unclear, or it was unrelated to learning environments that foster academic tenacity	
My budget description was detailed and accurate		My budget description was vague or inaccurate	
		Total	

EquipLCU Materials Grant Rubric			
5	3	1	Score
I provided a detailed and compelling description of the materials I need and how I will use them in the classroom. It is clear that these materials will help me implement learner-centered instruction in my course(s)	I provided a description of the materials I need and how I will use them in the classroom. These materials have the potential to help me implement learner-centered instruction in my course(s)	My description of the materials was unclear, or the materials are unrelated to creating a learner-centered environment in my course(s)	
I provided a detailed and compelling description of how using these materials will contribute to my scholarship of teaching	I provided a description of how using these materials will contribute to my scholarship of teaching	My description of how these materials will contribute to my scholarship of teaching was unclear or off-target	
I provided a detailed and compelling description of how using these materials will benefit students, especially related to learning environments that foster academic tenacity	I provided a description of how using these materials will benefit students, with some emphasis on learning environments that foster academic tenacity	My description of how these materials will benefit students was unclear or off-target	
My budget description was detailed and accurate		My budget description was vague or inaccurate	
		Total	

EquipLCU Research and Development Award			
5	3	1	
I provided a detailed and compelling description of the course/curriculum that I want to improve, or the scholarly work in which I am engaged. It is clear that these endeavors will contribute to implementing learner-centered instruction in my course(s)	I provided a description of the course/curriculum that I want to improve, or the scholarly work in which I am engaged. These endeavors have the potential to contribute to implementing learner-centered instruction in my course(s)	My description of the research or development project was unclear, or unrelated to creating a learner-centered environment in my course(s)	
The research cited in my annotated bibliography strongly supports the course or curriculum changes I intend to make, or the scholarly work in which I am engaged	The research cited in my annotated bibliography supports the course or curriculum changes I intend to make, or the scholarly work in which I am engaged	It is unclear how the research cited in my annotated bibliography is related to my project, or it is off-target	
I provided a detailed and compelling description of the goals of the project and how I intend to accomplish them. The goals reflect a strong pedagogical focus with great potential to enhance learning environments that foster academic tenacity	I provided a description of the goals of the project and how I intend to accomplish them. The goals reflect a pedagogical focus with some potential to enhance learning environments that foster academic tenacity	My description of the goals of the project and how I intend to accomplish them is unclear, or the goals are off-target with little to no potential to enhance learning environments that foster academic tenacity	
I provided a detailed and compelling description of how this project will contribute to my scholarship of teaching	I provided a description of how this project will contribute to my scholarship of teaching	My description of how this project will contribute to my scholarship of teaching was unclear or off-target	
I provided a detailed and compelling description of how this project will benefit students, especially related to learning environments that foster academic tenacity	I provided a description of how this project will benefit students, with some emphasis on learning environments that foster academic tenacity	My description of how this project will benefit students was unclear or off-target	
I provided a detailed and compelling description of how this project will benefit the LCU community, including faculty or departments	I provided a description of how this project will benefit the LCU community, including faculty or departments	My description of how this project will benefit the LCU community was unclear or off-target	
		Total	

Appendix H: QEP Assessment

LUBBOCK CHRISTIAN UNIVERSITY

Assessment Plan: Quality Enhancement Plan

Programs - Goal 1: Instill and foster academic tenacity in beginning undergraduate students.

Outcome: Learning Outcome 1.1: Student Knowledge and Understanding of Growth Mindset

Students will be able to demonstrate satisfactory knowledge and understanding about fundamentals of growth mindset in Phase 1 courses.
Status: Active
Program: Co-Curricular Student Learning Outcomes
Start Date: 07/01/2018
End Date: 06/30/2023

Assessment Methods	Assessment Results	Analysis /Actions
Direct - LO1.1A: Pre- and Post-Implicit Theory of Intelligence Questionnaire. **Achievement Target:** 5% increase between Pre- and Post-Implicit Theory of Intelligence Questionnaire results. **Review Schedule:** Compile and review results annually.		

Outcome: Learning Outcome 1.2: Student Metacognitive Skills

Students will develop and strengthen key metacognitive skills that support academic tenacity in Phase 2 courses.
Status: Active
Program: Co-Curricular Student Learning Outcomes
Start Date: 07/01/2018
End Date: 06/30/2023

Assessment Methods	Assessment Results	Analysis /Actions
Direct - LOA1.2A: Pre- and Post-Metacognitive Awareness Inventory.		

Outcome: Learning Outcome 1.2: Student Metacognitive Skills

Assessment Methods	Assessment Results	Analysis /Actions
Achievement Target: 5% increase between Pre- and Post-Metacognitive Awareness Inventory results. **Review Schedule:** Compile and review results annually.		
Indirect - OO1.2A Number of students seeking tutoring. **Achievement Target:** Tutoring clients will number at least 185 each year (5% increase over two-year average of clients). **Review Schedule:** Compile and review results annually.		
Indirect - OO1.2B Number of students seeking services from the Writing Center. **Achievement Target:** Writing Center clients will number at least 1343 each year (5% increase over five-year average of clients). **Review Schedule:** Compile and review results annually.		

Outcome: Operational Outcome 1.1: Student Retention

Retention rates for freshmen to sophomores will improve.
Status: Active
Program: Operational Objectives
Start Date: 07/01/2018
End Date: 06/30/2023

Assessment Methods	Assessment Results	Analysis /Actions
Direct - OO1.1A: One-year (freshman to sophomore) retention rates for first-year undergraduate cohorts. **Achievement Target:** 71.9% one-		

Outcome: Operational Outcome 1.1: Student Retention

Assessment Methods	Assessment Results	Analysis /Actions
year (freshman to sophomore) retention rate for first-time undergraduate cohorts (represents 3% increase over baseline - five-year average of 69.8%). **Review Schedule:** Compile and review results annually.		
Direct - OO1.1B: One-year (freshman to sophomore) retention rates for first-year first-generation undergraduates. **Achievement Target:** 69.2% one-year (freshman to sophomore) retention rates for first-year first-generation undergraduates (represents 10% increase over baseline - five-year average of 62.9%). **Review Schedule:** Compile and review results annually.		
Direct - OO1.1C: One-year (freshman to sophomore) retention rates for first-year minority undergraduates. **Achievement Target:** 71.1% one-year (freshman to sophomore) retention rates for first-year Hispanic undergraduates (represents 10% increase over baseline - five-year average of 64.6%). **Review Schedule:** Compile and review results annually.		
Direct - OO1.1D: One-year (freshman to sophomore) retention rates for first-year minority undergraduates. **Achievement Target:** 67.3% one-		

Programs - Goal 1: Instill and foster academic tenacity in beginning undergraduate students.

Outcome: Operational Outcome 1.1: Student Retention

Assessment Methods	Assessment Results	Analysis /Actions
year (freshman to sophomore) retention rates for first-year Black/African American undergraduates (represents 10% increase over baseline - five-year average of 61.2%). **Review Schedule:** Compile and review results annually.		

Program - Goal 2: Develop learning environments that support a growth mindset and academic tenacity.

Outcome: Operational Outcome 2.1: Faculty and Staff Knowledge

Faculty and staff will develop knowledge and skills that promote academic tenacity in students.
Status: Active
Program: Operational Objectives
Start Date: 07/01/2018
End Date: 06/30/2023

Assessment Methods	Assessment Results	Analysis /Actions
Direct - OO2.1A: Number of participants in Learning Academy, number of professional development opportunities and attendance by faculty and staff. **Achievement Target:** Learning Academy Participants: 8 per year, 40 over implementation period. Professional Development Opportunities: 4 Lunch and Learns per year with at least 75% of faculty and staff participating in at least 1 event per year. **Review Schedule:** Compile and review results annually.		
Direct - OO2.1B: Post-Learning Academy Experience rubric-guided written reflective analysis of Syllabus. **Achievement Target:** 100% of Faculty Scholars will be rated at least 3 on the Syllabus Portion of the Growth Portfolio Scoring Guide. **Review Schedule:** Compile and review results annually. **Related Documents:** Growth Portfolio Scoring Guide.pdf		
Direct - OO2.1C: Post-Learning Academy experience rubric-guided analysis of reflection piece.		

Program - Goal 2: Develop learning environments that support a growth mindset and academic tenacity.

Outcome: Operational Outcome 2.1: Faculty and Staff Knowledge

Assessment Methods	Assessment Results	Analysis /Actions
Achievement Target: 100% of Learning Scholars will be rated at least 3 on the Goal Reflection portion of the Growth Portfolio Scoring Guide. **Review Schedule:** Compile and review results annually. **Related Documents:** Growth Portfolio Scoring Guide.pdf		

Growth Portfolio Guide

Growth Portfolio: We will set two personal goals related to promoting and supporting academic tenacity through our course design, and document evidence of growth through analysis of syllabi changes and reflection.

Requirements	1 – Emerging, 2 – Developing, 3 – Practicing, 4 – Mastering	
Goal setting		
	I set at least two goals that were directly related to teaching and learning. One of my goals was related to the development of metacognition. My goals were measurable and attainable.	
My Syllabus		
	Includes at least two learner-centered strategies that are collaborative in nature (Guiding Principle 5)	
	Clearly outlines activities that are congruent with the 5E model of instruction (or another constructivist model) (Guiding Principle 1 & 3)	
	Includes purposeful activities that help students develop their metacognitive skills (based on the goal that I set) (Guiding Principle 2)	
	Provides evidence of the use of formative assessment strategies – at least one strategy per goal (Where Am I Going? Where Am I Now? How Can I Close the Gap?). (Guiding Principle 4)	
Written Reflection		
MAI	I provided an analysis of my pre- and post-MAI data that was accurate and insightful.	
Goal Reflection	I included artifacts that provided evidence of putting Goal 1 into practice (Artifacts may include (anonymous) student work, teacher handouts, pictures, correspondence, etc.)	
	I wrote a paragraph that described my evidence and justified its use as evidence for attaining Goal 1.	
	I wrote a paragraph that reflects on the impact of putting strategies related to my Goal 1 into practice.	
	I included artifacts that provided evidence of putting Goal 2 into practice (Artifacts may include (anonymous) student work, teacher handouts, pictures, correspondence, etc.)	
	I wrote a paragraph that described my evidence and justified its use as evidence for attaining Goal 2.	
	I wrote a paragraph that reflects on the impact of putting strategies related to my Goal 2 into practice.	
Overall reflection	I provided an insightful, in-depth reflection on the changes that have taken place in my classroom.	
	I provide concrete examples of change and articulated the effects of those changes.	
	My reflection demonstrates an understanding of concepts related growth mindset, academic tenacity, and how students learn. (Guiding Principle 6)	
	Average Score	