

**University of Louisiana Monroe**

**QEP Annual Impact Report**

**Summer 2020**

**Section 1: A succinct list of the initial goals and intended outcomes of the Quality Enhancement Plan**

*FOCUS on Biology*, the Quality Enhancement Plan (QEP) of the University of Louisiana Monroe (ULM), seeks to increase student success and critical thinking skills in two introductory science courses through instructional enhancement. Sixty-one percent of incoming students to ULM are required to take either Fundamentals of Anatomy and Physiology I (BIOL 1014) or Principles of Biology (BIOL 1020). FOCUS sessions will be integrated into all sections of these courses. The primary goal of ULM’s QEP is to improve performance and success of STEM and pre-health sciences freshmen students in these two gateway biology courses. The QEP will use high-impact practices to implement an innovative strategy focused on improving student learning by enhancing critical thinking.

**Initial Overarching QEP Goal**: To improve academic performance in the two gateway science courses that all STEM and pre-health sciences majors must take, BIOL 1014 and BIOL 1020. This goal will be monitored by student success rates in the two courses as well as success in subsequent science courses.

**Initial Learning Outcome 1**: To improve critical thinking skills as defined by the Critical Thinking Assessment Test (CAT) developed at Tennessee Tech.

**Initial Learning Outcome 2**: To develop discipline-specific knowledge aligned with a locally developed pneumonic: **F**ormulate, **O**bserve, **C**ommunicate, **U**se, and **S**ynthesize.

**Section 2: A discussion of changes made to the QEP and the reasons for making those changes**

**COVID-19:** The global pandemic COVID-19 caused significant and unprecedented disruption to the world of higher education during the Spring 2020 semester. In line with universities across the country, ULM converted classes to online instruction, including the FOCUS Sessions for the QEP. Instructors produced the best online materials possible with the tight timeline required, but the sudden shift to online learning as well as many other intervening factors for students significantly impacted their ability to learn, engage with the material, and excel.

**FOCUS Content and Activities:** FOCUS activities and content for the second half of the Spring 2020 semester were delivered online due to COVID-19.

**Diagnostic Questions:** Final exams, including the diagnostic questions for the QEP for both courses, were administered online during the Spring 2020 semester.

**Administration of the CAT test**: The QEP states, “The CAT will be administered during the final FOCUS session to a statistically significant number of students selected at random from each course section. The students who do not participate in the CAT test will be given a locally developed computerized critical thinking test.” Since FOCUS sessions were not implemented until the Spring of 2020, the CAT test was again administered during one regularly scheduled class period during Fall 2019 for all sections of the two courses. All students in the courses took the CAT test in this manner during Fall 2019. During Spring 2020, the administration of the CAT Test occurred after the move to online learning due to COVID-19. All students in the two courses during that semester, therefore, took the test online remotely. A locally developed computerized critical thinking test was developed during the Summer 2020 session and administered to students in an online section of BIOL 1020.

**Section 3: QEP impact on the environment and student learning**

The impact of the QEP on student learning was difficult to measure during the first semester of FOCUS sessions, Spring 2020, due to the impact of COVID-19. Prior to the shift to online learning, the integration of FOCUS sessions did appear to assist students in learning historically difficult topics within the class. The metacognitive activities used to enhance critical thinking skills also appeared to successfully introduce the concept of learning on a deeper level, sifting through information, and other relevant skills. The first semester, however, was a learning process. Working with instructors and students identified many key areas of the FOCUS activities that can be improved in future semesters.

**Achievement of identified goals and outcomes**: FOCUS sessions were incorporated into BIOL 1020 for the first time during the Spring 2020 semester.

* **Overarching goa**l: For the Fall 2019 semester, the data showed that 63% of students received an A, B, or C in BIOL 1014 and 61% received an A, B, or C in BIOL 1020. For the Spring 2020 semester, the data showed that 70% of students received an A, B, or C in BIOL 1014 and 69% received an A, B, or C in BIOL 1020.
* **Learning Outcome 1**: During the Fall 2019 semester, the average score of students across both courses on the CAT Test was 12.19, with the national average being 15.5. Tennessee Tech issued a statement that they had seen an overall decline in performance on the CAT test during the Spring of 2020 due to the impacts of COVID-19. The average score of students across both courses on the CAT Test for this semester was 12.14.
* **Learning Outcome 2**: In BIOL 1020 Fall 2019, 5% of students answered 75% or more of diagnostic questions correctly. For the two sections of BIOL 1020 in Spring 2020, 58% of students answered 75% or more of the questions correctly. This is noteworthy as the FOCUS sessions were implemented for the first time in BIOL 1020 during the Spring of 2020, and the performance on these questions greatly improved from the performance on the questions in Fall 2019. BIOL 1014 has not yet seen the implementation of FOCUS sessions, as the redesign will begin in that course in Fall 2020. Very little change, therefore, was seen in student performance on the BIOL 1014 diagnostic questions between Fall 2019, where 3% of students answered 75% or more of diagnostic questions correctly and Spring 2020, where 4% of students answered 75% or more of the questions correctly. The lack of improvement in BIOL 1014 without FOCUS sessions and the notable improvement in BIOL 1020 after implementation of FOCUS sessions supports and confirms the decision to continue the implementation of FOCUS sessions into both courses.
* **Qualitative Feedback from students**: Student feedback on FOCUS sessions has been diverse, as expected. In an email to the QEP Coordinator following the Spring 2020 semester, one student explained, “…the things we’ve talked about in the FOCUS sessions are what I remember and understand the most from this class…” and went on to explain that she would try to put into practice the metacognitive strategies in future classes. The course evaluations demonstrated some frustration over a lack of consistency between the lecture portion of the class and the FOCUS activities as well as the extra time required for FOCUS sessions, but also some appreciation of the extra things learned in FOCUS sessions. The QEP implementation committee is working to address the inconsistencies that were frustrating for students and improve the FOCUS sessions for the 2020-2021 academic year.

**Section 4: A reflection on what the institution has learned as a result of the QEP experience**

One of the most valuable lessons the institution, in particular the School of Sciences, has learned as a result of the QEP experience is the importance of an agreed upon, consistent list of learning objectives and student learning outcomes for a particular course. The FOCUS sessions have helped to highlight areas of these courses where material may need to be explored among all of the instructors responsible for that course. The QEP has also highlighted for the institution the great opportunity that exists to improve our students’ critical thinking skills. As a valued skill among professional schools and employers, critical thinking skills cannot be undervalued and have to be cultivated in university students. The QEP is facilitating the understanding of innovative ways to successfully develop these skills. The QEP has also created a stimulus to explore through webinars and conferences the vast collective creativity and information that exists among other faculty and universities across the country. Bringing these ideas back to ULM will enhance student learning across campus.