



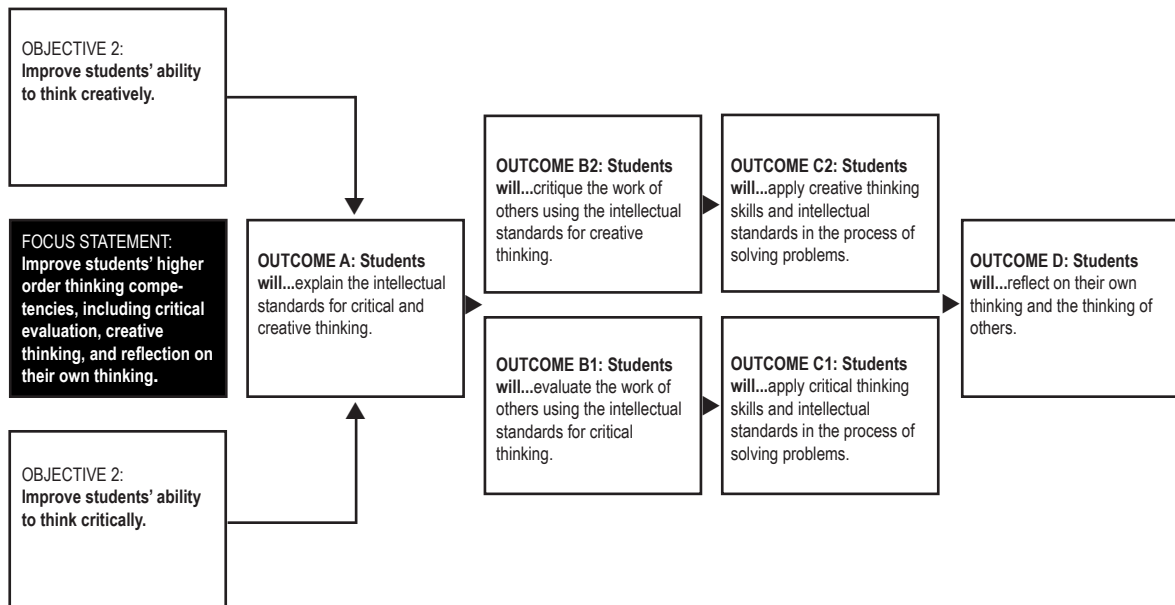
QEP AT A GLANCE

The five-year Quality Enhancement Plan (QEP) is a component of the university's submission for reaffirmation of its accreditation by the Southern Association of College and Schools. The purpose of a QEP is to bring action and resources to a well-defined topic for the enhancement of student learning. The focus of TH!NK, the NC State QEP, is improving students' higher-order thinking competencies, including critical evaluation, creative thinking, and reflection on their own thinking. This focus is consistent with the NC State University 2011-2020 Strategic Plan vision to "emerge as a pre-eminent technological research university recognized around the globe for its innovative education and research addressing the grand challenges of society" and one of its five major goals to "enhance student success through education innovation." The university selected its QEP topic through an inclusive, deliberative process resulting from campus-wide enthusiasm for transforming the university culture to one of critical and creative thinking.

The QEP defines critical thinking as the active, persistent, and careful consideration of a belief or form of knowledge. It involves analysis and judgments about knowledge and about the conditions that support the beliefs and conclusions that follow. Creative thinking generates new ideas within or across disciplines. It draws upon or breaks rules and procedures in those disciplines and actively engages students in bringing together existing ideas into a new configuration, developing new properties or possibilities for something that already exists, and discovering or imagining something entirely new.

The plan identifies six student learning outcomes that view critical and creative thinking as distinct but related higher-order thinking skills. The outcomes are hierarchical and articulate a developmental path through which students are likely to acquire these advanced skills. Each outcome has associated behaviors and intellectual standards that are applicable to all disciplines. Critical thinkers raise vital questions; gather and assess relevant information; reach well-reasoned conclusions and test them against appropriate standards; consider alternative systems of thought or points of view; and communicate effectively to others the analysis or solution to problems. The intellectual standards of critical thinking include: clarity accuracy, precision, relevance, significance, depth, breadth, logic, and fairness.

Creative thinkers analyze and evaluate information in framing problems; synthesize information and generate multiple solutions; exercise insight in choosing a solution and evaluating its worth; and elaborate and communicate outcomes to others. The



criteria for creative thinking include: originality, appropriateness, flexibility, and contribution to the field.

The pilot phase of the QEP (Years 1 and 2) addresses first-year student learning in three types of THINK courses, offered in the fall semester of each year: English 101, First-Year Inquiry seminars, and large enrollment courses in the colleges, including COS 295A, MIE 201, and E 101. In 2014-2015, Phase I of the plan will engage 15 faculty in professional development and revision of their syllabi and pedagogy. Participating faculty will receive a stipend for participation and will complete two self-directed, knowledge-building activities in the spring preceding a fall semester implementation. They will also attend two summer seminars led by Faculty Fellows, campus experts in teaching critical and creative thinking. They will use a common set of terms and will make critical and creative thinking and assessment integral to and explicit in their instruction. In 2015-1016, the university will add 25-30 THINK classes to the original 15. This effort to help faculty address critical and creative thinking in their courses builds on a long history of educational innovation at NC State, including the Hewlett Initiative, university courses in Design Thinking, and the SCALE-UP project in the Department of Physics.

The university chose to focus its QEP initially on first-year students in these types of courses following review of its institutional research and professional literature on students' development of critical and creative thinking skills. Data from both sources indicate that curricula should ask students to think critically and creatively early and throughout their studies and that some students will excel in general education courses, while others will flourish under work in their majors. While NC State stu-

dents and alumni credit NC State in developing their critical and creative thinking skills, research shows there is room for improvement. Faculty focus groups assign the highest priority to critical and creative thinking but also suggest that knowing when it is appropriate to take risks, being decisive, and learning from failure are necessary to develop these thinking skills.

Rigorous and authentic assessment is crucial to understanding student achievement. The university will use the scenario-based, NSF-funded Critical Thinking Assessment Test to measure students' critical thinking progress. A faculty-designed activity, using a common rubric, will assess critical and creative behavior within the discipline. And a student self-assessment will capture changes in their beliefs about the nature of knowledge and awareness of qualities in their own thinking. The plan will aggregate data and will not report the achievement outcomes of individual students or faculty. A goal of the plan is also to identify "best practices" that participating faculty will share with the campus.

The QEP will also ask several overarching questions in preparation for Phase II of the plan. Studying the relationship between student achievement and class size will help the university determine the cost of expanding successful practices to other courses in the curriculum. Differences in the performance of students who enroll in only one THINK class versus those in multiple THINK courses will suggest how much exposure is necessary to bring about significant change in student learning. And because the plan involves courses in the humanities, social sciences, and sciences, it is likely to illustrate what these domains have in common or how they differ in their approaches to critical and creative thinking. After two years of faculty development and data collection on student achievement, the university will discuss how to expand the program in the remaining three years of the plan (Phase II). While maintaining the initial investment in first-semester students and their faculty, expansion possibilities include offering a second semester of THINK classes for freshmen, pairing THINK courses for cross-disciplinary work, moving critical and creative thinking instruction into the upper division courses in majors, and expanding the number of faculty who undergo seminars in teaching critical and creative thinking.

The success of the QEP in transforming the campus culture depends on the active engagement of students, staff, and faculty. Throughout the development of the plan, the university invites comment and participation. The QEP website (qep.ncsu.edu) carries the most recent news on the QEP and means for communicating with the QEP Implementation Team and the QEP Advisory Group.