

R U Thnkn? Think Smarter:

**A Quality Enhancement Plan in Problem Solving
and Critical Thinking**



Bladen Community College
Dublin, North Carolina 28332
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I. Executive Summary

The Bladen Community College (BCC) Mission Statement reflects the College's commitment to quality teaching, to higher-order learning, to enhancing opportunities, and to providing a safe, sustainable learning environment. For this reason, the College selected critical thinking as its Quality Enhancement Plan (QEP) topic and designed a plan that will enhance student learning and meet student needs. The QEP's focus is to improve students' problem-solving skills through instruction and resources that promote critical thinking.

Two faculty members served as QEP co-chairs and members of the SACS/COC Leadership Team. After attending a QEP Summer Institute and SACS/COC Annual Conference, the co-chairs presented information and led discussions with faculty, staff, students, and other college constituents to select a topic and a focus. Five committees developed the QEP action plan. The committee chairs constituted the QEP Leadership Team, which finalized the plan and the QEP document.

Both test results and faculty, staff, and student surveys indicate that BCC students have critical thinking difficulties. Daily conversation and observation reveal that problem solving is a major challenge. The students tend to expect someone else to solve their problems or to expect that one solution applies to every situation. Students often do not know how to overcome obstacles in finding solutions or revising ineffective solutions. Therefore, the BCC QEP focuses on the problem-solving aspect of critical thinking.

The QEP begins with professional development for the faculty and staff. Faculty and staff must understand problem solving and their own critical thinking skills before they lead students in these areas. These professional development sessions will provide faculty and staff with the instruction and resources necessary to guide the students in instructional and support settings.

The plan's next phase includes instruction and resources for the students. Critical thinking involves having the ability to consider multiple perspectives and to apply reason to diverse problems and situations. Problem solving requires identifying a problem, constructing solutions to the problem, and choosing the best solution for the problem. It also includes a willingness to revise ineffective solutions. Critical thinking and problem solving are distinct and mutually dependent skills. Because BCC students need to respond actively to challenges, the faculty and staff chose to teach and demonstrate the 4P problem-solving action plan: Plan, Prepare, Practice, and Produce. This action plan applies to any situation at school, home, and work. Over the five-year period, all college courses and service areas will teach and practice the 4P action plan.

The QEP uses direct and indirect assessments to measure faculty and staff involvement in the professional development sessions and students' progress in developing problem-solving and critical thinking skills. Professional development, course syllabi, sample assignments, and a 4P rubric will assess faculty and staff participation in and contribution to the QEP. The Test of Everyday Reasoning, completed assignments, the 4P rubric, and student surveys will assess students' problem-solving and critical thinking skills and measure their progress.

BCC began a pilot of the QEP in spring 2012. All faculty participated in professional development at the end of semester. Faculty members completed the Test of Everyday Reasoning to assess their own critical thinking skills and to understand what the test requires of the students. Three ACA 115: Success and Study Skills instructors piloted the 4P action plan and other problem-solving instruction in their courses in the summer 2012 and fall 2012 semesters. Selected ACA classes completed the Test of Everyday Reasoning.

Bladen Community College wants students to become successful citizens who function well in academic, personal, and professional environments. The Quality Enhancement Plan will equip faculty and staff to help students improve their lives through strong problem-solving and critical thinking skills.

II. QEP Development Process

Comprehensive Standard 3.3.2 of *The Principles of Accreditation: Foundations for Quality Enhancement* states that the institution has developed a Quality Enhancement Plan (QEP) that includes broad-based involvement of institutional constituencies in the development and proposed implementation of the QEP (Southern Association of Colleges and Schools Commission on Colleges, 2009) . The process Bladen Community College (BCC) used to develop its QEP reflects broad-based involvement.

The process to develop the QEP began in October 2009. The College President and the Vice President for Instruction and Student Services appointed two faculty members to the SACS/COC Leadership Team. These faculty members became the QEP co-chairs for the College.

The SACS/COC Leadership Team met for the first time in November 2009. The Director of Institutional Effectiveness and Planning emphasized that the QEP must reflect broad-based involvement. The Team discussed the avenues of contact with College constituencies. These constituencies included the faculty and staff, students, administrative council members, program advisory committee members, BCC Board of Trustees members, and community representatives.

Throughout the 2009-2010, 2010-2011, and 2011-2012 academic years, the QEP co-chairs made presentations and led workshops at all-campus assemblies, faculty meetings, Program Advisory Committee Meetings, and Administrative Council Meetings. The all-campus assemblies involved College instructional and service area employees. Faculty meetings involved all curricula faculty. Program Advisory Committees included representatives from curriculum and continuing education programs, area public schools, four-year colleges and universities, and local

businesses and industries. The co-chairs also hosted activities at student government-sponsored events such as the 2011 Spring Fling.

At the October 2011 Board of Trustees' meeting, the QEP co-chairs presented the QEP topic and focus. In January 2012, the QEP co-chairs provided an update that included the QEP action plan at the Board of Trustees' annual retreat. In February 2012, the College President was guest on "The Saturday Show," which the local newspaper, *The Bladen Journal*, hosted. The newspaper's editor interviewed the College President and asked for an update on the events at BCC. The College President described the QEP and gave the Editor a wrist band that the QEP Marketing Team had designed to promote the QEP topic on campus and throughout the community. The show aired on the newspaper's web site and later appeared on YouTube (www.youtube.com/bladenjournal). Also in spring 2012, the College President provided QEP information and distributed wrist bands to the Bladen County Board of Commissioners (Appendix A). In July 2012, the College President, the Vice President for Instruction and Student Services, and a QEP co-chair presented QEP information to the Elizabethtown Rotary Club.

In spring 2011, the SACS/COC Leadership Team appointed QEP committees for Literature Review, Budgeting, Marketing, Professional Development, and Assessment. Each committee included a chairperson, a resource person, and faculty members. The Leadership Team delegated a QEP development task to each committee. The QEP co-chairs presented the following task descriptions and committee member lists to the faculty and staff.

Literature Review Committee

Members will research the topic of problem solving through critical thinking. The goal is to determine best practices related to the topic that will enhance student learning. Others can forward literature and references to this committee; however, committee members will determine the useful and relevant information for the QEP. The committee may need to assemble a bibliography of current literature on this topic with executive summaries of each item.

1. Sherwin Rice (resource)
2. Ann Russell: Chair
3. Claudia Anderson
4. Mark Coleman
5. Re Gena Brown
6. Joyce Bahhouth

Professional Development Committee

Members will plan and implement professional development activities for faculty and staff relative to the QEP topic.

1. Lynn King (resource)
2. Felisa Williams: Chair
3. Samantha Pope
4. Pamela King
5. Lisa Devane

Assessment Committee

Members will develop a comprehensive evaluation plan. Evaluation should be multifaceted, with attention to both the key objectives and benchmarks in the QEP as well as to the plan's overall goals.

1. Harriet Hobbs (resource)
2. Joey Hinson: Chair
3. Sharon Autry
4. Chris Conner
5. Amy Cummings

Budget Committee

Members will identify realistic resources to develop, implement and sustain the QEP over a five-year period. In addition to funds, resources may also include facilities, staffing, technology, professional development, marketing, and other items necessary to sustain the QEP.

1. Jay Stanley (resource)
2. Cynthia McKoy: Chair
3. Lee Anne Bryan
4. Mitch Mitchell
5. Robert Herring

Marketing Committee

Members will develop and implement a plan for marketing the QEP across the campus and to BCC stakeholders to ensure broad-based support.

1. Jack McDuffie (resource)
2. Chad McKenzie: Chair
3. Tina Forrester
4. Cliff Tyndall
5. Joyce Cain

Appendix B shows the marketing plan the QEP Marketing Committee developed and implemented.

In fall 2011, the QEP Leadership Team, which consisted of the SACS/COC Leadership Team and the five chairpersons of the QEP committees, developed the plan's details. The QEP co-chairs continued to meet with all constituencies to provide progress updates and to ask for input.

In spring 2012, the Dean of Students selected a member of the Student Government Association as a student representative for the QEP Leadership Team. The student joined the team and attended the meetings. The QEP Leadership Team continued its work through spring 2012.

Members of the QEP Leadership Team participated in professional development activities throughout the QEP preparation process. In July 2010, the Director of Institutional Effectiveness and Planning and one of the QEP co-chairs attended the SACS/COC QEP Summer Institute in Florida. In December 2010, the SACS/COC Leadership Team attended the SACS/COC Annual Conference in Kentucky; the QEP co-chairs attended sessions that defined the QEP and its requirements. In January 2011, the SACS/COC Leadership Team attended SACS/COC Orientation in Georgia.

In July 2011, the Vice President for Instruction and Student Services attended the SACS/COC QEP Summer Institute in Texas. The QEP Leadership Team attended the SACS/COC Conference in Florida in December 2011. In July 2012, four members of the QEP Leadership Team, including one co-chair, attended the SACS/COC QEP Summer Institute in Georgia. Table 1 contains a complete time line of the QEP development process.

Table 1. QEP Process Time Line

Date	Participants	Focus
November 2009	SACS/COC Leadership Team	Select Topic
November 12, 2009	All Campus Assembly: All BCC Employees Including Instructional and Service Areas	Introduce and Explain Quality Enhancement Plan
March 25, 2010	All Campus Assembly: All BCC Employees Including Instructional and Service Areas and Student Representatives from BCC Student Organizations	Survey Attendees to Solicit Opinions on which Student Skill Sets and Knowledge Areas the College Effectively Addresses and which Are Most Important
April 26, 2010	All Campus Assembly: All BCC Employees Including Instructional and Service Areas	Present the Results of the Survey BCC Conducted on March 25, 2010; Generate Ideas on How the College Can Be More Effective in the Top 5 Areas of Concern
April 30, 2010	Faculty Meeting	Present Results from April 26 Planning Session
June 17, 2010	Administrative Council Retreat: Representatives from all College Areas and Divisions	Review Goals and Progress; Update the QEP Process; Present Workshop Related to QEP Topic Selection
July 25-28, 2010	QEP Co-Chair; Director of Institutional Effectiveness and Planning	Attend 2010 SACS/COC Summer Institute on Quality Enhancement and Accreditation

October 19, 2010	Program Advisory Committee Meetings: College Representatives from All Curriculum and Continuing Education Programs and Community Representatives from Public Schools, Colleges and Universities, Business and Industry	Discuss Ways the College can Meet the Needs of the Community; Discuss the Importance of the QEP Topic in the Community and in Business and Industry
November 12, 2010	Faculty Meeting	Develop a Working Definition for the QEP Topic
November 16, 2010	All Campus Assembly: All BCC Employees Including Instructional and Service Areas	Provide Update on QEP Process and Present Faculty's Topic Definition
December 4-7, 2010	SACS/COC Leadership Team	Attend SACS/COC 2010 Annual Meeting
January 25, 2012	SACS/COC Leadership Team	Attend SACS/COC Orientation
February 24, 2011	SACS/COC Leadership Team	Discuss QEP Focus
March 24, 2011	All Campus Assembly: All BCC Employees Including Instructional and Service Areas	Provide Update on QEP Process; Explain Focus of QEP; Introduce First Idea for a Logo
April 14, 2011	Spring Fling: Student Government Association (SGA) sponsored event for all BCC students	Introduce and Educate Students on the QEP topic
April 8, 2011	Faculty Meeting	Discuss and Develop Student Learning Outcomes; Assign QEP Subcommittees (Literature Review, Budget, Marketing, Professional Development, and Assessment)
May 23, 2011	Faculty Meeting	Participate in Critical Thinking Workshop the HUM 115 Instructors Led
June 16, 2011	Administrative Council Retreat: Representatives from All College Areas and Divisions	Provide Update on QEP Progress Since 2010 Retreat

July 17-20, 2011	Vice President of Instruction and Student Services and Accreditation Liaison	Attend 2011 SACS/COC Summer Institute on Quality Enhancement and Accreditation
August 2, 2011	Faculty Meeting	Review Student Learning Outcomes; Develop Action Plan Activities
September 9, 2011	Faculty Meeting	Review QEP Topic, Focus, Student Learning Outcomes, Action Plan, and Subcommittees; Present Second Round of Ideas for Logo
October 14, 2011	Faculty Meeting	Discuss QEP Action Plan
October 20, 2011	Administrative Council Meeting	Provide QEP Update
October 25, 2011	BCC Board of Trustees	Provide an Overview of and an Update on the QEP
November 1, 2011	Program Advisory Committee Meetings: College Representatives from All Curriculum and Continuing Education Programs and Community Representatives from Public Schools, Colleges and Universities, Business and Industry	Provide an Update on the QEP Since 2010 Meeting
November 3, 2011	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Discuss Purpose of the Team and Next Steps: Select Lead Evaluator, Revisit the Logo, Decide on a Problem Solving Method
November 10, 2011	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Report from Literature Review Team; Select Problem-Solving Method; Design Logo
November 11, 2011	Faculty Meeting	Introduce Problem-Solving Method for the QEP; Reveal the Third and Final Idea for a Logo

November 17, 2011	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Provide Updates from Subcommittees; Focus on Budget
November 29, 2011	CTE Business Partners Advisory Council: Representatives from Local Businesses and Industries, Joblink, and BCC	Provide an Overview of and Update on the QEP
December 3-6, 2011	QEP Leadership Team	Attend SACS/COC 2011 Annual Meeting
December 7, 2011	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Present Budget for College President; Review Spring 2012 Marketing Plan; Discuss NET Assessment Results
January 5, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Review Approved Budget; Discuss QEP Wrist Bands
January 6, 2012	Faculty Meeting	Make Revisions to QEP: Focus Statement and Action Plan; Plan to Conduct Critical Thinking Survey and Distribute Wrist Bands for Faculty
January 12, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Review Lead Evaluator Nominations; Present Update on QEP Draft Progress
January 19, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Discuss Summary from Literature Review Committee, 4P Rubric, and QEP Bookmark Design
January 27, 2012	BCC Board of Trustees Annual Retreat	Present QEP Update; Distribute Armbands and Bookmarks
February 2, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Review Five-Year Time Line for the QEP Action Plan; Discuss QEP Coordinator

February 6, 2012	Bladen County Board of Commissioners Presentation by College President	Describe and Explain the BCC QEP; Distribute Armbands
February 8, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs with Assigned SACS Commission Staff Member and College President	Provide QEP Presentation; Accept Suggestions from Commission Staff Member
February 9, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Explain Pilot Plan to begin Spring 2012; Discuss QEP Coordinator Job Description
February 11, 2012	College President and Editor of <i>The Bladen Journal</i>	Participate in "The Saturday Show" Interview
February 23, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Discuss Standardized Assessment Instrument, Professional Development, and Student Learning Outcomes
March 15, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Discuss Standardized Assessment Instrument, QEP Theme Song, and QEP First Draft
March 16, 2012	Faculty Meeting	Present QEP Update, Games and Prizes for QEP Review, and QEP Theme Song
March 20, 2012	All Campus Assembly	Provide QEP Update including Action Plan Time Line, Assessment Tools, and Marketing
March 28, 2012	Marketing Committee and Information Technology Specialist	Report the BCC QEP Web site Launch
March 29, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Discuss QEP Summer Institute, QEP Web page, and QEP Budget

April 5, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Review QEP Organizational Structure and Professional Development Plans
April 12, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Review Webcast, "Teaching Critical Thinking with Student Engagement"
April 17, 2012	All Campus Assembly	Present QEP Update including Faculty and Student Learning Outcomes, Assessment Matrix, and Organizational Structure; Plan Quiz and Prizes for a Review
April 23, 2012	Pilot Project Instructors	Revise ACA 115 Course Syllabi for Summer 2012; Plan to Integrate Case Students for Problem Solving and Critical Thinking
April 26, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Discuss QEP Summer Institute; Distribute Draft 2 of the QEP Document
May 14, 2012	Faculty Professional Development with Jason Chaffin from Cape Fear Community College	What is Critical Thinking?
May 15, 2012	Faculty	"Test of Everyday Reasoning"
May 17, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Collect Copies of Draft 2 with Suggested Revisions
May 21, 2012	QEP Leadership Team Meeting: SACS/COC Leadership Team and QEP Subcommittee Chairs	Discuss Revisions to Draft 2; Set Deadline for Final Draft as June 1; Discuss Marketing and Professional Development Plans for the Fall
July 11, 2012	College President Vice President of Instruction	Present QEP information to Elizabethtown Rotary Club

	and Student Services QEP Co-chair	
July 29-August 1, 2012	Four QEP Leadership Team Members	Attend 2012 SACS/COC Summer Institute on Quality Enhancement and Accreditation
August 6, 2012	All BCC Faculty and Staff	Attend Presentation by Dr. Enoch Hale, Foundation for Critical Thinking

III. Topic Identification

Broad-based Involvement

Core Requirement 2.12 of *The Principles of Accreditation: Foundations for Quality Enhancement* requires the institution to develop an acceptable QEP that includes an institutional process for identifying key issues relative to student learning (Southern Association of Colleges and Schools Commission on Colleges, 2009). Identifying these issues led BCC to its QEP topic.

In fall 2009, the SACS/COC Leadership Team met to discuss selecting a QEP topic. The Director of Institutional Effectiveness and Planning presented a quality enhancement survey that would solicit ideas from faculty, staff, and students concerning the needs at BCC. The team agreed to use the survey to begin the topic selection process. Following the SACS/COC Leadership Team meeting, the Director of Institutional Effectiveness and Planning introduced the faculty and staff to the QEP and its requirements at an all-campus assembly in November 2009. SACS/COC Leadership Team members asked faculty and staff to begin thinking about a QEP topic.

BCC employs 121 administrators, faculty, and staff of which 59 are faculty. This number allows the use of surveys, large group planning, discussions, and other small group activities during regular faculty meetings. As a result, all employees were involved in the topic selection process through faculty meetings and all-campus assemblies.

In March 2010, the QEP co-chairs administered the survey on quality enhancement to faculty, staff, and students at an all-campus assembly (Appendix C). The SACS/COC Leadership Team invited students from each of the BCC student organizations to attend this meeting and participate in the survey. The sampling of faculty, staff, and students provided 82 responses.

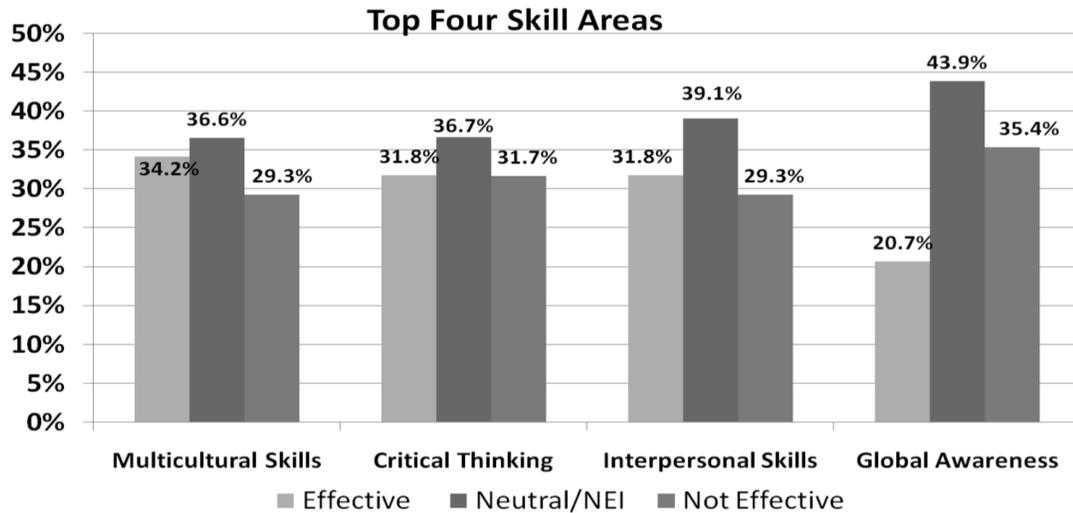
The survey identified nine student skill sets and knowledge areas on which BCC focuses. These included reading comprehension, written communication, oral communication, critical thinking, math skills, computer literacy, interpersonal skills,

global awareness, and multicultural sensitivity. The survey instructed participants to rank the nine areas in order of importance to student success after graduation from BCC and to rate the College’s effectiveness in addressing these issues. Survey participants could also list additional areas critical to student success. The SACS/COC Leadership Team collected the surveys and examined the results.

In April 2010, the Director of Institutional Effectiveness and Planning presented the survey results at an all-campus assembly. The results revealed critical thinking, global awareness, interpersonal skills, and multicultural sensitivity as areas important to student success after graduation from BCC. Critical thinking ranked as the most important.

Figure 1 shows how the faculty, staff, and students ranked BCC’s effectiveness in preparing students for success in the four areas. Of 82 responses, 31.7% did not think that BCC was effective in the instruction and development of critical thinking.

Figure 1. BCC’s Effectiveness in Preparing Students for Success after Graduation



Comprehensive Standard 3.3.2 of *The Principles of Accreditation: Foundations for Quality Enhancement* states that the institution must demonstrate capability for the initiation, implementation, and completion of the QEP (Southern Association of Colleges and Schools Commission on Colleges, 2009). As a result, at the April 2010 all-campus assembly, QEP co-chairs asked faculty and staff to assess the College’s ability to address these skill areas effectively and to list ways to enhance student learning in these areas. The SACS/COC Leadership Team collected the ideas. In this session, faculty and staff gave most attention to critical thinking. Figure 2 shows a sample of the suggestions the faculty and staff submitted.

Figure 2. Sample of the Responses from All Campus Planning Session

- Critical thinking should be integrated across the curriculum
- Tutor students on how to think outside the box, broaden their thinking

- Offer critical thinking-seminars, professional development, conferences for faculty and students
- Offer critical thinking skills tests, practice sessions, and real life scenarios
- Require all first year students to take a class on critical thinking

The Administrative Council held a retreat on June 17, 2010. The Administrative Council consists of representatives from all of the College’s academic and administrative areas. The retreat included a workshop on the QEP topic selection. Attendees at this meeting discussed the following questions and concerns:

- How would you define critical thinking?
- Why is critical thinking important?
- How could your department or academic unit be involved in the QEP so that it enhances student learning?
- In what ways will critical thinking push BCC forward? What are the measurable benefits?
- How can we put these ideas into practice?

The group discussed the importance of critical thinking and how the college could help students develop and use critical thinking skills. Since the group included representatives from all instructional and administrative areas at BCC, it discussed critical thinking as a campus-wide issue. Members of this group are responsible for the College goals; therefore, group members also discussed critical thinking as it relates to the College Mission Statement and the mission statements of each division.

In October 2010, the QEP co-chairs introduced the QEP to the Program Advisory Committees, which include representatives from all curriculum and continuing education programs and community representatives from area public schools, four-year colleges and universities, businesses, and industries. The committees discussed two questions. Table 2 gives a sample of the responses. A complete list of responses appears in Appendix D. At this meeting, constituencies outside of the College further acknowledged the need for enhancing students’ critical thinking skills.

Table 2. Sample Responses from Program Advisory Committee Members

<i>Question 1: What does critical thinking mean to your organization?</i>	<i>Question 2: How can Bladen Community College integrate critical thinking in its instructional programs?</i>
Critical thinking is necessary for making life choices, success in business and work endeavors.	Problem solving, seeking solutions to puzzles, enigmas, and options for troubleshooting.
Proper patient care and interventions. Students/workers must be able to put together a number of items to make a decision.	Implement it as a part of freshman orientation: critical thinking, developing quality study habits, and developing a personal budget.

<p>Critical thinking means explaining every aspect of a subject and considering the rewards or consequences of each aspect. Must play devil's advocate sometimes to see the negatives.</p>	<p>Role playing real-life scenarios; case studies.</p>
<p>It means employees who are able to assess situations and problems, and ask the right questions to apply the knowledge they have gained.</p>	<p>Ask more application questions on tests, ask for more role playing and contextual application of course concepts, require more writing.</p>
<p>All stakeholders should be able to find alternative solutions to current problems if critical thinking is applied.</p>	<p>Have experienced instructors and guest lecturers to communicate the need for critical thinking in program areas.</p>

To solidify critical thinking as the topic choice, faculty met in November 2010 to develop a working definition for the topic. Faculty members brought definitions to the meeting and worked in small groups to select or develop a definition. Each small group presented its definition. From the small group submissions, the faculty selected the following definition:

Critical thinking is the use of prior knowledge combined with newly acquired information to apply, interpret, and assess problems, questions, or situations.

In spring 2011, the SACS/COC Leadership Team continued to discuss the topic selection of critical thinking. While surveys, observations, and discussions supported the topic, the team was concerned that BCC students would not understand critical thinking. The BCC Institutional Effectiveness Plan identifies external and internal factors that impact the College. These include poverty level, low literacy rate, and lack of high school diplomas among the students (Bladen Community College Planning and Research Office, 2012, p. 44). Critical thinking is difficult to define, and the terminology is often esoteric. Therefore, the SACS/COC Leadership Team determined that the QEP topic should be critical thinking with a focus on problem-solving skills. Most often, life's problems and the inability to solve them are what hinder the students' success. Thus, problem solving through critical thinking became the target of the QEP. The QEP co-chairs presented the topic, focus, and definition to faculty and staff at the March 2011 all-campus assembly.

Mission Statement and Institutional Effectiveness Plan

Core Requirement 2.12 of *The Principles of Accreditation: Foundations for Quality Enhancement* requires the institution to develop an acceptable QEP that focuses on “accomplishing the mission of the institution” (Southern Association of Colleges and Schools Commission on Colleges, 2009, p. 19). The BCC Mission Statement explains that the College is “committed to quality teaching, to higher-order learning, to enhancing opportunities.” The BCC QEP supports the Mission Statement (Appendix E) and the goals of the Institutional Effectiveness Plan.

Critical thinking involves higher-order thinking. The BCC QEP will require students to identify problems, gather information relevant to the problems, analyze possible

solutions, and communicate solutions. In line with Bloom's Taxonomy, which classifies levels of cognitive activity, students will move beyond basic knowledge and comprehension and strive for higher cognitive activities such as analysis and evaluation. This supports the College's commitment to higher-order learning.

One goal of the BCC Institutional Effectiveness Plan is "to provide effective instruction to all who enroll through curricula programs that reflect existing and future needs of the BCC community" (Bladen Community College Planning and Research Office, 2012, p. 17). The BCC QEP emphasizes professional development for faculty and staff in order to increase critical thinking instruction in courses and demonstration in service areas. As faculty and staff learn to recognize and improve their critical thinking, they will be able to teach and use critical thinking strategies in their programs and divisions. This supports the College's commitment to quality instruction.

Through critical thinking professional development activities and by implementing the QEP in instructional and service areas, the College is fulfilling a second goal of the Institutional Effectiveness Plan. That is "to provide counseling and guidance services designed to help all students make appropriate educational, vocational, and avocational choices" (Bladen Community College Planning and Research Office, 2012, p. 18). One QEP goal is that students will use the critical thinking skills they develop in the courses in personal and professional situations also. As these skills move into personal decision making and problem solving, students will overcome many obstacles that hinder their success. In addition, students will use these skills in the workplace and find more success in and satisfaction with their jobs. As a result, the College will fulfill its mission of enhancing opportunities for its students.

Finally, the QEP will involve assessment and revision. Through rubrics, discussions, observations, surveys, and testing, participants will evaluate professional development activities; instruction and materials in the courses; instructions and demonstration in service areas; and changes in students' knowledge, behaviors, skills, and values. The QEP Leadership Team will make revisions to the plan if the evaluations indicate a need. This will fulfill one of the expected educational results of the Institutional Effectiveness Plan: "providing quality enhancement of programs, services, and instruction through continuous planning and evaluation" (Bladen Community College Planning and Research Office, 2012. p. 18).

Alignment with College and Community Needs

College expansion and development and employee and workforce surveys reveal the need for critical thinking and problem-solving skills in academic and professional environments.

Bladen Community College began as Bladen Technical Institute in 1967. Its first location was in rented buildings throughout Elizabethtown. Initially, the school offered programs in cosmetology, executive secretarial science, business administration, industrial maintenance, automotive mechanics, and nursing assistant. Extension and adult education programs were also available (Bladen Community College, 2011-2012, p. 12).

In 1969, the College's Board of Trustees secured a permanent location for the campus near Dublin. From 1970 – 2009, a series of building projects has expanded the campus so that it now covers 45.76 acres, including 21 buildings and four mobile units. A satellite center of the College is located in East Arcadia, 35 miles east of the

College’s Dublin campus in the southeast center of the county (Bladen Community College Planning and Research Office, 2012, p. 39). The College now offers 15 associate degrees, 43 certificates, and 10 diplomas.

In addition to the increases in campus size and program offerings, enrollment has increased significantly. Fall 2011 enrollment included 1,556 students. This was a decrease from fall 2010 with 1,856 students and fall 2009 with 1,699 students. Nevertheless, these numbers are unprecedented in the College’s history. Continuing education through occupational extension, basic skills, community service, customized industry training, and small business programs serves over 5,000 adults annually. In 2010-2011, BCC had 258 graduates in the curriculum, General Education Development (GED), and Adult High School (AHS) programs. Most of the students come from five counties: Bladen, Robeson, Columbus, Cumberland, and Sampson (Bladen Community College Planning and Research Office, 2012, p. 39; Priest, 2011).

The student population at BCC is also diverse. Enrollment reports for 2011 indicate that 44% of the students are African American, 37% are Caucasian, and 15% are American Indian. Most of the students are between the ages of 16 and 40 with 26% ranging from 16 -20, 37% ranging from 21-30, and 21% ranging from 31-40 (Priest, 2011).

BCC has rapidly developed distance learning programs in recent years. Distance learning includes telecourse, teleweb, hybrid, and on-line classes. Interactive television classes are also available. BCC offers seven programs through distance learning. In fall 2011, 77% of the students enrolled in one or more distance-learning classes (Priest, 2011).

Each year, the Director of Institutional Effectiveness and Planning surveys companies that employ graduates of BCC. The survey asks the employers to rank the graduates in several skill areas including problem-solving skills. Despite the indication of satisfaction, Tables 3 and 4 show that some students do not have the problem-solving skills the employers expect.

Table 3. 2008-2009 Employer Survey Results

Total number of employer surveys sent	20
Total number of employer surveys returned	10 50%

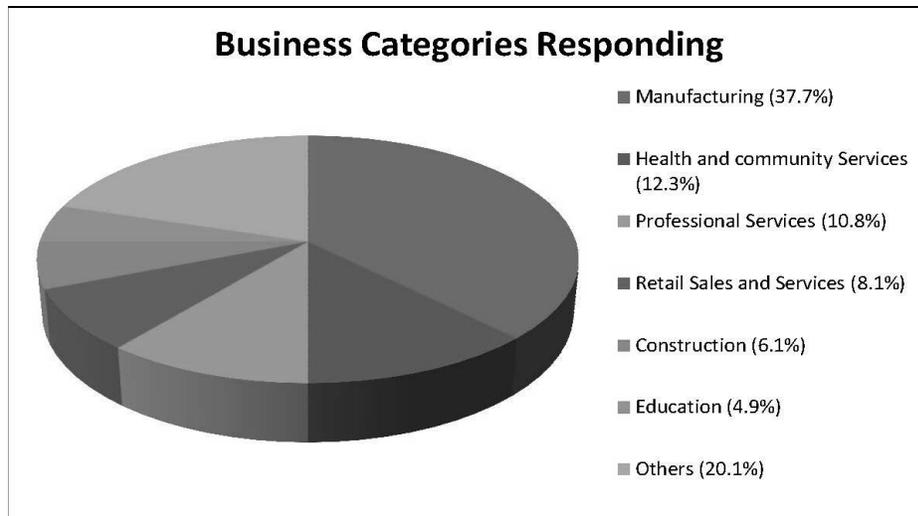
<i>Enter the total number of responses for each category of response:</i>	Don't	Very		Very		
	Know	Dissatisfied	Dissatisfied	Satisfied	Satisfied	
	(0)	(1)	(2)	(3)	(4)	
1. Specific job-related knowledge	2			7	1	100%
2. Specific job-related skills	2			7	1	100%
3. Oral communication skills	2			7	1	100%
4. Written communication skills	2		1	6	1	88%
5. Problem solving skills	2		1	6	1	88%
6. Organization and planning	2		1	6	1	88%
7. Quality of Work	2		1	6	1	88%
8. Overall job preparation	2			7	1	100%

Table 4. 2010 - 2011 Employer Survey Results

	Don't Know (0)	Very Dissatisfied (1)	Dissatisfied (2)	Satisfied (3)	Very Satisfied (4)	
1. Specific job-related knowledge				6	11	100%
2. Specific job-related skills				7	10	100%
3. Oral communication skills			2	9	6	88%
4. Written communication skills	1			9	7	100%
5. Problem solving skills			1	6	10	94%
6. Computer Skills	4			4	9	100%
7. Organization and planning	1		1	7	8	94%
8. Quality of Work			1	6	10	94%
9. Overall job preparation			1	6	10	94%

In 2011, North Carolina Business Services Representatives from the Workforce Development Boards of North Carolina conducted a survey of businesses throughout North Carolina that employ 10 – 499 employees. The survey asked employers to identify the skills employees are lacking in their fields. The businesses that responded to the survey included manufacturing, health and community services, professional services, retail sales and services, construction, and education. Figure 3 shows the percentage of responses from each of the categories.

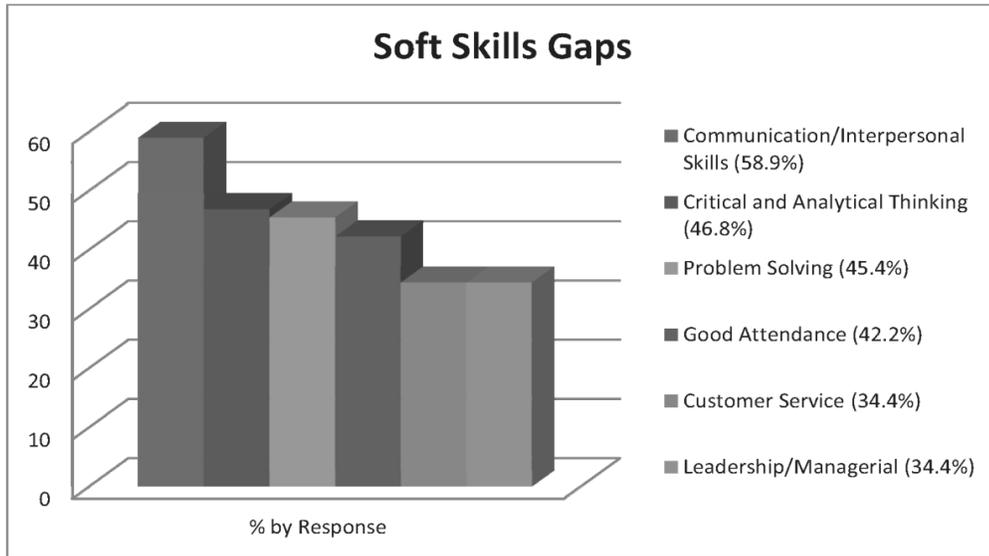
Figure 3. Response to the Workforce Development Boards of NC Survey



(Workforce Development Boards of NC, 2012. p. 5)

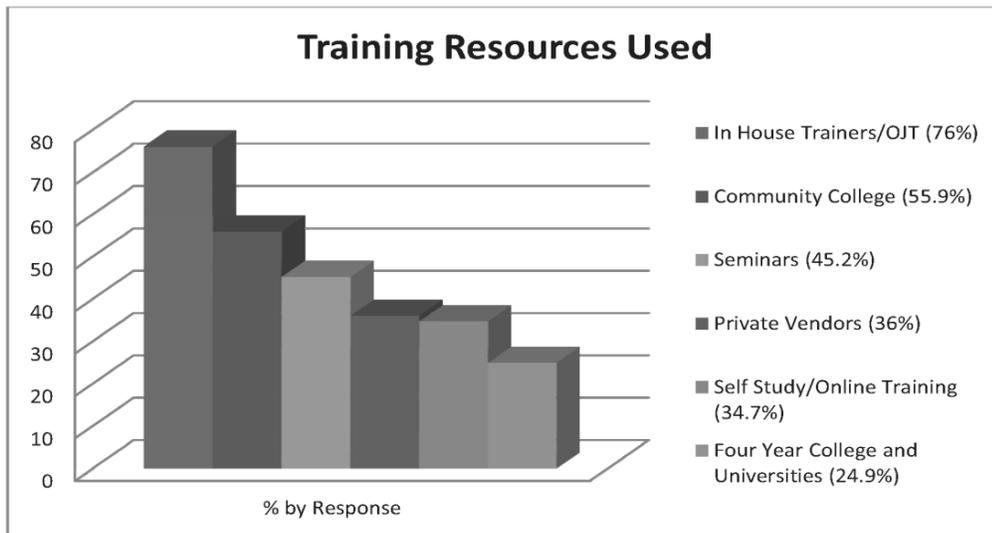
Survey results in Figure 4 show that 46.8% of the businesses claim that critical and analytical thinking are lacking. In addition, 45.4% of the businesses indicated that problem solving skills are lacking. One employer stated, “Employees who have an understanding of problem-solving, teamwork, and continuous learning are very valuable” (Workforce Development Boards of NC, 2012, p. 7). Figure 5 illustrates that the “local community college and seminars are being used frequently as training resources” (Workforce Development Boards of NC, 2012, p. 3).

Figure 4. Key Findings of the Workforce Development Boards of NC Survey



(Workforce Development Boards of NC, 2012, p. 7)

Figure 5. Employee Training Resources



(Workforce Development Boards of NC, 2012, p. 9)

BCC's change and growth reflect the changes in business, industry, higher education, and society in general. The demand for employees with post-secondary education and higher-order thinking skills continues to increase. Improved critical thinking skills are a necessity for the workforce population.

The 2009-2010 Curriculum Planning Assumptions in the Institutional Effectiveness Plan recognized these needs:

- Programs will need to change in both scope and offerings as the community needs change.

- Increases in technology will necessitate expansion of high technology curricula and will create a continual need to evaluate and update program content and instructional equipment in existing programs.
- Manufacturing operations in Bladen County will begin to use technology that is more sophisticated and employ fewer people. Those who are employed in manufacturing will need higher-level skills. Retraining displaced workers from these industries may become a major need.
- Expanded curriculum course offerings will be necessary to meet the needs of increasing numbers of our citizens from diverse backgrounds.
- Professional development should have, as a major thrust, training in skills to meet the needs of this diverse group of students.
- Distance learning opportunities will need to intensify to meet the needs of a diverse population. (Bladen Community College Planning and Research Office, 2012. p. 50)

BCC recognizes the student body's diversity and community needs. These factors require graduates who have the ability to recognize a problem, analyze possible solutions, and resolve the problem efficiently. Graduates become productive employees and productive citizens. Enhanced critical thinking skills are the basis for this success.

COMPASS and NET Testing Results

BCC's test results reveal the need for enhanced critical thinking skills. Upon applying to BCC, students must complete the COMPASS placement test, which evaluates students' reading, writing, and math skills. The test scores identify the levels at which a student can begin classes. Students with below average placement test scores enroll in developmental courses before enrolling in curriculum courses. In fall 2011, 40% of the students enrolled in one or more developmental courses (Priest, 2011).

Before implementing the Test of Essential Academic Skills (TEASE) in 2008, students who planned to apply to the Practical Nursing Program or the Associate Degree in Nursing Program completed the Nurse Entrance Test (NET). This test assessed the students' critical thinking skills. The Assessment Committee chose to analyze the results of this test because a large sample of students took the NET at BCC, and the NET is standardized and psychometrically sound. It contains one section that specifically assesses critical thinking.

The Assessment Committee reviewed NET Assessments from 2006-2008, focusing on the scores from the critical thinking component of the reading comprehension section. The NET assesses students' ability to comprehend what they read and to make decisions according to what they read. Students must read passages that vary in length and complexity. After reading the passage, students answer questions about what they read. These questions vary in complexity from basic questions of identification and comprehension to questions that require the students to analyze and apply the information to a situation or problem. The NET Assessment includes three types of reading comprehension tasks:

- (1) Main Idea: This measures a student's ability to read a passage and understand and identify the main idea. Higher scores in this area indicate basic reading comprehension.

(2) Inferential Reading: This is more complex than the “main idea” task. This task measures a student’s ability to read a passage and make inferences (logical extensions and leaps) in response. This requires more cognitive complexity and requires that the student be able to not only identify what they have read but analyze and apply that information to another situation or problem. Higher scores in this area indicate the ability to analyze and apply written information, which is beyond mere comprehension and identification.

(3) Predicting Outcomes: This is the most complex comprehension and critical thinking task on the NET. This type of task measures a student’s ability to read a passage and predict possible future outcomes that students base on the reading. This type of task also requires students to think beyond identification and comprehension. Higher scores on this type of task indicate strong comprehension and decision-making skills.

The assessment committee examined the average student performance on each task in 490 tests. The assessment committee predicted that students would earn higher scores on the task of understanding a passage’s main idea but would earn lower scores on the inferential reading task and earn even lower scores on the task of predicting outcomes.

The results are

1. Main Idea: Average Student Score = 68.59%
2. Inferential Reading: Average Student Score = 63.44%
3. Predicting Outcomes: Average Student Score = 60.00%

The test identifies students who scored between 0% and 50% as high risk for deficiency in critical thinking skills. Students who scored between 50% and 75% have average critical thinking skills. Since the average for student scores range from 60 % to 68%, students overall demonstrate average critical thinking skills. However, since this is an average score, this also implies that many of BCC’s students remain at high risk for deficiency in critical thinking skills.

Although partial data from a standardized instrument like the NET cannot provide general conclusions about students, the QEP Leadership Team’s interest in evaluating critical thinking justifies its using only the NET data that measures critical thinking. The overall results support the committee’s prediction that higher-order comprehension skills involving critical thinking is a challenge for BCC students and is a justifiable focus for the BCC QEP.

IV. Student Learning Outcomes

Comprehensive Standard 3.3.2 of *The Principles of Accreditation: Foundations for Quality Enhancement* requires that the institution develop a QEP that identifies goals, and Core Requirement 2.12 of *The Principles of Accreditation: Foundations for Quality Enhancement* requires that the institution develop a QEP that focuses on learning outcomes (Southern Association of Colleges and Schools Commission on Colleges,

2009). BCC has developed a plan with well-defined, specific goals and measurable student learning outcomes.

In March 2011, QEP co-chairs presented the QEP topic and the faculty definition for critical thinking at an all-campus assembly. On April 1, 2011, the QEP co-chairs asked faculty to send three to five student learning outcomes to the co-chairs by April 7. Faculty received a guide to writing student learning outcomes and a copy of Bloom's Taxonomy measurable verbs. The QEP co-chairs compiled the faculty submissions into a list of 40 student learning outcomes.

At the April 8, 2011 faculty meeting, QEP co-chairs distributed copies of the list of student learning outcomes. The faculty met in small groups and selected the best outcomes for the QEP or composed new outcomes by combining and revising. Each group presented its top student learning outcomes reducing the outcomes from 40 to 13.

On August 2, 2011, the faculty met to finalize the student learning outcomes and to develop ideas for an action plan. Faculty received copies of the 13 outcomes they created in April. After group discussion, the faculty voted for the following outcomes:

1. Students will be able to identify a problem, gather relevant information for that problem, analyze that information, solve the problem and then communicate their results in a concise, logical manner.
2. Students will collect, analyze, and organize data in order to develop an evidence-based plan with measurable outcomes in the problem-solving process.
3. Students who complete courses at BCC will be able to examine and evaluate various practices in their field based on current research and theory.

The faculty then suggested ways that BCC could help students achieve these outcomes. These ideas became the basis of the action plan in Section VI and for the QEP goals. After the faculty meeting adjourned, the QEP committee chairs met to discuss their roles in the QEP development. This small group discussion focused and defined the goals, student learning outcomes, and action plan for the QEP.

During August 2011, the QEP co-chairs organized the information from the meetings and presented the basics for the QEP to the faculty on September 9, 2011, and to faculty and staff on September 13, 2011. These basics included the topic, focus, five student learning outcomes, and a three-part action plan. In October 2011, the co-chairs added goals to the QEP. In November 2011, the QEP Leadership Team selected the 4P action plan and the Steps to Better Thinking Problem Solving Method as part of the action plan, and in December 2011, the QEP Leadership Team deleted one part of the action plan. As a result, the BCC QEP includes the following:

- Topic: Critical Thinking
- Title: R U Thnkn? Think Smarter.
- Definition of Critical Thinking: Use of prior knowledge combined with newly acquired information to apply, interpret, and assess problems,

questions, or situations.

- Focus Statement: The focus of the Bladen Community College QEP is to improve students’ problem solving skills by providing instruction and resources that promote critical thinking.
- Goals:
 - BCC will offer professional development for faculty and staff who will provide students with the instruction and resources necessary to develop and improve students’ critical thinking skills.
 - Students will demonstrate the use of critical thinking skills in academic, professional, and personal environments.
- Student Learning Outcomes:
 - As students develop and enhance critical thinking skills, students will be able to
 - Identify a problem
 - Gather relevant information for the problem
 - Analyze relevant information and possible solutions for the problem
 - Solve the problem
 - Communicate their solutions to the problem in a logical, concise manner
- Action Plan
 - Provide professional development to faculty and staff in the areas of problem solving and critical thinking
 - Introduce students to the 4P problem-solving action plan in connection with “Steps for Better Thinking: A Developmental Problem Solving Process”

In spring 2012, the QEP Leadership Team revised the student learning outcomes to align with the assessments and allow measurement. Table 5 shows the revised student learning outcomes, assessments, goals, and criteria for success.

Table 5. Revised Student Learning Outcomes

Student Learning Outcome	Assessment	Goals	Criteria for Success
1. Students will be able to <i>identify</i> a problem and relevant information surrounding the problem.	Test of Everyday Reasoning (TER): Deductive and Inductive Reasoning Sample Assignments 4P Rubric Student Surveys	Students will show a pattern of increase on the TER in Deductive and Inductive Reasoning. Rubrics the instructors and service area facilitators use will show that all students can identify and discuss a problem. Assignments that implementers present in discussions will show that all	On the Post-Test, students will score 80% or higher on the Deductive and Inductive Reasoning Section of the TER. Students will score a 2 or higher on the “Plan” section of the 4P rubric. Students will score 80% or higher on assignments that measure students’ ability to identify and discuss a

		students can identify and discuss a problem.	problem. Student surveys will show that students achieved this outcome adequately well, very well, or extremely well.
2. Students will be able to <i>interpret</i> and <i>infer</i> information in order to <i>construct</i> possible solutions for the problem.	Test of Everyday Reasoning (TER): Analysis and Inference Sample Assignments 4P Rubric Student Surveys	Students will show a pattern of increase on the TER in Analysis and Inference. Rubrics the instructors and service area facilitators use will show that all students can identify and analyze multiple solutions to a problem. Assignments that implementers present in discussions will show that all students can identify and analyze multiple solutions to a problem.	On the Post-Test, students will score 80% or higher on the Analysis and Inference Sections of the TER. Students will score a 2 or higher on the “Prepare” section of the 4P rubric. Students will score 80% or higher on assignments that measure students’ ability to identify and analyze multiple solutions to a problem. Student surveys will show that students achieved this outcome adequately well, very well, or extremely well.
3. Students will be able to <i>choose</i> and <i>assess</i> a solution to the problem.	Test of Everyday Reasoning (TER): Evaluation Sample Assignments 4P Rubric Student Surveys	Students will show a pattern of increase on the TER in Evaluation. Rubrics the instructors and service area facilitators use will show that all students can choose and evaluate a best solution to a problem. Assignments that target groups present in discussions will show that all students can choose and evaluate a best solution to a problem.	On the Post-Test, students will score 80% or higher on the Evaluation section of the TER. Students will score a 2 or higher on the “Practice” section of the 4P rubric. Students will score 80% or higher on assignments that measure students’ ability to choose and evaluate a best solution to a problem. Student surveys will show that students achieved this outcome adequately well, very well, or extremely well.
4. Students will be able to <i>communicate</i> a solution to a problem in a logical and concise manner.	Sample Assignments 4P Rubric Student Surveys	Rubrics the instructors and service area facilitators use will show that all students can communicate the solution in a logical and concise manner. Assignments that implementers present in discussions show that all students can communicate	Students will score a 2 or higher on the “Produce” section of the 4P rubric. Students will score 80% or higher on assignments that measure students’ ability to choose and evaluate a best solution to a problem.

		the solution in a logical and concise manner.	Student surveys will show that students achieved this outcome adequately well, very well, or extremely well.
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The goals of the BCC QEP reflect the College’s mission to ensure quality education by providing professional development to faculty and staff and quality enhancement of programs, services, and instruction. The student learning outcomes reflect the College’s commitment to higher order learning as each of the outcomes progresses through Bloom’s taxonomy.

V. Literature Review and Best Practices

Literature Review Committee Process

Research for this section of the BCC QEP is the work of the QEP Literature Review Committee:

Ann Russell, Chairperson
 Sherwin Rice, Resource Person
 Joyce Bahhouth
 Re Gena Brown
 Mark Coleman
 Claudia Anderson

Once the College established critical thinking with emphasis on problem solving as the topic for the QEP, the Literature Review Committee divided its search for information into five areas: theory, practice, teaching, assessment, and training. Each committee member conducted an intensive review of current literature for a certain area.

1. Ann Russell Theory and Practice
2. Re Gena Brown Theory
3. Claudia Anderson Teaching and Practice
4. Mark Coleman Training
5. Joyce Bahhouth Assessment
6. Sherwin Rice Resource Locating and Training

The committee established a forum in the Faculty Resource Library in the College Learning Management System so that members could post citations for articles. Over three months, the committee reviewed nearly 500 articles on critical thinking with a focus on college students. The committee sought justification for instruction and training in critical thinking among college students, a definition of critical thinking that focused on problem solving, information on best practices for teaching and improving critical thinking skills among college students, and methods of assessment that can apply across the college.

Needs Assessment: Critical Thinking Skills

Mendenhall and Johnson (2010) cited a 2006 US Department of Education study that revealed that new graduates are “underprepared and inadequately skilled when they enter the workforce” and that they often “lack the necessary literacy skills to be competitive in the workplace.” This is part of a trend of declining skills that include “the ability to critically think, problem solve, and write effectively” (US Department of Education quoted in Mendenhall and Johnson, 2010). As a result of this decline, the US Secretary of Education Commission adopted a new set of higher education standards that promote providing “learners with workplace skills and for institutions to adapt to a rapidly changing world that is continually being altered by technology” (US Department of Education quoted in Mendenhall and Johnson, 2010).

In the March 2012 issue of *Campus Technology*, John Waters writes in his article “John Q. Netizen” that today’s college students “have progressed from a situation where students labored to find enough information to where they are drowning in the stuff.” This fact, Waters further states, means that skills to evaluate and analyze the information are essential (Waters, 2012). Thus, says Alexander Halavais, a professor of communications at Quinnipac University and Stanford University, “the core digital skill is not digital at all. It’s critical thinking” (Halavais, quoted in Waters, 2012, p. 20). Kansas State University professor Michael Wesch further says that critical thinking helps students filter the flood of information coming at them (Wesch, quoted in Waters, 2012).

The Association of American Colleges and Universities stated in 2002 that “Business leaders seek graduates who can think analytically, communicate effectively, and solve problems” (Schamber and Mahoney, 2006, p. 104). In order to meet the needs of 21st century employers, general education programs at universities are requiring critical thinking, and standardized tests are thus targeting it (Mazer et al, 2008, p. 173). The rationale behind this requirement is that critical thinking produces lifelong learners who learn through inquiry rather than fact compilation. In a study Ratcliff et al. conducted in 2001 (cited in Schamber and Mahoney, 2006, p. 104), 72 percent of institutions in a national sample of colleges and universities identified critical thinking as an important “cognitive area” of general education.

Numerous universities and colleges are requiring critical thinking (Bissell and Lemons, 2006; Schamber and Mahoney, 2006). Bers (2005) concludes that community colleges expect their students to think critically and that assessment is more likely on the course level than on the department, program, or institution level. The placement rates of Olin Business School at Washington University in St. Louis, Missouri, improved by 10% after the School required all of its syllabi to include a critical thinking component, and its elective and core courses integrated problem formulation, problem-solving analytics, critical thinking techniques, and peer and self-assessment (Bisoux, 2011). The Community College of Baltimore County, Maryland, states that general education courses must teach critical analysis and reasoning by offering “a variety of learning experiences that encourage students, independently and in collaboration with others, to use those fundamental principles and methods to acquire, analyze, and use information for purposes of inquiry, critical thinking, problem-solving, and creative expression in a diverse environment” (Community College of Baltimore County, 2004, p. 2 cited in Bers, 2005). Colleges need to ensure synchronization of the curriculum, teaching methodologies, and assessment.

“According to the U.S. Bureau of Labor Statistics, the fastest growing job markets in the United States will require critical thinking skills of all employees.” High school graduates often lack this skill or even the basic skills leading to critical thinking, and the work force is ill-prepared to meet the current demands (Law and Kaufhold, 2009; Parker, 2011).

Critical Thinking Definitions

One of the earliest definitions of critical thinking associated with higher education comes from William Edward Sumner in 1940:

[Critical thinking is] . . . the examination and test of propositions of any kind which are offered for acceptance, in order to find out whether they correspond to reality or not. The critical faculty is a product of education and training. It is a mental habit and power. It is a prime condition of human welfare that men and women should be trained in it. It is our only guarantee against delusion, deception, superstition, and misapprehension of ourselves and our earthly circumstances (p. 632).

Mazer, Hunt, and Kuznekoff (2008) cite Browne and Stuart’s (2004) definition: “Critical thinking consists of a set of interrelated critical questions, plus the ability and willingness to ask and answer them at appropriate times” (p. 3) [p. 175]. James, Hughes, and Cappa (2010) state that “Critical thinking is the art of knowledgeable and skillful disobedience” (p. 287).

Facione defines critical thinking as “purposeful, self-regulatory judgment that results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based” (Facione cited in Schamber and Mahoney, 2006, p. 106).

Taylor (2004 cited in Bers, 2005, p. 15-16) adds a practical slant to critical thinking: “Critical thinking is the kind of thinking that professionals in the discipline use when doing the work of the discipline” (p. 2).

Paul and Elder, co-founders of the Foundation for Critical Thinking, define critical thinking as “self-directed, self-disciplined, self-monitored, and self-corrective thinking. It presupposes assent to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem solving abilities and a commitment to overcome our native egocentrism and sociocentrism” (Paul and Elder, *Miniature Guide*, 2010).

Though the language of definitions has changed, and numerous definitions exist, they share critical thinking descriptions: critical thinking focuses on questions rather than answers, critical thinking pushes toward higher order thought processes, critical thinking requires a degree of metacognition, and critical thinking promotes challenging traditional ideas. These support BCC’s definition of critical thinking: the use of prior knowledge combined with newly acquired information to apply, interpret, and assess problems, questions, and situations.

QEP Goal Support

Paul (Foundation for Critical Thinking), in his 2004 white paper “The State of Critical Thinking Today,” reaches these eight broad conclusions:

1. Broad based study reveals college faculty lack a substantive concept of critical thinking.
2. Critical thinking is rare in the college classroom.
3. Substantive critical thinking can be cultivated in every academic setting.
4. There is a necessary connection between critical thinking and learning.
5. There is a necessary connection between critical thinking and skilled reading and writing.
6. Fragmentation and short-term memorization are predictable outcomes of non-substantive critical thinking.
7. Establishing general education courses in critical thinking and in study skills will not solve the problem.
8. A substantive concept of critical thinking leads to deep learning and to the acquisition of substantive knowledge.

Faculty ability to and preparation for incorporating critical thinking into their instruction and course design is the first obstacle Elder addresses in her discussion of the state of critical thinking. Elder (2004) found in her study “three disturbing, but hardly novel facts” about higher education faculty and critical thinking:

1. Most faculty at all levels lack a substantive concept of critical thinking.
2. Most college faculty don’t realize they lack a substantive concept of critical thinking, believe that they sufficiently understand it, and assume they are already teaching it to students.
3. Lecture, rote memorization, and (largely ineffective) short-term study habits are still the norm in college instruction and learning today.

Further, a study Paul, Elder, and Bartell (1997) conducted across 38 public and 28 private California colleges and universities focused on one question: “To what extent are faculty teaching for critical thinking?” It revealed that although 89% of faculty claimed critical thinking was a primary focus of their instruction, only 19% could give a clear explanation of what critical thinking is. Additionally, Paul (2004) points out that 77% of respondents could not reconcile their content coverage in any way to critical thinking. Finally, Paul (2004) recommends that, at minimum, college faculty need instruction in the basic concept of critical thinking and must be sufficiently well-informed about critical thinking to not only explain it to their students but also to routinely model instruction for critical thinking and demonstrate critical thinking orientation “in the design of their classes.” Paul (2004) concludes with three mandates concerning faculty:

1. We must disseminate the information faculty need to change their perceptions.
2. We must provide for faculty skill-building through appropriate professional development.
3. We must establish a mandate to systematically teach critical thinking.

Clearly, these studies show that most college faculty need professional development in critical thinking concepts and in teaching critical thinking in their disciplines.

University and college professors strongly believe that critical thinking skills are essential and that students must master these skills (Bers, 2005). Mazer et al. (2008) believe that critical thinking instruction is most effective within a content course. Elder (2010) insists that critical thinking must be at the heart of the curriculum. Mazer et al. (2008), Walker (2003), and McClune and Jarman (2010) show that critical thinking can only improve with specific instruction that targets higher-order thinking. Walker (2003) adds that thought develops with practice and evaluation over time with multiple strategies.

Many studies show how to teach critical thinking through different disciplines. For example, Mazer et al. (2008) stress the need to promote critical thinking through an introductory communication course since speech and thought are closely linked. McClune and Jarman (2010) apply critical thinking in science education to prepare students to use science in real-life context. Bissell and Lemons (2006) have designed, used, and scored discipline-specific assessments of critical thinking by writing questions that require both biological knowledge and critical thinking skills, documenting the required knowledge and critical thinking skills, and then devising a rubric. Bissell and Lemons explicitly gave students goals for both content knowledge and critical thinking skills mastery. As a result of these specific learning intentions, Bissell and Lemon believe that the learners' critical reading capability improves. Moreover, critical capability at any level depends on the capacity to integrate knowledge from different curricular areas and demonstrate a range of competencies appropriate in the context.

Paul tells higher education faculty that they must "teach content through thinking, not content, and then thinking" (2004, p. 3). Elder continues that "every discipline-- mathematics, physics, chemistry, biology, geography, sociology, anthropology, history, philosophy, and so on-- is a mode of thinking" (p. 4). An instructor must teach any discipline as a mode of thought so that he or she does not "sacrifice thought to gain coverage," and thereby "sacrifice knowledge at the same time" (p. 4).

Lynch and Wolcott also address the issue of faculty designing appropriate educational experiences to help students exhibit more complex thinking skills. According to Lynch and Wolcott's research, teachers who do not understand how thinking skills develop may overestimate or underestimate students' skills and assign course work that is all foundational or all overly complex. Lynch and Wolcott assert that "a major reason college students fail to exhibit more complex thinking skills is because their educational experiences have provided limited support for skill development and optimal performance" (Idea Paper #37, p. 5). Since the development of complex thinking skills depends on students' having appropriate experiences, faculty

must know how to design developmentally appropriate learning experiences (Idea Paper #37, p. 5). To this end, Lynch and Wolcott designed a rubric for faculty to use in preparing activities and assignments so that they are developmentally (in terms of thinking skills) appropriate for students (Idea Paper #37, p. 5 -7) (Appendix G).

Other studies focus on fostering critical thinking in specific disciplines. Though speaking specifically of business program faculty, T. K. Das makes a valid point for all disciplines in his assessment that “most of our business school instructors suffer from a false sense of adequacy in their competence to help students in developing critical thinking skills” (quoted in Wolcott, n.d., p. 2). Wolcott suggests that this overconfidence might come from instructors’ failure to recognize the limitations of students’ cognitive development and that instructors “need to learn about cognitive development in order to recognize those limitations in their students and learn to adapt their curriculum accordingly” (Wolcott, n.d., p. 2).

Ruutmann and Vanaveski (2009) focus on the need for expert teachers in engineering-related classes. They conclude that expert teachers must have four different forms of knowledge to skillfully model and foster deep learning. The four forms of knowledge are

1. Content knowledge: a factual understanding of the subject
2. Pedagogical content knowledge: the ability to create examples or activities that make the understanding of the subject comprehensible to others
3. General pedagogical knowledge: an understanding of general principles of instruction and classroom management that transcends individual topics or subject areas
4. Knowledge of learners and learning: the most essential of the types of knowledge as it influences the understanding that we do not teach content; we teach students and understanding how to adapt instruction to what students already know and how students learn is essential. (p. 177)

Expert teachers teach thinking in the subject and understanding of the subject, using these four types of knowledge to identify clear learning objectives, select effective strategies to help students reach the objectives, provide examples leading to deep understanding of the subject, guide students as they construct their own understanding of the subject, and continually monitor students for evidence of learning (Ruutmann and Vanaveski, p. 178).

Abushihab (2008) in “Taking Reading Beyond Comprehension Level by Developing Critical Thinking in the Classroom,” concludes that reading instruction in all subject areas must take readers beyond mere comprehension to discerning the implications of the text and to making inferences from those implications; this is critical reading (p. 375). Abushihab explains that “inference is a mental process which is activated through interpretation. It is a mental activity...that allows the reader to make meanings from other meanings....” (p. 376). Thus, inferential reading is critical reading, and critical reading is a problem-solving process (p. 379).

Walker (2003) comments on medical education and critical thinking in her article “Active Learning to Promote Critical Thinking.” Her research revealed that the relationship between faculty disposition to think critically and to model critical thinking is

essential to nurturing critical thinking in students (p. 2). Her conclusion is that “faculty who select lecture formats as a large part of their teaching strategy may be enabling students to avoid critical thinking as this practice eliminates the opportunity for students to decide for themselves what information is important to know” (p. 3). This idea supports Walker’s assertion that “students need to be exposed to diverse teaching methods that promote critical thinking in order to nurture the critical thinking process” (p. 3). Further, faculty must not lead students to think that there is only one answer, solution, care method, or treatment, but rather, “students must be exposed to ambiguity and multiple interpretations and perspectives of a situation or problem in order to stimulate critical thinking growth” (p. 3-4).

McClune and Jarman (2010) studied the ability to critically read science-based media and concluded that “one important aim of science education should be to prepare students to engage with science in contexts they will encounter later in life” (p. 728). The aptitude to engage critically with media-based science is one manifestation of critical scientific literacy (p. 729). McClune and Jarman also found “little evidence of news-based activities integrated into programs of study in such a way as to develop criticality among students” (p. 731). The lack of integration with real world science does not foster this scientific literacy.

The American Institute of Certified Public Accountants (AICPA) named critical thinking as one of its “Broad Business Perspective Competencies,” which encompass “the ability to link data, knowledge, and insight together from various disciplines.” The AICPA lists the following as behaviors indicating mastery of “Broad Based Business Competencies”:

1. Articulates the principles of the strategic planning process;
2. Identifies strengths, weaknesses, opportunities, and threats associated with a specific scenario, case, or business activity;
3. Identifies and gathers data from a wide variety of sources to provide insightful interpretations for decision making;
4. Transfers knowledge from one situation to another; and
5. Analyzes and prepares strategic information (market share data, customer satisfaction data, competitor data, product innovation data, etc.) (Reinstein and Lander, n.d., p. 81)

In addition to a numerous studies on teaching critical thinking in various disciplines, much research on critical thinking in higher education explores teaching and problem-solving models that help create the instructional modeling and critical thinking climate in classes that all the research concludes is essential. Since educational technology is a key component of most classrooms today, faculty must include technology when planning learning strategies and learning models (Mendenhall and Johnson, 2010, p. 264).

Mendenhall and Johnson (2010) conducted a study to test their Social Annotation Model Learning System (SAM-LS). SAM-LS’s purpose is to test the theory that annotation, using Web 2.0 technology, is one way for students to interact with and react to texts, translating reading to learning. Critical understanding of texts requires

applying many learning and study strategies. This study concluded that annotation using Web 2.0 technology promoted this critical comprehension.

One key component to critical comprehension is learner's motivation, which greatly improved when the learner "perceived the learning activities as personally relevant" (Keller, quoted in Mendenhall and Johnson, p. 265). Examples of relevant activities include real world problems that learners can relate to future applications and the use of peer interaction so that students tested their mental models and made appropriate adjustments (Keller, quoted in Mendenhall and Johnson, p. 265). Faculty are responsible for selecting these real world tasks, but appropriate use of technology such as the SAM-LS can provide "a framework for learners engagement in the tasks and exercises and in deeper cognitive processes" (Mendenhall and Johnson, 2010, p. 265). Mendenhall and Johnson (2010) theorized that through the use of SAM-LS methodology, students' critical thinking would improve (p. 266). The study tested three cognitive areas: reading comprehension, meta-cognition, and critical thinking. Final results showed critical thinking was the only cognitive area that improved in all five instructional strategies using technology-enhanced annotation. Increased interaction with peers and with the texts improved critical thinking skills.

Facione (2011, p. 25) proposes a problem-solving process he calls IDEAS. The steps build in complexity and level of thinking:

1. Identify the problem and set priorities.
2. Deepen understanding and gather relevant information.
3. Enumerate options and anticipate consequences.
4. Scrutinize the process and self-correct.

Note* The underlined action words are key components in all models.

IDEAS five steps mirror other problem-solving models: The Simplex Process by Mind Tools has eight stages: problem finding, fact finding, problem definition, idea finding, selection and evaluation, planning, selling ideas, and action ("The Simplex Process," Mind Tools.com). Lorain County Community College in Elyria, Ohio publishes its "Problem Solving Process" for students on the school web page. The Lorain Process has six steps: problem definition, problem analysis, establishing goals, generating possible solutions, analyzing solutions, and implementation of solutions.

Lynch and Wolcott (2001, p. 1-2) in "Helping Students develop Critical Thinking Skills," propose a four-step problem-solving model, Steps for Better Thinking, to lead students through problem solving and into increasingly complex thinking levels (Appendix F). The four steps in this model align with Bloom's Taxonomy as they move toward high cognitive complexity. The steps are

1. Identify the problem, relevant information and uncertainties.
2. Explore interpretations and connections.
3. Prioritize alternatives and communicate conclusions.
4. Integrate, monitor, and refine strategies for re-addressing the problem.

BCC's QEP goals, providing professional development for faculty who will promote critical thinking across all disciplines and staff in non-instructional areas that serve and interact with students, and enabling students to use critical thinking skills in academic, professional, and personal environments, align with current data on teaching and fostering critical thinking in the college environment.

Critical Thinking Assessment

Assessment is essential to measure learning. Silva (2009) stresses that designing standards, curricula, and assessment is essential to guarantee that students learn. McMahon (1999) explains that the assessment method determines whether the learners will be conformists or adopt a critical approach. Therefore, appropriate assessment strategies are necessary for adequate teaching and learning in critical thinking. McMahon stresses that the learners' perception of assessment and requirements strongly affects what they learn. Furthermore, Stein and Haynes (2011) explain how assessment leads to faculty awareness of their students' weaknesses, which leads to more effective practices and improvement in student learning. This process began with the development of the Critical Thinking Assessment Test (CAT). Faculty members actively engaged in developing the assessment tool that diagnosed students' weaknesses and prompted discussions of methods to improve student learning.

Peach, Mukherjee, and Hornyak (2007) call assessment a journey since it is an ongoing process requiring reevaluation, revision, and improvement of procedures. They warn that rubrics meet specific needs and that these rubrics may need revision to better meet the needs of an institution or a course. They also warn that assessment reflects what instructors teach in their classes, so instructors of multi-section courses need to agree on the core content. They conclude that change starts with the instructor and spreads throughout the college, sometimes even requiring change in the curriculum.

The purpose of assessing critical thinking is to improve students' learning through applying critical thinking skills in their various disciplines (Foundation, n.d.). Ennis (1993) emphasizes the need to define the purpose for each critical thinking assessment. These purposes may vary in their effect on different stakeholders. Instructors diagnose students' level of critical thinking and determine their success. Learners receive feedback about their critical thinking abilities, are motivated to improve these skills, and learn about their abilities in certain programs. Then the public gains access to research findings.

Paul and Nosich (1993) divide critical thinking assessment into the following categories:

- The assessment of elements of thought: Any critical thinking assessment tool must be valid and reliable.
- The assessment of abilities: The critical thinking assessment tool should test a number of abilities since critical thinking requires multiple abilities. The tool should assess these abilities directly, systematically, and in authentic situations.

- The assessment of affective dimensions: These dimensions, such as intellectual perseverance, are not always easy to test directly; such assessment should occur over a period of time.

Many studies (Hatcher, 2011; Elder, 2010, Mazer et al, 2008; Bers, 2005; Bissell and Lemons, 2006) show that most faculty members consider critical thinking the basis for undergraduate studies. However, many faculty members believe that critical thinking assessment is impossible, or they do not know how to assess it. They also find measuring critical thinking difficult.

Critical thinking assessment must involve real-world problems. Therefore, critical thinking assessment deals with a wide-scope of experiences in which no specific rules or solutions apply (Bers, 2005). Maniotes (2010) discusses critical thinking assessment through observation using a variety of record-keeping devices such as note taking, audio recording, and video recording. Bissell and Lemons (2006) recommend explaining to the students at the beginning of the course which content and critical thinking skills are necessary for success in that course.

Ennis (1993) presents possible forms for a critical thinking assessment tool: multiple-choice with written justification, essay, and performance assessment. Multiple-choice with written justification is the format the *Illinois Critical Thinking Project* adopted to allow for defensible conclusions that differ from the key and that are hard to assess in strictly multiple-choice items. The degree of structure in an essay test can vary from minimal to high, and such a test usually includes a rubric for holistic or analytical evaluation to maintain consistency between raters. Finally, performance assessment is the most expensive because of the time examiners spend with individual students. The degree of structure in performance assessments can also vary from naturalistic observations to evaluation of portfolios to the most structured performance assessment, which involves assigning a task that requires specific skills.

Some standardized instruments for assessing critical thinking are the following:

- *Academic Profile* examines college-level reading and critical thinking skills in the context of the humanities, social sciences, and natural sciences.
- *California Critical Thinking Dispositions Inventory* (CCTDI) targets students' internal motivation to use critical thinking skills to solve problems and make decisions.
- *California Critical Thinking Skills Test* (CCTST) assesses an individual's or group's critical thinking and reasoning skills.
- *College Base* is criterion-referenced and is administered after students complete a college-level core curriculum; the test emphasizes concepts and principles from course materials.
- *Collegiate Assessment of Academic Proficiency* (CAAP) assesses five general education skill areas, among them critical thinking.
- *Collegiate Learning Assessment Project* (CLA) measures the value added by an institution to students' critical thinking skills.
- *Tasks in Critical Thinking* is performance-based and generates group rather than individual scores.
- *Watson-Glaser Critical Thinking Appraisal* tests students' ability to think critically.

- *Community College Survey of Student Engagement (CCSSE)* asks the students to report the frequency with which they engage in various behaviors requiring cognitive skills (Bers, 2005).
- *International Critical Thinking Test* by Elder and Paul provides the fundamentals of critical thinking used in any discipline (Elder, Paul, and Cosgrove, n.d.).
- *Test of Everyday Reasoning* is a 35-item multiple-choice test that assesses an individual's or group's basic reasoning skills (Test of Everyday Reasoning, 2011).

In addition to standardized tests of critical thinking, rubrics are a means of measuring student performance in critical thinking. Facione and Facione (1994) developed a four-level rubric, the Holistic Critical Thinking Scoring Rubric, to assess critical thinking and developed a set of instructions (Appendix H). Paul and Elder (2007, pp. 3-4) warn that in many cases, standardized tests mention some elements of thought but ignore them as a whole. Paul and Elder show that although knowledge is not only recalling information but also finding and using this information, the purpose of assessing critical thinking is to help "students learn to reason with skill through the logic of the subject."

Individual colleges often develop in-house assessments to measure critical thinking. Several community colleges, such as Bergen Community College in New Jersey, the Community College of Baltimore County, Maryland and Waukesha County Technical College in Wisconsin have each created institution-specific methods for assessing critical thinking (Bers, 2005).

The Test of Everyday Reasoning (TER) measures the reasoning skills of high school and two-year community college students and can assess individual students or groups of students. Technical colleges, businesses, and government agencies also use the TER because it provides data for short and long-term learning outcomes assessment as well as for evaluation and design of programs that teach reasoning skills (Test of Everyday Reasoning, 2011).

As BCC evaluated different critical thinking tests, the following points from Hatcher (2011) led to the choice of *Test of Everyday Reasoning*.

- BCC's faculty members had already defined critical thinking. The courses the faculty had chosen for the assessment of critical thinking will focus on helping students achieve these skills. Moreover, this test assesses the skills that the definition highlights and the courses target.
- This test has error analysis, which will help in diagnosing students' strengths and weaknesses.
- The test's cost is appropriate for BCC's budget.
- The students are familiar with the question types, which consist mainly of 35 multiple choice items requiring analysis and interpretation of information in different forms and assessing students' ability to draw conclusions and evaluate inferences.
- The test is available online or in a paper-and-pencil form.

- The research indicates likely improvement in students' critical thinking abilities.

VI. Action Plan and Time Line

The goals of the BCC QEP involve both the faculty and staff and the students. The first action of the plan addresses faculty and staff:

- Provide professional development to faculty and staff in problem solving and critical thinking.

Since BCC will submit the QEP to SACS/COC in August 2012, and the on-site team will review the QEP at the on-site visit in October 2012, the College will implement the plan in spring 2013. The first full phase of professional development sessions will occur during the spring semester. Experts in the field of critical thinking and instruction will lead the sessions. The training for faculty will include hands-on workshops that allow participants to revise syllabi, create lesson plans, and design assignments that enhance the instruction and use of problem solving and critical thinking. The training for staff will include instruction, action planning, and role playing of how to use the problem-solving action plan in each of the service areas on campus. The four sessions will address these questions and topics:

- **Session 1** – What is critical thinking? What are the characteristics of a critical thinker? How do faculty and staff become better critical thinkers?
- **Session 2** – The 4P Problem Solving Action Plan: How do faculty teach it? How do faculty and staff incorporate the action plan in instruction and service areas? How can faculty develop lesson plans and design assignments that use the action plan?
- **Session 3** – Teaching Critical Thinking: reading, writing, discussions, presentations, portfolios, and other projects.
- **Session 4** – Assessing Critical Thinking: syllabi, assignments, discussions, interaction, and involvement.

Sessions 2, 3, and 4 will adapt for the service areas when the staff participate in the training.

The QEP Professional Development Committee prepared a list of potential speakers, conferences, and instructional resources to reference when scheduling professional development sessions.

Resources for Critical Thinking and Problem Solving Professional Development

- Conferences and Workshops: Foundation for Critical Thinking. "Calendar of Events in Critical Thinking." 2011. The Critical Thinking Community. March 2012. <http://www.criticalthinking.org/>
- Instructional Resources: Saskatoon Public Schools. Instructional Case Studies Online. 2004-2009. March 2012. <http://olc.spsd.sk.ca/DE/PD/instr/strats/casestd/index.html>

- Action plans for Professional Development: Foundation for Critical Thinking. "Professional Development: Higher Education." 2011. The Critical Thinking Community. March 2012. <http://www.criticalthinking.org/pages/professional-development-for-higher-education/431>
- Action plan for Professional Development: Elder, Linda. "Professional Development Action plan - Colleges and Universities that Foster Critical Thinking." Fall 2004. The Critical Thinking Community. March 2012. <http://www.criticalthinking.org/pages/professional-development-action-plan-college-and-university/435>
- Speaker – Jason Chaffin: Cape Fear Community College. "Faculty and Staff: Jason Chaffin." 2010. Cape Fear Community College. February 2012. <http://cfcc.edu/fasd/index.php?lastNameInitial=c>
- Speaker – Peter Facione: All American Speakers LLC. "Biography of Peter Facione." 2011-2012. All American Speakers. March 2012. www.allamericanspeakers.com/speakers/Peter-facione/5907
- Speaker – Susan K. Wolcott: Wolcott, Susan K. and Cindy L. Lynch. WolcottLynch. 2006. March 2012. <http://www.wolcottlynch.com/>

In spring 2012, the QEP Leadership Team selected a pilot group to test the QEP. Three ACA 115 instructors participated in professional development training in May. The College offered three sections of ACA 115 in the summer of 2012; two instructors taught the courses. In preparation for the summer, instructors revised ACA 115 syllabi to include problem solving and critical thinking skills components. In addition, the instructors integrated teaching and assessment methods into the courses. In the fall of 2012, the three instructors plan to implement syllabi revisions, teaching methods, and assessments focusing on critical thinking in ACA 115 and ACA 122.

Between 2012 and 2013, BCC will select a QEP Coordinator and a QEP Support Team. These are described in Section VII.

In spring 2013, BCC will implement the QEP with revisions the QEP Coordinator and QEP Support Team find necessary after the summer 2012 and fall 2012 pilots. All ACA 115: Success and Study Skills and ACA 122: College Transfer Success instructors will participate in the professional development. ACA classes already include some discussion of critical thinking. All programs of study require students to take one of the ACA courses, and advisors encourage students to take ACA during the first year of college. For these reasons, ACA instructors are the first group of faculty to participate in the training. Other faculty and staff who volunteer to participate in the professional development sessions may attend.

In fall 2013, all ACA instructors will use the information from the spring professional development in their ACA classes. They will employ syllabi with learning outcomes that focus on, assignments that promote, and activities that require problem solving and critical thinking. Such activities may include open-ended or essay question on tests. Throughout the fall, instructors will meet to discuss assignments and conduct assessments that will monitor and evaluate these critical thinking activities, the use of the 4P action plan, and the results of such activities. Implementers will present to the

QEP Coordinator and the QEP Support Team the strengths and weaknesses of the plan and make suggestions for any revisions to make the plan more effective.

At the end of the fall semester, the QEP Coordinator and QEP Support Team will revisit the plan and make changes as necessary.

If no significant changes are necessary, in spring 2014, instructors for developmental education courses and general education core courses will participate in the four professional development sessions. General education core courses include ENG 111, ENG 114, HUM 115, CIS 110, MAT 140, and PSY 150. Instructors for a science class and oral communication class may also participate to meet the SACS/COC General Education Core Requirements. These instructors will implement information from the training into their classes in fall 2014 and participate in the same activities ACA instructors did in fall 2013. The QEP will follow the same procedure in spring and fall 2015 and will include all other instructors who have not participated in the professional development series. By the end of 2015, the 4P action plan and critical thinking will be common in all curriculum areas.

In 2016, the supervisors and representatives from the BCC service area staff will participate in professional development. The sessions will be similar to the faculty's professional development, with some adjustments to meet the staff's specific needs. For example, instead of revising syllabi and creating lesson plans, staff will learn to model the 4P action plan for the students and show students how to follow the action plan when solving problems and making decisions involving classes and financial aid issues.

In 2017, the College will provide training as necessary for any faculty or staff who have not participated, including new employees. By the end of 2017, the 4P action plan and critical thinking should be common language, common knowledge, and a well-used tool in all courses and service areas on the BCC campus.

The second part of the action plan addresses the students:

- Introduce students to a specific problem-solving method that they will use across the curriculum and in college service areas.

The 4P problem solving action plan includes four basic steps: Plan, Prepare, Practice, and Produce. 4P is easy to remember and gives students a short, concise method to recall the problem-solving method. The method is an action plan; it shows students what to do in order to solve a problem, make a decision, or complete any kind of project or assignment they might encounter. Table 6 illustrates the kinds of questions a student might address for each of the steps.

Table 6. 4P Problem-Solving Action Plan

4P Problem-Solving Action Plan	
Plan	<ul style="list-style-type: none"> • What is the problem I need to solve or the task I need to complete? • What are the causes and other circumstances surrounding the problem? Who else does this problem involve? • What do I need to know to understand the problem? Where or from whom might I seek information?

Prepare	<ul style="list-style-type: none"> • What is my understanding of what has caused the problem? • What do other people think has caused this problem? • Am I looking at all sides or points of view of the situation? • What are several possible solutions for this problem? • What resources might I need to solve this problem? • How much time do I have to find a solution?
Practice	<ul style="list-style-type: none"> • Which solution appears to be the best? • Why does the solution appear to be the best? • What are the pros and cons of trying this solution? • If this solution doesn't work, which solution will I try next?
Produce	<ul style="list-style-type: none"> • Did I solve the problem? • Was this the best way to solve the problem? • If not, what other way would have worked better? • What will I do the next time the problem occurs?

The 4P action plan correlates with “Steps for Better Thinking: A Developmental Problem Solving Method” by Susan K. Wolcott (2006) (Appendix F). Table 7 shows the 4P action plan and the “Steps to Better Thinking” combined.

Table 7. 4P Action Plan with “Steps for Better Thinking: A Developmental Problem Solving Method”

4P Problem Solving Action Plan	“Steps for Better Thinking: A Developmental Problem Solving Process”
Plan	Step 1: identify the problem, relevant information, and uncertainties
Prepare	Step 2: explore interpretations and connections
Practice	Step 3: prioritize alternatives and communicate conclusions
Produce	Step 4: integrate, monitor, and refine strategies for re-addressing the problem

Step 1 in the “Steps for Better Thinking” asks students to identify the problem, relevant information, and uncertainties in the information. This is the same as “Plan” in that students must identify the problem and the causes of the problem along with any other information that promotes their understanding of the problem. Step 2 in “Steps for Better Thinking” encourages students to explore the interpretations of the information they identified in Step 1 and to see the complexities and alternate points of view. “Prepare” in the 4P action plan does this by encouraging students to look at all sides of a problem and to construct several possible solutions.

Step 3 in “Steps for Better Thinking” moves students toward prioritizing the information they identified and interpreted in Steps 1 and 2 and to consider several solution options. In the 4P action plan, “Practice” also guides students to prioritize their

possible solutions, consider which one might be best, and implement that solution first. In “Steps for Better Thinking,” Step 4 asks students to acknowledge, explain, and monitor the limitations of the best solution and to use the steps in all future problem-solving situations. “Produce” in the 4P action plan asks students to communicate their solutions to the problem and to evaluate how well the solution worked. If it did not work, the students should explain why and then choose another solution.

As faculty and staff participate in professional development, they will become familiar with the 4P action plan and learn to use this action plan in all courses and service areas. Instructors will teach the 4P action plan in the courses, and students will learn to use it to complete assignments and perform well in their classes. Advisors will also use the action plan as students are making decisions about course registration. Student services counselors and financial aid counselors will use the action plan as they help students work through challenges with program completion and finances. Co-op instructors can use the action plan with students involved in internships and other on-the-job training experiences. As a result, BCC will meet the second goal of the QEP as students are using problem solving and critical thinking in academic, professional, and personal environments.

BCC piloted the QEP in spring 2012, and implementation will occur from spring 2013 to fall 2017. Table 8 summarizes the QEP action plan time line. Table 9 provides a more detailed analysis of the QEP action plan.

Table 8. QEP Action Plan Time Line 2012- 2017

Year	Spring	Summer	Fall
2012	Professional Development for Pilot Implementers (ACA Instructors); Revise ACA 115 to include Strong Critical Thinking and Problem-Solving Components	Implement 4P Action Plan in three ACA 115 courses; Assess the Course Revisions and Assess the Students	Revise ACA 115 as necessary; Implement 4P Action Plan in all ACA Courses the Pilot Instructors teach.
2013	Professional Development for all ACA Instructors and Early Implementers	Revise ACA 115 and ACA 122 Courses as Necessary	Implement the 4P Action Plan in all ACA Courses; Monthly Discussions; Assessment
2014	Professional Development for Developmental Education Instructors, General Education Instructors, and Early Implementers (ENG 111, ENG 114, HUM 115, CIS 110, MAT 140, PSY 150)	Revise Course Syllabi and Course Assignments to Include Critical Thinking and Problem-Solving Components	Continue 4P Action Plan in ACA; Implement 4P Action Plan in all Developmental Education and General Education Courses; Monthly Discussions; Assessment
2015	Professional Development for All Other Instructors and Early Implementers		Continue 4P Action Plan in ACA, Developmental Education, and General Education Courses; Implement 4P Action Plan in all Other Courses; Monthly Discussions; Assessment

2016	Professional Development for Supervisors and Representatives from the Service Area Staff (with adjustments to align with responsibilities.		Implement 4P Action Plan in All Service Areas on Campus
2017	Professional Development as Necessary; Continue Use and Assessment of 4P Action Plan in Classes and in Service Areas.		Finalize Assessments; Write Five-Year Report

Table 9. Detailed QEP Action Plan Time Line 2012-2017

Date	Action	Responsible	Completed
Fall 2011	Outline Action Plan	Faculty QEP Leadership Team	X
	Research Best Practices	Literature Review Committee	X
	Design Logo	Marketing Committee QEP Leadership Team Faculty	X
	Select Title	QEP Leadership Team Faculty	X
	Develop Budget	Budget Committee	X
	Approve Budget	College President	X
Spring 2012	Finalize Details of the QEP	QEP Leadership Team	X
	Begin Marketing QEP	Marketing Committee Budget Committee	X
	Write the QEP Narrative	QEP Leadership Team	X
	Create a Pool of Presenters, Workshops, and Institutes for Professional Development	Professional Development Committee	X
	Identify QEP Coordinator	Vice President of Student Services and Instruction College President	X
	Select Pilot Instructors to Begin Professional Development	QEP Leadership Team	X
	Provide Professional Development for Pilot Instructors	QEP Leadership Team Professional Development Committee	X
Summer 2012	Implement 4P Action Plan in ACA 115 Pilot Classes	ACA 115 Instructors (Pilot)	X
	Assess ACA 115 Classes Assess QEP Make Revisions as Necessary	ACA 115 Instructors (Pilot) QEP Leadership Team	X
Fall 2012	Conduct On-Site Visit	SACS/COC Visiting Team SACS/COC Leadership Team QEP Leadership Team	
	Schedule Professional Development Sessions	QEP Coordinator	
	Identify Group 1 for Professional Development: All ACA 115 and ACA 122 Instructors	QEP Coordinator	

Year 1: 2013

Date	Action
Spring 2013	January: Professional Development– Session 1 “What is Critical Thinking?” <ul style="list-style-type: none"> • Attend (ACA Instructors) • Evaluate the Session
	February: Professional Development – Session 2 “4P Action Plan; Problem-Solving Method” <ul style="list-style-type: none"> • Attend (ACA Instructors) • Evaluate the Session
	March: Professional Development – Session 3 “Critical Thinking Implementation” <ul style="list-style-type: none"> • Attend (ACA Instructors) • Evaluate the Session
	April: Professional Development - Session 4 “Assessing Critical Thinking” <ul style="list-style-type: none"> • Attend (ACA Instructors) • Evaluate the Session
	May: Follow-Up Session “Preparations for Fall 2013” <ul style="list-style-type: none"> • Attend (ACA Instructors) • Evaluate the Session
Summer 2013	<ul style="list-style-type: none"> • Revise ACA 115 and ACA 122 • Include Strong Critical Thinking and Problem Solving Components
Fall 2013	August-December <ul style="list-style-type: none"> • Implement Instruction and Use of 4P Action Plan in ACA 115 and ACA 122
	Monthly Discussions <ul style="list-style-type: none"> • Present Progress Reports (Written and Verbal) of Critical Thinking Activities in the Courses • Present Rubrics That Reflect Interaction with Students
	August <ul style="list-style-type: none"> • Submit Copy of Course Syllabus to QEP Coordinator for Assessment
	August <ul style="list-style-type: none"> • Pre-Test: Test of Everyday Reasoning – All ACA Students
	October-Midterm <ul style="list-style-type: none"> • Submit One Assignment with Student Responses for Assessment
	December-End of Semester <ul style="list-style-type: none"> • Submit Second Assignment with Student Responses for Assessment • Submit Overall Evaluation from Instructor

Year 2: 2014

Date	Action
Spring 2014	January: Professional Development– Session 1 “What is Critical Thinking?” <ul style="list-style-type: none"> • Attend (Developmental Education and General Education Instructors) • Evaluate the Session
	February: Professional Development – Session 2 “4P Action Plan; Problem-Solving Method” <ul style="list-style-type: none"> • Attend (Developmental Education and General Education Instructors) • Evaluate the Session
	March: Professional Development – Session 3 “Critical Thinking Implementation” <ul style="list-style-type: none"> • Attend (Developmental Education and General Education Instructors) • Evaluate the Session
	April: Professional Development - Session 4 “Assessing Critical Thinking” <ul style="list-style-type: none"> • Attend (Developmental Education and General Education Instructors) • Evaluate the Session
	May: Follow-Up Session “Preparations for Fall 2013” <ul style="list-style-type: none"> • Attend (Developmental Education and General Education Instructors) • Evaluate the Session
Summer 2014	<ul style="list-style-type: none"> • Revise Developmental Education and General Education Courses • Include Strong Critical Thinking and Problem Solving Components
Fall 2014	August -December <ul style="list-style-type: none"> • Implement Instruction and Use of 4P Action Plan in Developmental Education and General Education Courses
	Monthly Discussions <ul style="list-style-type: none"> • Present Progress Reports (Written and Verbal) of Critical Thinking Activities in the Courses • Present Rubrics That Reflect Interaction with Students
	August <ul style="list-style-type: none"> • Submit Copy of Course Syllabus to QEP Coordinator for Assessment
	August <ul style="list-style-type: none"> • Pre-Test: Test of Everyday Reasoning – Sample of Developmental Education and General Education Students
	October-Midterm <ul style="list-style-type: none"> • Submit One Assignment with Student Responses for Assessment
	November <ul style="list-style-type: none"> • Post-Test: Test of Everyday Reasoning – ACA Students from Fall 2013
	December-End of Semester <ul style="list-style-type: none"> • Submit Second Assignment with Student Responses for Assessment • Submit Overall Evaluation from Instructor

Year 3: 2015

Date	Action
Spring 2015	January : Professional Development– Session 1 “What is Critical Thinking?” <ul style="list-style-type: none"> • Attend (Program Instructors) • Evaluate the Session
	February: Professional Development – Session 2 “4P Action Plan; Problem-Solving Method” <ul style="list-style-type: none"> • Attend (Program Instructors) • Evaluate the Session
	March: Professional Development – Session 3 “Critical Thinking Implementation” <ul style="list-style-type: none"> • Attend (Program Instructors) • Evaluate the Session
	April: Professional Development - Session 4 “Assessing Critical Thinking” <ul style="list-style-type: none"> • Attend (Program Instructors) • Evaluate the Session
	May: Follow-Up Session “Preparations for Fall 2013” <ul style="list-style-type: none"> • Attend (Program Instructors) • Evaluate the Session
Summer 2015	<ul style="list-style-type: none"> • Revise Program Courses • Include Strong Critical Thinking and Problem-Solving Components
Fall 2015	August-December <ul style="list-style-type: none"> • Implement Instruction and Use of 4P Action Plan in Program Courses
	Monthly Discussions <ul style="list-style-type: none"> • Present Progress Reports (Written and Verbal) of Critical Thinking Activities in the Courses • Present Rubrics That Reflect Interaction with Students
	August <ul style="list-style-type: none"> • Submit Copy of Course Syllabus to QEP Coordinator for Assessment
	August <ul style="list-style-type: none"> • Pre-Test: Test of Everyday Reasoning – Sample of Program Assessment
	October-Midterm <ul style="list-style-type: none"> • Submit One Assignment with Student Responses for Assessment
	November <ul style="list-style-type: none"> • Post-Test: Test of Everyday Reasoning – Developmental Education and General Education Students from Fall 2014
	December-End of Semester <ul style="list-style-type: none"> • Submit Second Assignment with Student Responses for Assessment • Submit Overall Evaluation from Instructor

Year 4: 2016

Date	Action
Spring 2016	January: Professional Development– Session 1 “What is Critical Thinking?” <ul style="list-style-type: none"> • Attend (Staff) • Evaluate the Session
	February: Professional Development – Session 2 “4P Action Plan; Problem-Solving Method” <ul style="list-style-type: none"> • Attend (Staff) • Evaluate the Session
	March: Professional Development – Session 3 “Critical Thinking Implementation” <ul style="list-style-type: none"> • Attend (Staff) • Evaluate the Session
	April: Professional Development - Session 4 “Assessing Critical Thinking” <ul style="list-style-type: none"> • Attend (Staff) • Evaluate the Session
	May: Follow-Up Session “Preparations for Fall 2013” <ul style="list-style-type: none"> • Attend (Staff) • Evaluate the Session
Summer 2016	<ul style="list-style-type: none"> • Provide Additional Training as Necessary
Fall 2016	August -December <ul style="list-style-type: none"> • Implement Instruction and Use of 4P Action Plan in Service Areas
	August <ul style="list-style-type: none"> • Pre-Test: Test of Everyday Reasoning – Sample of Students from All Areas
	Monthly Discussions <ul style="list-style-type: none"> • Present Progress Reports (Written and Verbal) of Critical Thinking Activities in the Service areas • Present Rubrics That Reflect Interaction with Students
	November <ul style="list-style-type: none"> • Post-Test: Test of Everyday Reasoning – Program Students from Fall 2015
	December-End of Semester <ul style="list-style-type: none"> • Overall Evaluation from Service Area Members

Year 5: 2017

Date	Action
Spring 2017	January: Professional Development – Session 1 “What is Critical Thinking?” <ul style="list-style-type: none"> • Attend (New Employees and Continuing Education and Curriculum Adjunct Faculty) • Evaluate the Session
	February: Professional Development – Session 2 “4P Action Plan; Problem-Solving Method” <ul style="list-style-type: none"> • Attend (New Employees and Continuing Education and Curriculum Adjunct Faculty) • Evaluate the Session
	March: Professional Development – Session 3 “Critical Thinking Implementation” <ul style="list-style-type: none"> • Attend (New Employees and Continuing Education and Curriculum Adjunct Faculty) • Evaluate the Session
	April: Professional Development - Session 4 “Assessing Critical Thinking” <ul style="list-style-type: none"> • Attend (New Employees and Continuing Education and Curriculum Adjunct Faculty) • Evaluate the Session
	May: Follow-Up Session “Preparations for Fall 2013” <ul style="list-style-type: none"> • Attend (New Employees and Continuing Education and Curriculum Adjunct Faculty) • Evaluate the Session
Summer 2017	Additional Training Sessions as Necessary
	Draft and Write 5 th Year Report
Fall 2017	August-December <ul style="list-style-type: none"> • Implement Instruction and Use of 4P Action Plan in All Remaining Areas
	Continue Assessments of All Areas
	Collect Assessment Results and Other Data
	Complete 5 th Year Report

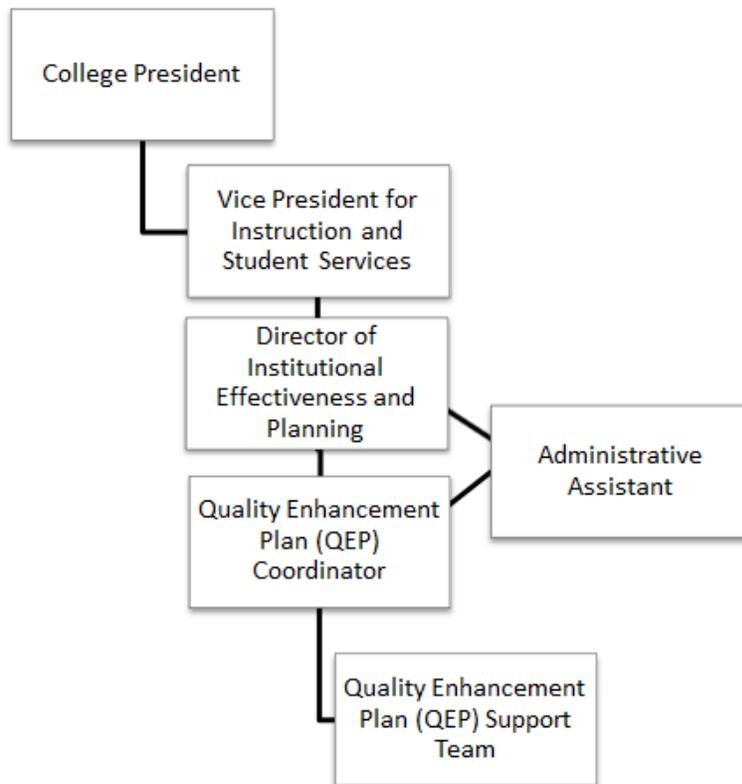
VII. Organizational Structure

Comprehensive Standard 3.3.2 of *The Principles of Accreditation: Foundations for Quality Enhancement* requires “institutional capability for the initiation, implementation, and completion of the QEP” (Southern Association of Colleges and Schools Commission on Colleges, 2009, p. 25). This includes clear lines of responsibility for the plan’s implementation and sustainability. The QEP Coordinator will be a faculty member with a reduced teaching load who will supervise the execution of the QEP and monitor the plan’s progress over the five-year period. The following responsibilities are in the QEP Coordinator job description:

- Oversee the implementation of the QEP
- Manage the QEP budget
- Direct assessment processes for all aspects of the QEP
- Promote student awareness of the QEP
- Report assessment findings and discuss issues with the QEP Support Team in a consulting role
- Prepare annual reports of assessment results
- Promote faculty participation
- Facilitate discussions each fall with instructors implementing the 4P action plan in their courses
- Schedule and facilitate professional development activities
- Collaborate with the Director of Institutional Effectiveness and Planning to ensure that the College’s strategic plans support the QEP

The College will hire an administrative assistant to support both the Director of Institutional Effectiveness and Planning and the QEP Coordinator. The administrative assistant will aid with report preparation, meeting schedules, and other duties the QEP Coordinator assigns.

The QEP Coordinator may elect to organize a QEP Support Team for consultation purposes. The QEP Support Team will review the assessment results, discuss changes to the plan when necessary, and recommend solutions or new ideas when questions or concerns arise. The QEP Support Team will include three faculty members, two service area staff members, and one student representative. Figure 6 illustrates the organizational structure.

Figure 6. QEP Organizational Structure

VIII. Resources

Comprehensive Standard 3.3.2 of *The Principles of Accreditation: Foundations for Quality Enhancement* requires “institutional capability for the initiation, implementation, and completion of the QEP” (Southern Association of Colleges and Schools Commission on Colleges, 2009, p. 25). BCC proposed and adopted a QEP budget that includes realistic and sufficient human, financial, and physical resources.

The QEP Budget Committee met August 3, 2011, to review QEP budgets from other schools to determine the items necessary in the BCC QEP budget. The committee members asked all QEP committee chairs to estimate the amount of money they would need for their work. Each committee chair responded.

The QEP Budget Committee met on October 19, 2011, and discussed the requests from the QEP committee chairs. The Budget Committee prepared a budget according to the lists of needs each committee chair submitted and presented the budget to the QEP Leadership Team. The QEP Leadership Team suggested other costs that the QEP budget would include. On November 18, 2011, the Budget Committee met for

another revision and review of the budget. The committee gave the final budget to the QEP Leadership Team, which presented the budget to the College President.

The College President requested that the Budget Committee further research the \$4,000.00 necessary for QEP assessment. The College President also asked the Budget Committee to send the Vice President for Instruction and Student Services a recommendation for approval for the budget. The QEP Budget Committee met for final revision and review of the budget on December 9, 2011, and sent the final budget to the Vice President for Instruction and Student Services on December 13, 2011.

The College President approved the budget through a memo to the Vice President for Instruction and Student Services. The College will use state funds for the QEP budget. However, vending funds will provide marketing items such as prizes or items for campus and community distribution. The College will provide the necessary funding for the QEP budget for the plan's five-year duration and funding for 2011-2012 for marketing and piloting the plan. Table 10 shows the pre-year and five-year budget for the QEP.

Table 10. Approved Budget

QEP 5-YEAR BUDGET							
	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16	FY 16-17	Total Cost
QEP Coordinator		\$55,000	\$56,500	\$58,000	\$60,000	\$62,000	\$291,500
Marketing	\$5,000	\$5,000	\$2,000	\$1,000	\$1,000	\$500	\$14,500
Literature Review Committee	\$200	\$200	\$200	\$200	\$200	\$200	\$1,200
Professional Development (Conferences/ Workshops)	\$6,000	\$5,000	\$3,000	\$3,000	\$1,000	\$1,000	\$19,000
Assessments	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$24,000
Total	\$15,200	\$69,200	\$65,700	\$66,200	\$66,200	\$67,700	\$350,200

IX. Assessment

Comprehensive Standard 3.3.2 of *The Principles of Accreditation: Foundations for Quality Enhancement* requires institutions to develop a “plan to assess their achievement” (Southern Association of Colleges and Schools Commission on Colleges, 2009, p. 25). The BCC QEP includes multiple facets of assessment for the plan's goals and outcomes. Appendix I illustrates the assessment model for the QEP.

The first goal of the QEP is to offer professional development for faculty and staff. Table 11 shows the Faculty and Staff Outcomes Assessment Matrix, which demonstrates the time line for assessing the outcomes for this goal.

Table 11. QEP: Faculty and Staff Expected Outcomes Assessment Matrix

Semester and Year	Focus Group	Assessment	Assessment Date
Spring 2012 (Pilot)	ACA 115 Instructors (Brown, Davis, Williams)	Attendance Rosters	May
		Professional Development Evaluations	May
		Course Syllabi	May
		Sample Assignments	May
Summer 2012 (Pilot)	ACA 115 Instructors (Brown, Davis, Williams)	Discussions	June and July
Fall 2012 (Pilot)	ACA 115 Instructors (Brown, Davis, Williams)	Discussions	Monthly
		4P Rubric	Monthly
		Follow-Up Questionnaire	December
Spring 2013 (Year 1)	ACA 115 and ACA 122 Instructors	Attendance Rosters	For Each Professional Development Event
		Professional Development Evaluations	
		Sample Assignments	May
Fall 2013 (Year 1)	ACA 115 and ACA 122 Instructors	Course Syllabi	May
		Discussions	Monthly
		4P Rubric	Monthly
Spring 2014 (Year 2)	Developmental Education Instructors General Education Instructors: ENG 111, ENG 114, HUM 115, CIS 110, MAT 140, PSY 150	Follow-Up Questionnaire	December
		Attendance Rosters	For Each Professional Development Event
		Professional Development Evaluations	
Fall 2014 (Year 2)	Developmental Education Instructors General Education Instructors: ENG 111, ENG 114, HUM 115, CIS 110, MAT 140, PSY 150	Sample Assignments	May
		Course Syllabi	May
		Discussions	Monthly
Fall 2014 (Year 2)	Developmental Education Instructors General Education Instructors: ENG 111, ENG 114, HUM 115, CIS 110, MAT 140, PSY 150	4P Rubric	Monthly
		Follow-Up Questionnaire	December

Spring 2015 (Year 3)	Program Course Instructors Who Did Not Attend Professional Development in Years 1 and 2	Attendance Rosters Professional Development Evaluations Sample Assignments Course Syllabi	For Each Professional Development Event May May
Fall 2015 (Year 3)	Program Course Instructors Who Did Not Attend Professional Development in Years 1 and 2	Discussions 4P Rubric Follow-Up Questionnaire	Monthly Monthly December
Spring 2016 (Year 4)	Service Area Staff: Business Office, Student Services, Student Resource Center, Learning Enhancement Center	Attendance Rosters Professional Development Evaluations	For Each Professional Development Event
Fall 2016 (Year 4)	Service Area Staff: Business Office, Student Services, Student Resource Center, Learning Enhancement Center	Discussions 4P Rubric Follow-Up Questionnaire	Monthly Monthly December
Fall 2016 (Year 4)	Instructors of Selected Courses for Student Assessment	Course Syllabi Discussions 4P Rubric	August Monthly Monthly
Spring 2017 (Year 5)	All New Instructors and Staff and Other Employees Who Did Not Attend Professional Development in the Previous Years	Attendance Rosters Professional Development Evaluations	For Each Professional Development Event
Fall 2017 (Year 5)	All New Instructors and Staff and Other Employees Who Did Not Attend Professional Development in the Previous Years	Discussions 4P Rubric Follow-Up Questionnaire	Monthly Monthly December
Fall 2017 (Year 5)	Instructors of Selected Courses for Student Assessment	Course Syllabi Discussions 4P Rubric	August Monthly Monthly

Faculty and staff will participate in professional development training each spring. The QEP Coordinator will keep a roster of all who attend the training. Participants will evaluate the professional development sessions immediately after the meetings (Appendix J). Instructors will evaluate the effectiveness and benefits of the professional

development during the fall semester after they have had opportunity to use some of the tools the training sessions provide (Appendix K).

Faculty and staff will design and incorporate into their courses learning experiences that promote problem solving and critical thinking. All course syllabi will emphasize critical thinking. All faculty will include the following student learning outcome:

- Students will use the 4P Problem-Solving Action Plan to complete assignments and enhance their critical thinking skills.

In addition, all course syllabi will include a description of the QEP. The QEP Coordinator will collect copies of the course syllabi from the implementers each fall and check for the student learning outcome and other appropriate information.

The instructors who are implementing the 4P action plan and other critical thinking activities in their courses will participate in monthly discussions during the fall semesters. Instructors will discuss the strengths and weaknesses of the activities they use in their courses and any observations of students' critical thinking skills. The QEP Coordinator will facilitate the meetings and keep a record of the resulting information. Observation and records of these discussions will show critical thinking in the classroom and assessment of students' strengths and weaknesses.

When assessing students' strengths and weaknesses, implementers at the discussions will also present the 4P rubrics they used when advising and counseling students (Appendix L). The 4P rubric follows "Steps to Better Thinking" by Susan K. Wolcott and incorporates the 4P Problem-Solving Action Plan; Section VI explains both. The rubric allows the instructor or staff person to rate the students' ability to solve problems at each stage of the 4P action plan: Plan, Prepare, Practice, and Produce. The scoring categories are (1) below expectations, (2) meets expectations, or (3) above expectations at each level. A total score of 1-4 from all levels will indicate problem-solving skills below expectations; 5-8 will show adequate problem-solving skills, and 9-12 will demonstrate problem-solving skills above expectations. The instructor or staff person can refer students who have a total score below 5 to the Learning Enhancement Center (LEC) for individual reinforcement or tutoring in critical thinking.

The Learning Enhancement Center (LEC) is an open lab that provides supplemental instruction and tutoring in a computer-enhanced environment. On-line problem-solving and critical thinking programs and tutorials will assist students who need more practice in these areas. Students must log in upon entering and exiting the lab and indicate the purposes for their lab sessions. This will allow the QEP Coordinator to track the use of the LEC in relation to the QEP.

In the middle of the semester and at the end of the semester, implementers will submit two completed assignments that promote problem solving and critical thinking. Faculty may use suggestions for appropriate critical thinking assignments from the spring professional development sessions when designing these learning experiences.

The second goal of the QEP is that students will demonstrate the use of critical thinking skills in academic, professional, and personal settings. The "Test of Everyday Reasoning," assignments, rubrics, and student surveys will assess this goal. The

Student Learning Outcomes Assessment Matrix in Table 12 illustrates the time line for Assessment.

Table 12. QEP: Student Learning Outcomes Assessment Matrix

Semester and Year	Focus Group	Assessment	Assessment Date
Spring 2012	BCC Faculty (54)	Test of Everyday Reasoning	May 2012
Summer 2012 (Pilot)	ACA 115 (3 sections = 60 students; 120 tests)	Pre-Test: Test of Everyday Reasoning	June 2012
		Post-Test: Test of Everyday Reasoning	July 2012
Fall 2012 (Pilot)	ACA 115 and ACA 122 (6 sections = 120 students)	Pre-Test: Test of Everyday Reasoning	Beginning of 8 week class (Aug. or Oct.)
		Mid-Term Sample Assignment	October
		4P Rubric	After Use
		Final Sample Assignment	December
		Student Survey	December
Fall 2013 (Year 1)	ACA 115 and ACA 122 (15 sections = 300 students)	Pre-Test: Test of Everyday Reasoning	Beginning of 8 Week Class (August or October)
		Mid-Term Sample Assignment	October
		4P Rubric	After Use
		Final Sample Assignment	December
		Student Survey	December
		ACA 115 and ACA 122 Students Who Pre-Tested in Fall 2012 (60)	Post-Test: Test of Everyday Reasoning
	Fall 2014 (Year 2)	Developmental Education Courses General Education Courses: ENG 111, ENG 114, HUM 115, CIS 110, MAT 140, PSY 150 (15 sections = 300 students)	Pre-Test: Test of Everyday Reasoning
Mid-Term Sample Assignment			October
4P Rubric			After Use
Final Sample Assignment			December
Student Survey			December
ACA 115 and ACA 122			Post-Test: Test of Everyday Reasoning

	Students Who Pre-Tested in Fall 2013 (150 students)		
Fall 2015 (Year 3)	Program Courses (15 sections = 300 students) Developmental Education Courses General Education Courses Students Who Pre-Tested in Fall 2014 (150 students)	Pre-Test: Test of Everyday Reasoning Mid-Term Sample Assignment 4P Rubric Final Sample Assignment Student Survey Post-Test: Test of Everyday Reasoning	August October After Use December December November
Fall 2016 (Year 4)	ACA 115 and 122 Developmental Education Courses General Education Courses Program Courses (15 sections = 300 students) Program Courses Students Who Pre-Tested Fall 2015 (150 students)	Pre-Test: Test of Everyday Reasoning Mid-Term Sample Assignment 4P Rubric Final Sample Assignment Student Survey Post-Test: Test of Everyday Reasoning	August October After Use December December November
Fall 2017 (Year 5)	ACA 115 and 122 Developmental Education Courses General Education Courses Program Courses (15 sections = 300 students) Students Who Pre-Tested in Fall 2016 (150 students)	Pre-Test: Test of Everyday Reasoning Mid-Term Sample Assignment 4P Rubric Final Sample Assignment Student Survey Post-Test: Test of Everyday Reasoning	August October After Use December December November

The “Test of Everyday Reasoning” (TER) assesses critical thinking skills in community college and technical college students as well as working adults in staff support positions. Questions analyze critical thinking skills in analysis, inference, evaluation, inductive reasoning, and deductive reasoning. The test measures

reasoning skills that are essential elements for an individual's educational progress and success in everyday life and work.

Students in classes implementing the 4P action plan each fall will take the TER as a Pre-Test at the beginning of the semester. These students will practice using the 4P action plan and other critical thinking instruction in the fall, the spring, and the following fall. After three semesters of instruction, students who are still enrolled at the College will take the TER in a Post-Test environment. BCC will compare the pre-test and post-test scores. The goal is to see a pattern of increase between the pre-test and post-test scores.

Instructors will submit copies of two assignments they use that demonstrate problem solving and critical thinking and the results from students' work. Instructors will score these assignments using rubrics or criteria lists they develop during the spring professional development. Student success with the assignments will measure student learning outcomes and students' use of critical thinking in academic settings.

Another portion of the second goal is that students will use problem solving and critical thinking skills in professional settings. BCC will continue to use its employer satisfaction survey to measure the success of BCC graduates in the workforce. The Director of Institutional Effectiveness and Planning conducts the survey each year. Currently, the survey asks employers to rate the graduates' problem-solving skills. Beginning in 2012, the survey will include critical thinking skills as an area of evaluation. These survey results will evaluate students' use of problem solving and critical thinking skills in a professional setting (Appendix M).

While sometimes difficult to measure, observations provide evidence of outcome achievement. By the fourth year of the QEP, the 4P action plan will be common in all service areas on campus. Therefore, faculty and staff will be able to assess students' problem solving and critical thinking skills in dealing with personal issues. When a student visits a faculty or staff member to discuss a problem, such as class registration, financial challenges, or conflict resolution, the faculty or staff member will use the 4P rubric to evaluate the students' critical thinking skills (Appendix Q). The faculty or staff member will give the evaluation results to the students and the QEP Coordinator. Students who score below expectations during the evaluation can visit the Learning Enhancement Center for resources that will strengthen the students' critical thinking skills.

According to Barbara Walvoord in *Assessment Clear and Simple: A Practical Guide for Institutions, Departments, and General Education*, one of the best ways to determine completion of a course objective is to ask the students (2010). At the end of each semester, implementers will survey the students in their courses to gather the students' self-assessments on achieving the four QEP student learning outcomes. Students will also be able to describe course strengths that helped them learn and make suggestions for improving the course to enhance student learning (Appendix N). This final assessment includes a collection of direct and indirect assessment tools that will provide significant data for evaluating both the QEP as an effective plan and the QEP as a tool for enhancing student learning. Table 13, which also appears in Section IV: Student Learning Outcomes, shows the goals and criteria for success for each of the student assessment tools.

Table 13. Assessment Goals and Criteria for Success

Student Learning Outcome	Assessment	Goals	Criteria for Success
1. Students will be able to <i>identify</i> a problem and relevant information surrounding the problem.	Test of Everyday Reasoning (TER): Deductive and Inductive Reasoning Sample Assignments 4P Rubric Student Surveys	Students will show a pattern of increase on the TER in Deductive and Inductive Reasoning. Rubrics the instructors and service area facilitators use will show that all students can identify and discuss a problem. Assignments that implementers present in discussions will show that all students can identify and discuss a problem.	On the Post-Test, students will score 80% or higher on the Deductive and Inductive Reasoning Section of the TER. Students will score a 2 or higher on the “Plan” section of the 4P rubric. Students will score 80% or higher on assignments that measure students’ ability to identify and discuss a problem. Student surveys will show that students achieved this outcome adequately well, very well, or extremely well.
2. Students will be able to <i>interpret</i> and <i>infer</i> information in order to <i>construct</i> possible solutions for the problem.	Test of Everyday Reasoning (TER): Analysis and Inference Sample Assignments 4P Rubric Student Surveys	Students will show a pattern of increase on the TER in Analysis and Inference. Rubrics the instructors and service area facilitators use will show that all students can identify and analyze multiple solutions to a problem. Assignments that implementers present in discussions will show that all students can identify and analyze multiple solutions to a problem.	On the Post-Test, students will score 80% or higher on the Analysis and Inference Sections of the TER. Students will score a 2 or higher on the “Prepare” section of the 4P rubric. Students will score 80% or higher on assignments that measure students’ ability to identify and analyze multiple solutions to a problem. Student surveys will show that students achieved this outcome adequately well, very well, or extremely well.
3. Students will be able to <i>choose</i> and <i>assess</i> a solution to the problem.	Test of Everyday Reasoning (TER): Evaluation Sample Assignments 4P Rubric Student Surveys	Students will show a pattern of increase on the TER in Evaluation. Rubrics the instructors and service area facilitators use will show that all students can choose and evaluate a best solution to a problem. Assignments that target groups present in discussions will show that all students can choose and evaluate a best solution to a problem.	On the Post-Test, students will score 80% or higher on the Evaluation section of the TER. Students will score a 2 or higher on the “Practice” section of the 4P rubric. Students will score 80% or higher on assignments that measure students’ ability to choose and evaluate a best solution to a problem. Student surveys will show that students achieved this outcome adequately well,

<p>4. Students will be able to <i>communicate</i> a solution to a problem in a logical and concise manner.</p>	<p>Sample Assignments 4P Rubric Student Surveys</p>	<p>Rubrics the instructors and service area facilitators use will show that all students can communicate the solution in a logical and concise manner.</p> <p>Assignments that implementers present in discussions show that all students can communicate the solution in a logical and concise manner.</p>	<p>very well, or extremely well.</p> <p>Students will score a 2 or higher on the "Produce" section of the 4P rubric.</p> <p>Students will score 80% or higher on assignments that measure students' ability to choose and evaluate a best solution to a problem.</p> <p>Student surveys will show that students achieved this outcome adequately well, very well, or extremely well.</p>
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Appendices

Appendix A. Board of Commissioners Meeting Minutes

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February 6, 2012

A regular meeting of the Bladen County Board of Commissioners was held at 6:30 p.m. on Monday, February 6, 2012 in the Commissioners Meeting Room of the Bladen County Courthouse.

The following members were present:

Charles Ray Peterson, Chairperson
 James G. "Jimmie" Smith, Vice Chairperson
 Delilah Blanks
 Mark Gillespie
 David Goode
 Lewis Tatum
 Billy Ray Pait
 Russell Priest
 Daniel Dowless

Attorney: Leslie Johnson and Will Johnson, Johnson Law Firm

Chairman Peterson called the meeting to order. Reverend Wilson Bryan, Pleasant Grove United Methodist Church, Bladenboro, NC provided the Invocation and County Manager Greg Martin led the Pledge of Allegiance.

- ITEM 1. Consent Items:**
Upon a motion by Commissioner Smith, seconded by Commissioner Dowless, the Board approved the following Consent Items:
 A. Agenda
 B. Minutes of January 17, 2012 meeting
 C. County Attorney Invoices as follows:

12-16-2011	\$ 250.00	Health Department agreement
12-19-2011	\$ 100.00	Grant of Basement/Piedmont Gas
01-17-2012	\$ 4,630.00	EBOC
01-23-2012	\$ 250.00	Parks & Recreation agreement
01-23-2012	\$ 750.00	Election District
01-26-2012	\$ 391.00	McKay Street Deed
01-31-2012	\$ 35.00	Tax Foreclosure recording fees
	\$ 6,426.00	

D. Budget Amendments as follows:

Department and Account Number	Account Description	Increase	Decrease
Motor Pool			
Expenditures			
105010.357	M/R Vehicles	755.60	
Revenue			
103190.010	Miscellaneous	755.60	
Repair payment for 2010 Ford Fusion.			
Health			
Expenditures			
1059005905.201.002	Supplies-Mosquito	2,220.00	
1059005905.610.002	Contracted-Mosquito	7,138.00	
Revenue			
103330.061	DHHS-Environmental Health	9,358.00	
Additional state funds for Mosquito Control.			
Administration			
Expenditures			
106900.909.001	To Water Construction	619,370.41	
Revenue			
103190.050	FBA	619,370.41	

For additional roads associated with Phase IIB. Cannot use Water District funds per USDA. Reimbursement with USDA loan to County.

February 6, 2012

Water Construction

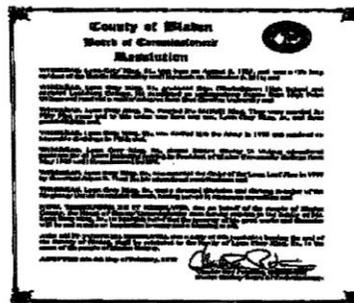
Expenditures			
236804.611.039	Contract 1: Herring Rivenbark	186,547.95	
236804.611.040	Contract 2: Herring Rivenbark	402,822.46	
236804.990	Contingency	30,000.00	
Revenues			
233220.015	Fm General Fund	619,370.41	

For additional roads associated with Phase IIIB. Cannot use Water District funds per USDA. Reimbursement with USDA loan to County.

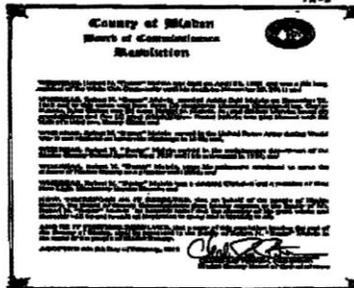
- E. Contract with Healthworks Fitness and Wellness Relating to the Young Moms Connect Program Grant

ITEM 2. Matters of Interest to Commissioners:

- A. Chairman Peterson presented the following Resolution to the family of Lynn Grey King, Sr.:



- B. Chairman Peterson presented the following Resolution to the family of Robert N. "Buster" Melvin:



- C. Chairman Peterson recognized Kenneth T. Hill upon his retirement as Transportation Specialist with the Division on Aging.
- D. Chairman Peterson presented a plaque to Myra H. Johnson upon her retirement as Public Health Nurse II with the Bladen County Health Department. Health Department Director Wayne Stewart acknowledged Ms. Johnson for the work that she had done while employed with the County. He wished her well upon her retirement and stated that he hoped she would continue to grow as an individual as well as a professional.

ITEM 3. Individuals/Delegations Wishing to Address Commissioners:

- No one addressed the commissioners.

February 6, 2012

ITEM 4. Bladen Community College (Dr. William Findt, President)

- Bladen Community College President William Findt reported to the board that the college is seeking reaffirmation by The Southern Association of Colleges and Schools this year. The college was first accredited in 1976 and has been accredited continuously since then. The college will file data this spring to begin the peer review process with a visit to the campus in October by representatives of Southern Association. As required, the college is preparing a plan to present to the visiting representatives that will demonstrate student learning in occurring in the classroom. The plan, officially known as the Quality Enhancement Plan (QEP), has been identified by faculty to be critical thinking. After extensive review, the faculty decided that critical thinking is at the core of student learning and success. For students to succeed, problem solving by thinking critically is the basis for measurable achievement. Following his presentation to the commissioners, Dr. Findt presented to each commissioner a yellow wrist band with the phrase Think Smarter inscribed. He said that these wrist bands are being worn by college staff and students to remind each person of the work of the QEP.

ITEM 5. Health Department (Cathy Kinlaw, Executive Director of Healthy Bladen)

- Kathy Kinlaw presented a power point presentation on "What Healthy Bladen is doing in Bladen County". Ms. Kinlaw was asked to present this power point at the State Conference of the North Carolina Society of Health Educators in Greensboro in October 2011.

ITEM 6. Emergency Services (Bradley Kinlaw, Director)

- Emergency Services Director Bradley Kinlaw provided the Board with a draft copy of the Bladen County Pet Friendly Shelter Plan. Bradley stated that due to 60% of families having pets, Bladen County Animal Response Team (CART) had recognized the need to provide a Pet Friendly Shelter during emergency incidents in Bladen County. He also advised the Board that the County had received an Emergency Management Performance Grant from the Department of Crime Control and Public Safety for a Companion Animal Mobile Equipment Trailer (CAMET) to house the supplies necessary to set up a Pet Friendly Shelter.

ITEM 7. Bladen County Water District (Randy Garner, Director)**A. Upon a motion by Commissioner Smith, seconded by Commissioner Gillespie, the Board entered Session as the Water District Board of Directors.****B. Randy Garner provided the following report on Phase III-B:**

As of February 6, 2012, 233 applications have been received for tie-in to Phase III-B water project.

The elevated storage tank has been painted and is about complete. The well has been drilled and construction on the well house will be started soon. The contractors laying pipe are on schedule and making good progress as follows:

93% Contract 1
60% Contract 2
5% Contract 1 Change Orders
51% Contract 2 Additional Roads
Tank Contract 3 Painting Complete
Well Contract 4 Well Drilled

A list of roads to be considered if additional monies are available is being compiled. These roads were in the original project scope and were not approved because of feasibility. Adam Kiker is putting together a project scope of the remaining roads and what potential they may have to add to this phase.

February 6, 2012

The customers from Bay Tree Lakes have been added to our system and will receive their first bill on February 15, 2012 for January water usage.

C. Upon a motion by Commissioner Smith, seconded by Commissioner Pait, the Board exited Session as the Water District Board of Directors.

ITEM 8. Advisory Board Appointments to be considered at the Board Meeting on February 20, 2012:

- A. Bladen County Juvenile Crime Prevention Council (5)
- B. Bladen County Social Services Board (1)

ITEM 9. County Manager: (Greg Martin)

- A. County Manager Greg Martin reviewed the calendar for upcoming events.
- B. Upon a motion by Commissioner Tatum, seconded by Commissioner Pait, the Board rescheduled the first Board meeting in March, 2012 to Monday, March 12, 2012 at 6:30 pm due to the Legislative Conference in Washington, D.C.
- C. County Manager Greg Martin reviewed a request from the North Carolina Association of County Commissioners to submit any federal issues of statewide importance to the Association by Friday, February 10, 2012.
- D. Upon a motion by Commissioner Pait, seconded by Commissioner Blanks, the Board approved a Plan of Merger and Agreement relating to Southeastern Regional Mental Health Services.

ITEM 10. Individuals/Delegations Wishing to Address Commissioners:

- No one addressed the commissioners.

ITEM 11. Upon a motion by Commissioner Pait, seconded by Commissioner Dowless, the Board entered Closed Session in accordance with N.C. G. S. 143-318.11(a) (3) Attorney Client (a) (4) Economic Development and (a) (6) Personnel.

Upon a motion by Commissioner Priest, seconded by Commissioner Pait the Board exited Closed Session and re-entered Open Session.

Upon a motion by Commissioner Tatum, seconded by Commissioner Gillespie the Board adjourned at 9:00 pm.


 Charles Ray Peterson, Chairman
 Bladen County Board of Commissioner

ATTEST:


 Sara S. West, Clerk



Appendix B. QEP Marketing Subcommittee Plan

Quality Enhancement Plan 2011-12 Marketing Plan

Critical Thinking Skills

Bladen Community College's Quality Enhancement Plan (QEP) seeks to improve BCC students' problem-solving skills by providing instruction and resources that promote critical thinking.

The QEP is a result of a leading committee consisting of Bladen Community College students, faculty, and staff. The committee worked with the overall objective of the Quality Enhancement Plan, which is critical thinking skills. The Marketing Committee's goal is to develop and implement a plan for marketing the QEP across the campus and to BCC stakeholders to ensure broad-based support. The committee has worked through many open discussion meetings to achieve the following suggestions of how to best market and promote the QEP in the first year to fulfill the overall objectives of the QEP and the SACS/COC reaffirmation.

I. Target Markets

First, market the QEP to the immediate college community of students, faculty, and staff. Awareness of the SACS/COC reaffirmation and the QEP's objectives needs to become common knowledge throughout the entire college in a timely manner. Ultimately, once SACS/COC has reaffirmed Bladen Community College, the goal is to make the overall objective of enhancing critical thinking a part of the Bladen Community College culture.

Second, the alumni and community need awareness about the SACS/COC reaffirmation and the QEP to help generate excitement and support for the College.

- A. Current Students
 - 1. Traditional and Online: 1,900
Monthly Web Site Views: 100,000+
 - 2. Adult and Basic Skills: 150
 - 3. Continuing Education: 1,500
- B. Faculty
 - 1. Full-time: 54
 - 2. Part-time: 40
- C. Staff
 - 1. Full-time: 61
 - 2. Part-time: 160
- D. Board of Trustees: 13 members
- E. Alumni/Community
 - 1. Bladen County: 35,190
 - 2. Robeson County: 134,168
 - 3. Columbus County: 58,098

II. Communications Methods

- A. Current Students
 - 1. E-mail Announcements
 - 2. Web Site Announcements
 - 3. SGA T-shirts

4. Information in *The Flyer*
 5. Bulletin Boards on Campus
 6. Cups; Coffee Mugs
 7. Frisbees; Sunglasses; Umbrellas
 8. Lanyards; Flash Drives
 9. Wrist Bands and Bookmarks
 10. Flyers on Campus
 11. Slideshow in Student Lounge
 12. Facebook Updates
 13. BCC IDs
 14. QEP Web Site
- B. Faculty and Staff
1. E-mail Announcements
 2. Web Site Announcements
 3. Information in *The Flyer*
 4. Flyers on Campus
 5. Slideshow in Student Lounge
 6. BCC IDs
 7. QEP Web Site
- C. Board of Trustees
1. Presentations at Board Meetings and Retreat
 2. Wrist Bands and Bookmarks
 3. QEP Web Site
- D. Alumni and Community
1. Press Release to *Bladen Journal*, Bladen Online
 2. QEP Web Site
 3. Facebook Updates

III. Create a QEP Visual Identity

- A. Logo: Hand with Cell Phone (Texting)
- B. Tagline: R U Thnkn? Think Smarter
- C. Action Plan: 4P Model with Steps for Better Thinking (Plan, Prepare, Practice, Produce)



IV. Marketing Ideas

- Banners, Billboards
- T-shirts for Students, Faculty, Staff
- Lanyards and Flash drives
- Coffee Mugs for Faculty and Staff
- Posters on Campus
- Bookmarks with the QEP Information
- Desktop Background for Computers in Labs and the Library
- Contests, Spring Fling Activities
- QEP Web Site and Facebook Page

V. Timeline for Implementation of 2011-12 Marketing Plan

August – December 2011

- Met Monthly to Begin Discussion of the QEP Marketing Plan
- Decided Most Important Marketing Items to Pursue
- Finalized Budget Requirements for Marketing
- Presented Logo and Tagline to QEP Leadership Team and Faculty and Staff for Final Approval
- Posted Flyers on Every Door on Campus to Get Students and Staff Wondering about the QEP
- Set QEP Logo as Desktop Background in Computer Labs and on Office Computers

January 2012

- Distributed QEP Bookmarks and Wrist bands across Entire Campus
- Began Work on QEP Web Site
- Began Work on QEP Song

February 2012

- Updated Web Site and Facebook
- Ordered Promotional Items
- Continued Work on QEP Song and Lyrics

March 2012

- President and QEP Leadership Team Approved QEP Web Site
- Launched Web Site
- Updated Facebook
- Presented QEP Song and Lyrics to the Faculty

April 2012

- Reviewed QEP at All Campus Assembly with QEP Prize Patrol
- Faculty Updated Fall Syllabi with QEP Blurb and Logo

May 2012

- Order T-Shirts with SGA to Promote QEP
- Update Fall Syllabi with QEP Blurb and Logo

June 2012

- Continue Updates on Web Site and Facebook

July 2012

- Continue Updates on Web Site and Facebook

August 2012

- Final Kickoff (New Student Orientation: August 7)
- Student Giveaways (Registration: Aug 7,8,13)

Appendix C. Bladen Community College Survey on Quality Enhancement

Purpose of this survey: To solicit your opinions about which student skill sets/knowledge areas we effectively address and which are most important, with the eventual goal being to select a topic on which the Quality Enhancement Plan (QEP) will focus.

What is a Quality Enhancement Plan (QEP)? A QEP is a document (required by the Southern Association of Colleges and Schools/Commission on Colleges) developed by the College to describe a plan for improving student learning campus wide. The QEP is designed to enhance overall institutional quality and effectiveness, and must include broad-based involvement of institutional constituencies.

I. **Which of the following best describe you with regard to your present role at Bladen Community College (BCC)? (Please check only one.)**

- Faculty
- Staff
- Board Member
- Employer
- Community Member
- Advisory Committee Member
- Graduate of BCC (Alumni)
- Student

If you are a student, how many classes have you completed at BCC? _____ classes

Instructions: Please give your opinion on the following items.

II. **Please rank each of these skill areas in order of their importance to the enhancement of student success following graduation from BCC. Fill in the blanks using the numbers 1 through 9, with 1 representing the most important skill area. Use each number only once.**

- ____ Reading Comprehension (ability to read and interpret written materials)
- ____ Written Communication (ability to write in a clear, coherent manner)
- ____ Oral Communication (ability to communicate aloud effectively with others)
- ____ Critical Thinking (ability to think analytically and logically)
- ____ Math Skills (ability to perform appropriate level math skills)
- ____ Computer Literacy (ability to use computers to acquire, process, and communicate information)
- ____ Interpersonal Skills (ability to interact appropriately with others, even when in conflict)
- ____ Global Awareness (knowledge of world events and affairs)
- ____ Multicultural (ability to interact appropriately with people from diverse backgrounds)

OVER

III. To what degree does BCC effectively prepare students with regard to the skills listed below? Please respond by circling the most appropriate response. If you feel unable to make a judgment regarding any of the skills, please circle the NEI (Not Enough Information) response.

	Not Very Effectively					Very Effectively			
Reading Comprehension	1	2	3	4	5	6	7	NEI	
Written Communication Skills	1	2	3	4	5	6	7	NEI	
Oral Communication Skills	1	2	3	4	5	6	7	NEI	
Critical Thinking	1	2	3	4	5	6	7	NEI	
Math Skills	1	2	3	4	5	6	7	NEI	
Computer Literacy	1	2	3	4	5	6	7	NEI	
Interpersonal Skill	1	2	3	4	5	6	7	NEI	
Global Awareness	1	2	3	4	5	6	7	NEI	
Multicultural Sensitivity	1	2	3	4	5	6	7	NEI	

IV. Aside from those areas listed previously, list up to three skill sets/knowledge areas that you see as critical to student success and indicate how effectively we address each of these areas by circling the appropriate response.

	Not Very Effectively					Very Effectively		
1. _____	1	2	3	4	5	6	7	
2. _____	1	2	3	4	5	6	7	
3. _____	1	2	3	4	5	6	7	

Additional Comments:

V. **OPTIONAL:** Tell us how to get in touch with you (your opinions will be treated confidentially).

Name: _____

E-Mail: _____ Telephone: _____

Thank you for your participation. Your opinions are highly valued, and your time is appreciated.

Appendix D. Curriculum Advisory Committee Responses

Curriculum Advisory Committee Quality Enhancement Plan External Feedback - 16 respondents October 2010

1. What does critical thinking mean to your organization?

- Critical thinking permits the workforce and the organization to think independently.
- Students must be able to integrate skills (math, writing, and reading) into all areas.
- Critical thinking is necessary for making life choices, success in business and work endeavors.
- Proper patient care and interventions. Students/workers must be able to put together a number of items to make a decision.
- Functioning outside the box, assessing, analyzing, and projecting outcomes.
- Critical thinking means explaining every aspect of a subject and considering the rewards or consequences of each aspect. Must play devil's advocate sometimes to see the negatives.
- Creativity, marketing is important to business; however, funding those efforts requires creativity and critical thinking. In the accounting profession, you have to be able to propose scenarios and results while staying within the law/guidelines and completing the goal.
- It means employers who are able to assess situations and problems, and ask the right questions to apply the knowledge they have gained.
- For our industry, it is very important because you are working with different clients and different situations. In this industry, students have to be able to use this skill.
- All stakeholders should be able to find alternative solutions to current problems if critical thinking is applied.
- It means that our students improve their problem-solving skills and learn to think logically which makes them accountable for their learning.
- It is very important for students to be successful at Fayetteville State University. We implement these skills in all coursework.
- A better prepared student, increases retention, and affects clinical judgment.
- The ability to apply the organization's learned knowledge to real life situations.
- Better prepared students are able to function in "Modern world problem solving.
- In fire rescue and law enforcement, it is a life/death situation. Individuals must be able to think quickly and accurately.

2. How can Bladen Community College integrate critical thinking in our instructional programs?

- Permit and allow students to have pride in their program of study
- Through effective critical thinking teaching
- Problem solving, seeking solutions to puzzles, enigmas, and options for troubleshooting
- More equipment for more hand skills that can be added to hands on
- I would suggest implementing it as part of freshman orientation: critical thinking, developing quality study habits, and developing a personal budget.
- Role playing-real life scenarios
- Case studies
- Ask more application questions on tests, ask for more role playing and contextual application of course concepts, require more writing
- Teach these classes and keep students in these classes
- Assign appropriate work pertaining to your curriculum that uses case studies with events to show different outcomes or alternative solutions
- I teach Univ - 110 at Fayetteville State University, and we implement critical thinking into our curriculum. I conduct exercises and discussions that explain and encourage critical thinking skills. We also require students who transfer under 60 credit hours to take Intro to Philosophy (critical thinking).
- Have experienced instructors, and guest lecturers to communicate the need for critical thinking in program areas. Incorporate critical thinking skills in assessments. Create critical thinking practical applications.
- Case studies, simulation, test by application instead of memorization, mandate as a portion of ACA or separate course required the 1st year
- Incorporate into the curriculum scenarios, make information relevant to realistic situations, create lifelong learning skills, and how to process data
- More subjective tests and activities, in class discussions, emphasize “Higher Level” thinking skills

Appendix E. Bladen Community College Mission Statement

MISSION STATEMENT

Bladen Community College is dedicated to the educational and cultural enrichment of the people of Bladen and surrounding counties. As a constituent institution of the North Carolina Community College System, the College is committed to quality teaching, to higher-order learning, to enhancing opportunities, and to providing a safe, sustainable learning environment through the following:

- literacy, occupational and curriculum instructional programs;
- support for economic development with training services to business and industry;
- training in and use of educational technology; and
- services which improve the cultural, educational and economic quality of life for our diverse communities.

Revised: April 2011

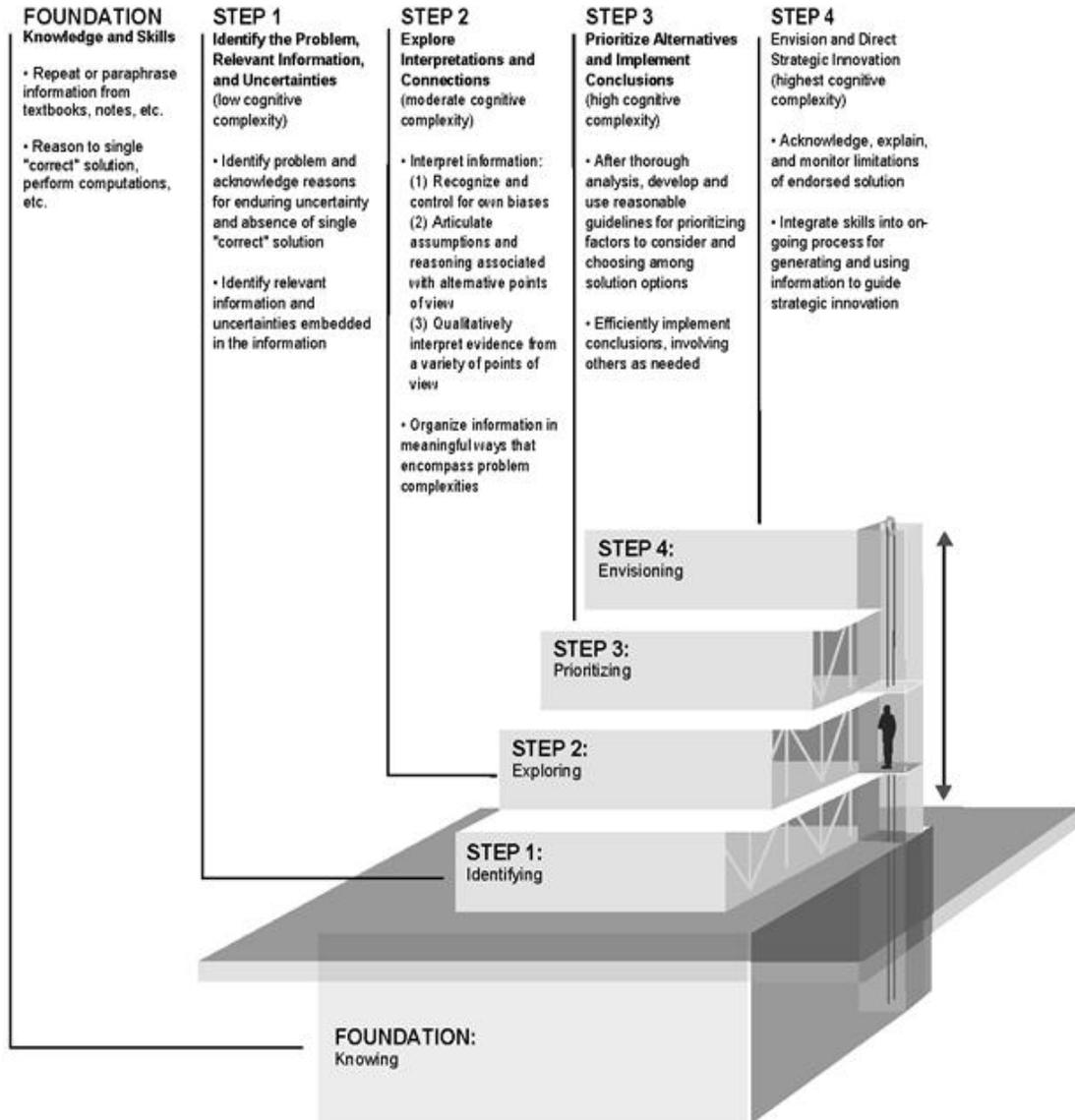
Approved: April 26, 2011

Appendix F. Steps for Better Thinking: A Developmental Problem Solving Process



STEPS FOR BETTER THINKING

A Developmental Problem Solving Process



© 2006, Susan K. Wolcott. All rights reserved. Materials herein may be reproduced within the context of educational practice or classroom education, provided that reproduced materials are not in any way directly offered for sale or profit. Please cite this source: Wolcott, S. K. (February 9, 2006). Steps for Better Thinking: A Developmental Problem Solving Process [On-line]. Available: <http://www.WolcottLynch.com>. Model evolved from ideas presented in King and Kitchener's (1994) reflective judgment model of cognitive development and Fischer's (Fischer & Bidell, 1998) dynamic skill theory.

Appendix G. Task Prompts for Different Levels in Steps for Better Thinking

Figure 3 • Task Prompts for Different Levels in  Steps for Better Thinking

Steps for Better Thinking (Turn Upside Down)	Task Prompts That Address These Skills
<p>Foundation: Knowledge and Skills (lowest cognitive complexity tasks)</p> <ul style="list-style-type: none"> repeat or paraphrase information from textbooks, notes, etc. reason to single "correct" solution, perform computations, etc. 	<ul style="list-style-type: none"> Calculate _____. Define _____. Define in your own words _____. List the elements of _____. Describe _____. List the pieces of information contained in _____ (specific narrative/paragraph/text). Recite the arguments about _____ (assuming arguments are explicitly provided in textbook, notes, etc.).
<p>Step 1: Identify the Problem, Relevant Information, and Uncertainties (low cognitive complexity tasks)</p> <ul style="list-style-type: none"> identify problem and acknowledge reasons for enduring uncertainty and absence of single "correct" solution identify relevant information and uncertainties embedded in the information (may include "stacking up" relevant reasons and evidence to support some solution or conclusion) 	<ul style="list-style-type: none"> Explain why people disagree about _____. Explain why _____ can't be known with certainty. Identify aspects of _____ in which uncertainty is a major factor. Explain why even an expert about _____ can't predict with certainty what will happen when _____. Create a list of information that might be useful in thinking about _____. Consult experts and explore literature or other resources to: <ul style="list-style-type: none"> Create a list of issues related to _____. Create of list of different points of view related to _____. Identify a range of possible solutions to _____. Sort pieces of information to identify reasons and evidence that support a given solution to _____.
<p>Step 2: Explore Interpretations and Connections (moderate cognitive complexity tasks)</p> <ul style="list-style-type: none"> interpret information recognize and control for own biases articulate assumptions and reasoning associated with alternative points of view qualitatively interpret evidence from a variety of points of view organize information in meaningful ways to encompass problem complexities 	<ul style="list-style-type: none"> Discuss the strengths and weaknesses of a particular piece of evidence related to _____. Interpret and discuss the quality of evidence related to _____. Interpret and evaluate the quality of the same body of evidence related to _____ from different points of view. Compare and contrast the arguments related to two or more solutions to _____. Identify and discuss the implications of assumptions and preferences related to one or more points of view about _____. Identify and discuss the implications of your own experiences and preferences for how you think about _____. Develop one or more ways to organize information and analyses to help you think more thoroughly about _____.
<p>Step 3: Prioritize Alternatives and Communicate Conclusions (high cognitive complexity tasks)</p> <ul style="list-style-type: none"> after thorough analysis, develop and use reasonable guidelines for prioritizing factors to consider and choosing among solution options communicate appropriately for a given audience and setting 	<ul style="list-style-type: none"> Prepare and defend a solution to _____. Identify which issues you weighed more heavily than other issues in arriving at your conclusion about _____. Explain how you prioritized issues in reaching a solution to _____. Describe how the solution to _____ might change, given different priorities on important issues. Explain how you would respond to arguments that support other reasonable solutions to _____. Identify the most important information needs of the audience for communicating your recommendation about _____. Explain how you designed your memo/presentation/_____ to effectively communicate to your audience. Describe how you would communicate differently about _____ in different settings.
<p>Step 4: Integrate, Monitor, and Refine Strategies for Re-addressing the Problem (highest cognitive complexity tasks)</p> <ul style="list-style-type: none"> acknowledge and explain limitations of endorsed solution integrate skills in on-going process for generating and using information to monitor strategies and make reasonable modifications 	<ul style="list-style-type: none"> Describe the limitations of your proposed solution to _____. Explain the implications of limitations to your proposed solution to _____. Describe conditions under which you would reconsider your solution to _____. Explain how conditions might change in the future, resulting in a possible change in the most reasonable solution to _____. Develop strategies for generating new information about _____. Establish a plan for monitoring the performance of your recommended solution to _____. Establish a plan for addressing the problem strategically over time.

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Appendix H. Holistic Critical Thinking Scoring Rubric



Holistic Critical Thinking Scoring Rubric

Dr. Peter A. Facione
Santa Clara University

Dr. Noreen C. Facione, R.N., FNP
University of California, San Francisco

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provided that no part of the scoring rubric is altered and that "Facione and Facione" are cited as authors.
(PAF49;R4.2:062694)

Holistic Critical Thinking Scoring Rubric

Facione and Facione

4 Consistently does all or almost all of the following:
Accurately interprets evidence, statements, graphics, questions, etc.
Identifies the salient arguments (reasons and claims) pro and con.
Thoughtfully analyzes and evaluates major alternative points of view.
Draws warranted, judicious, non-fallacious conclusions.
Justifies key results and procedures, explains assumptions and reasons.
Fair-mindedly follows where evidence and reasons lead.

3 Does most or many of the following:
Accurately interprets evidence, statements, graphics, questions, etc.
Identifies relevant arguments (reasons and claims) pro and con.
Offers analyses and evaluations of obvious alternative points of view.
Draws warranted, non-fallacious conclusions.
Justifies some results or procedures, explains reasons.
Fair-mindedly follows where evidence and reasons lead.

2 Does most or many of the following:
Misinterprets evidence, statements, graphics, questions, etc.
Fails to identify strong, relevant counter-arguments.
Ignores or superficially evaluates obvious alternative points of view.
Draws unwarranted or fallacious conclusions.
Justifies few results or procedures, seldom explains reasons.
Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.

1 Consistently does all or almost all of the following:
Offers biased interpretations of evidence, statements, graphics, questions, information, or the points of view of others.
Fails to identify or hastily dismisses strong, relevant counter-arguments.
Ignores or superficially evaluates obvious alternative points of view.
Argues using fallacious or irrelevant reasons, and unwarranted claims.
Does not justify results or procedures, nor explain reasons.
Regardless of the evidence or reasons, maintains or defends views based on self-interest or preconceptions.
Exhibits close-mindedness or hostility to reason.

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Instructions for Using the Holistic Critical Thinking Scoring Rubric

1. Understand the construct.

This four level rubric treats critical thinking as a set of cognitive skills supported by certain personal dispositions. To reach a judicious, purposive judgment a good critical thinker engages in analysis, interpretation, evaluation, inference, explanation, and meta-cognitive self-regulation. The disposition to pursue fair-mindedly and open-mindedly the reasons and evidence wherever they lead is crucial to reaching sound, objective decisions and resolutions to complex, ill-structured problems. So are the other critical thinking dispositions, such as systematicity, reasoning self-confidence, cognitive maturity, analyticity, and inquisitiveness. [For details on the articulation of this concept refer to Critical Thinking: A Statement of Expert Consensus for Purposes of Educational Assessment and Instruction. ERIC Document Number: ED 315 423.]

2. Differentiate and Focus

Holistic scoring requires focus. In any essay, presentation, or clinical practice setting many elements must come together for overall success: critical thinking, content knowledge, and technical skill (craftsmanship). Deficits or strengths in any of these can draw the attention of the rater. However, in scoring for any one of the three, one must attempt to focus the evaluation on that element to the exclusion of the other two.

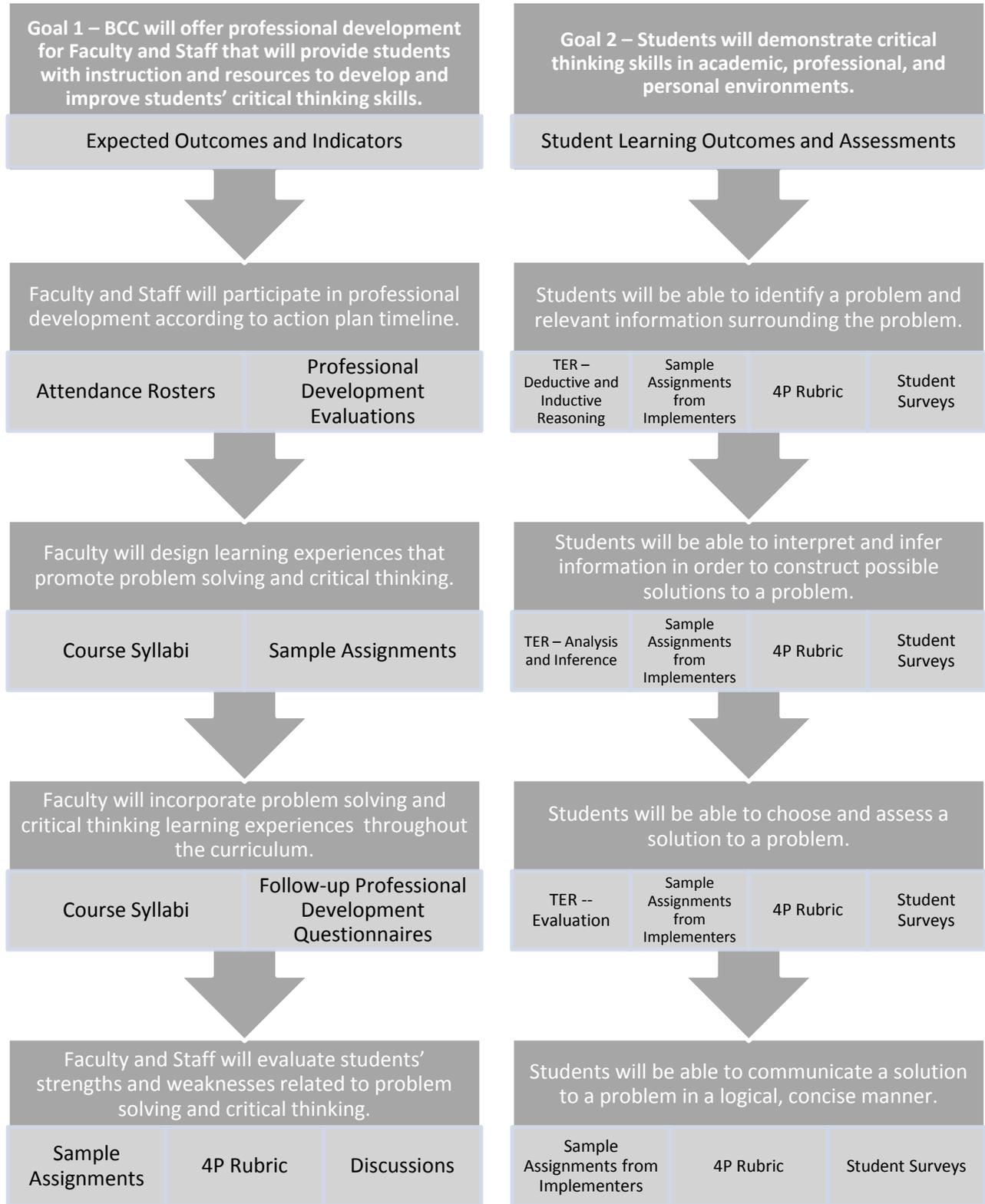
3. Practice, Coordinate and Reconcile.

Ideally, in a training session with other raters one will examine sample essays (videotaped presentations, etc.) which are paradigmatic of each of the four levels. Without prior knowledge of their level, raters will be asked to evaluate and assign ratings to these samples. After comparing these preliminary ratings, collaborative analysis with the other raters and the trainer is used to achieve consistency of expectations among those who will be involved in rating the actual cases. Training, practice, and inter-rater reliability are the keys to a high quality assessment.

Usually, two raters will evaluate each essay/assignment/project/performance. If they disagree there are three possible ways that resolution can be achieved: (a) by mutual conversation between the two raters, (b) by using an independent third rater, or (c) by taking the average of the two initial ratings. The averaging strategy is strongly discouraged. Discrepancies between raters of more than one level suggest that detailed conversations about the CT construct and about project expectations are in order. This rubric is a four level scale, half point scoring is inconsistent with its intent and conceptual structure. Further, at this point in its history, the art and science of holistic critical thinking evaluation cannot justify asserting half-level differentiations.

If working alone, or without paradigm samples, one can achieve a greater level of internal consistency by not assigning final ratings until a number of essays/projects/performances/assignments have been viewed and given preliminary ratings. Frequently natural clusters or groupings of similar quality soon come to be discernible. At that point one can be more confident in assigning a firmer critical thinking score using this four level rubric. After assigning preliminary ratings, a review of the entire set assures greater internal consistency and fairness in the final ratings.

Appendix I. QEP: Goals and Outcomes Assessment Model



Appendix J. Professional Development Evaluation

Date _____ Title of Presentation _____
 Time _____ Presenter _____
 Start End

Please rate to what level you agree with the following statements.

1) The ideas and practices taught at this workshop were new to me.
 Strongly disagree Disagree Agree Strongly agree
 1 2 3 4

2) The ideas and practices taught at this workshop are relevant to my professional practice.
 Strongly disagree Disagree Agree Strongly agree
 1 2 3 4

3) The quality of information presented at this workshop was sound (e.g., reflecting best practice).
 Strongly disagree Disagree Agree Strongly agree
 1 2 3 4

4) Information was conveyed in an effective manner.
 Strongly disagree Disagree Agree Strongly agree
 1 2 3 4

5) I am likely to implement the ideas and practices taught in my professional setting.
 Strongly disagree Disagree Agree Strongly agree
 1 2 3 4

6) If I implement the ideas and practices taught at this workshop, my students are likely to benefit.
 Strongly disagree Disagree Agree Strongly agree
 1 2 3 4

7) I would recommend this workshop to my colleagues.
 Strongly disagree Disagree Agree Strongly agree
 1 2 3 4

8) What do you need in order to apply information and practices taught at this workshop in your professional practice?

9) What was your favorite aspect of this workshop?

Appendix K. Professional Development Follow-Up Questionnaire

Professional Development Follow-Up Questionnaire

Date _____

Title of Presentation _____

Time _____

Presenter _____

Please rate to what level you agree with the following statements.

1) I have been able to implement major objectives taught at the workshop in a regular, sustained fashion.

Strongly disagree
1

Disagree
2

Agree
3

Strongly agree
4

2) As a result of implementing objectives of this professional development activity, I have observed a positive impact on students.

Strongly disagree
1

Disagree
2

Agree
3

Strongly agree
4

3) I consider the changes in my teaching and/or student learning outcomes as a result of implementing objectives of this professional development activity important and valuable.

Strongly disagree
1

Disagree
2

Agree
3

Strongly agree
4

4) Describe specifically how your teaching practice has changed as a result of the workshop.

5) Describe observable, positive student impact that you have observed as a result of the workshop.

6) What do you need in order to better implement key objectives taught?

Appendix L. 4P Problem-Solving Rubric

4P Problem-Solving Action Plan Rubric

	<i>Below Expectations (1)</i>	<i>Meets Expectations (2)</i>	<i>Above Expectations (3)</i>	<i>TOTAL</i>
<p>PLAN <i>Low Cognitive Level</i></p> <p>_____</p> <p><i>What is the problem?</i></p>	<p>Able to verbalize or identify the problem</p> <p>_____</p> <p><i>What is the problem?</i></p>	<p>Able to explain the problem and identify the source</p> <p>_____</p> <p><i>What are the causes and other circumstances surrounding the problem?</i></p>	<p>Can identify the problem and offer a single solution with relevant information</p> <p>_____</p> <p><i>What is your solution to the problem?</i></p>	
<p>PREPARE <i>Moderate Cognitive Level</i></p> <p>_____</p> <p><i>What is your understanding of what caused the problem?</i></p>	<p>Does not recognize or verbalize own biases, own assumptions or other points of view</p> <p>_____</p> <p><i>What is your understanding of what caused the problem?</i></p>	<p>Able to interpret their own biases, own assumptions and other points of view</p> <p>_____</p> <p><i>What do other people think has caused this problem? Are you looking at all sides or points of view of the situation?</i></p>	<p>Able to infer information in meaningful ways, control for biases, articulate reasoning from other points of view in order to construct possible solutions</p> <p>_____</p> <p><i>What are other ways to solve this problem?</i></p>	
<p>PRACTICE <i>High Cognitive Level</i></p> <p>_____</p> <p><i>Which solution seems to be the best? Why did you choose this solution?</i></p>	<p>Does not verbalize or recognize alternatives or communicate conclusions</p> <p>_____</p> <p><i>Which solution seems to be the best? Why did you choose this solution?</i></p>	<p>Able to assess alternative solutions and prioritize options for consideration</p> <p>_____</p> <p><i>What are the pros and cons of the solution you selected? What are other solutions that might work?</i></p>	<p>Able to justify options and choose an appropriate solution</p> <p>_____</p> <p><i>If this solution does not work, which solution will you try next?</i></p>	
<p>PRODUCE <i>Highest Cognitive Complexity Level</i></p> <p>_____</p> <p><i>Why may the solution you selected may not work?</i></p>	<p>Does not acknowledge and explain limitations of selected solution</p> <p>_____</p> <p><i>Why may the solution you selected may not work?</i></p>	<p>Can explain limitations of the selected solution. Able to communicate and revise strategies.</p> <p>_____</p> <p><i>Was your first solution the best solution for the problem? If not, what other solution would have worked better?</i></p>	<p>Able to justify new strategies; creates new, effective habits related to problem solving</p> <p>_____</p> <p><i>What will you do the next time this problem occurs? Can you offer new strategies to solve the problem?</i></p>	

This problem is related to: ____ Admissions ____ Bookstore ____ Business Office ____ Conflict with staff or faculty
____ Continuing Education ____ Distance Learning ____ Financial Aid ____ Human Resources ____ Instruction or
Academics ____ Learning Enhancement Center ____ Library ____ Personal issues ____ Student Services ____ Technology

SCORING:

****1-4 points:** Problem-Solving and Critical Thinking Abilities- Below Expectations

5-8 points: Problem Solving and Critical Thinking Abilities- Adequate

9-12 points: Problem Solving and Critical Thinking Abilities- Above Expectations

****Remediation necessary for scores <5**

RECOMMENDATIONS: _____

Evaluator: _____



Appendix M. 2012 Employer Survey

Employer Satisfaction Survey 2012

The purpose of this survey is to determine your overall satisfaction with Bladen Community College graduates, not to collect information on individual graduates. All data will be kept strictly confidential, and reported only as group data. Individual businesses and industries will not be identified in the final report. **Please complete the survey below and return it in the enclosed postage-paid envelope by Thursday, November 1, 2012.**

For each item below, please circle the response that closely reflects your overall opinion of Bladen Community College graduates employed by your organization.

	Don't Know	Very Dissatisfied	Dissatisfied	Satisfied	Very Satisfied
1. Specific job-related knowledge	0	1	2	3	4
2. Specific job-related skills	0	1	2	3	4
3. Oral communication skills	0	1	2	3	4
4. Written communications skills	0	1	2	3	4
5. Problem solving skills	0	1	2	3	4
6. Critical thinking skills	0	1	2	3	4
7. Computer skills	0	1	2	3	4
8. Organization and planning	0	1	2	3	4
9. Quality of work	0	1	2	3	4
10. Overall job preparation	0	1	2	3	4

If you have any questions concerning this survey, please contact Harriet Hobbs, Director of Institutional Effectiveness/Planning at 910.879.5516. Thank you for your feedback.

COMMENTS:

Appendix N. End-of-Course Student Survey

Quality Enhancement Plan: Critical Thinking
End-of-Course Student Survey

Course Name: _____
Semester: _____

Answer the following questions as they relate to problem-solving and critical thinking instruction and activities throughout this course.

1. How well did you achieve each of the following QEP Student Learning Objectives in this course?
 - a. Students will be able to identify a problem and relevant information surrounding that problem.
 Extremely well
 Very well
 Adequately well
 Not very well
 Not at all
 - b. Students will be able to interpret information and make inferences in order to construct possible solutions to a problem.
 Extremely well
 Very well
 Adequately well
 Not very well
 Not at all
 - c. Students will be able to choose and evaluate a solution to a problem.
 Extremely well
 Very well
 Adequately well
 Not very well
 Not at all
 - d. Students will be able to communicate the solution to a problem in a logical, concise manner.
 Extremely well
 Very well
 Adequately well
 Not very well
 Not at all

