Executive Summary (as submitted to SACS upon 2012 reaffirmation)

Palm Beach State College selected the topic of *critical thinking* through an institutional process in the 2009-2010 academic year. Through continued broad-based, participatory conversations in 2010, constituents derived the following operational definition: *critical thinking is using the skills needed to explore, evaluate, express, and engage in purposeful reasoning in order to reach sound conclusions, decisions, positions, and/or solutions.* The College developed its Quality Enhancement Plan (QEP) using this definition.

Plan development resulted in a single goal to improve student learning: *Students will develop and apply critical thinking skills.* To accomplish this goal, the College will embark on a focused initiative for professional development to help faculty and staff enhance their skills to teach and assess critical thinking. The plan provides a framework to unite faculty, instructors, staff, and administrators in an endeavor to create a learning environment that includes a common understanding of critical thinking and of the skills and characteristics associated with critical thinking. It is such a learning environment that will help students develop and apply necessary critical thinking skills.

There are at least three benefits to the College's QEP. First, *student learning will be promoted and improved*. As the five-year plan is implemented and completed, students will develop and use the skills associated with critical thinking. This will occur as faculty and instructors integrate critical thinking into the classroom, giving students opportunities to practice critical thinking in ways that encourage its transfer across disciplines and beyond the classroom.

Second, *students will benefit as the QEP provides a College-wide mechanism to teach and assess critical thinking in all academic and career programs*. Faculty, instructors, and staff will be provided needed time to review existing practices and results and to develop new outcomes and strategies to help students develop critical thinking skills.

Third, with a focused effort on critical thinking throughout the College community, the definition of learning will be broadened and defined. The result will be a cultural shift to a *pervasive awareness of the importance of critical thinking as a life- and career-enhancing skill*.

The QEP will help the College meet its mission to "create and sustain a dynamic teaching and learning environment" and to prepare "students to contribute and compete ethically and successfully in a diverse global community."

The plan is comprehensive. Student learning outcomes define what QEP implementation will accomplish. A carefully designed strategy for professional development will help realize the outcomes. The projected five-year budget of approximately $785,010 includes preliminary expenses and is fully fundable. The degree to which the QEP goals and outcomes have been attained will be informed by a well-constructed assessment plan. Palm Beach State College looks forward to the spring 2012 implementation of the following Quality Enhancement Plan.

Section I: Initial Goal and Intended Outcomes of the QEP

Palm Beach State College (PBSC) chose to focus its QEP on critical thinking, which was defined as *using the   skills needed to explore, evaluate, express, and engage in purposeful reasoning in order to reach sound conclusions, decisions, positions, and/or solutions*. After a pilot semester in spring of

2012, the QEP was officially launched in the fall of 2012 and continued until the summer of 2017. Over the five years of its implementation, the success of the QEP was determined by using a clearly defined goal and measurable learning outcomes.

- QEP Goal: Students will develop and apply critical thinking skills.
- QEP student learning outcomes:
    1. Students will analyze and interpret relevant information.
    2. Students will reach sound conclusions based on a demonstrated reasoning process.
    3. Students will evaluate and explain relevant information.
    4. Students will exhibit affective dispositions known to characterize critical thinkers.

To maximize the stated learning outcomes, the College annually dedicated funding to support QEP initiatives. Budget allocations covered the cost of resources and staffing necessary to implement the plan.

Strategies

To address the four learning outcomes, the primary strategy of the QEP was a focused integration of critical thinking into the classroom in all academic programs. Integration occurred through faculty and staff professional development, learning outcomes assessment, and through program-specific critical thinking outcomes in career-oriented programs. Additionally, educational support areas identified and developed critical thinking learning outcomes outside the classroom. A final supporting action included the development of and access to electronic and hard copy critical thinking resources. The following are specific descriptions of the actions implemented.

Professional Development: Two levels of ongoing professional development were offered on a cyclical basis to advance faculty and staff critical thinking instructional and academic support skills and increase their capacity to measure student critical thinking through assessment. Level 1 introductory training offered participants an overview of critical thinking with some study of a particular critical thinking topic, the QEP outcomes, a critical thinking rubric, and assessment practices. Level 2 comprised a group of faculty and staff, called the collaboration cohort, who were recruited to lead and participate in training focused on critical thinking as defined by the QEP learning outcomes.

Outcomes Assessment: Assessment of learning outcomes included the administration of a variety of direct and indirect measures. Direct measures included the *California Critical Thinking Skills Test* (CCTST), the *General Education Critical Thinking Scenario*, the *California Critical Thinking Dispositions Inventory* (CCTDI), the *Course Assessments*, the *Literature Embedded Assessment,* and the *ETS Proficiency Profile* (ETS). Indirect measures included the *Graduating Student Survey* and the *Community College Survey of Student Engagement* (CCSSE).

Career Programs and Educational Support Services: Program directors and associate deans participated in a review of QEP outcomes and the development of a QEP critical thinking rubric. All career programs identified or developed program outcomes specific to critical thinking and their corresponding benchmarks for success. In addition, educational support areas identified outcomes that measured critical thinking involved in the delivery of services to students.

Critical Thinking Resources: Resources were shared college-wide on the QEP and Panther Online Learning Objects (POLO) webpages and, when possible, by live demonstration during trainings. Purchased critical thinking resources were housed on each campus in both the Professional Teaching and Learning Center (PTLC) and the campus libraries, and in fall 2015 the QEP leadership created and

distributed a critical thinking guide for use in instruction and academic support services.

Section II: Changes to the QEP and Reasons for the Changes

The QEP remained focused on the four strategies discussed above; however some adjustments and modifications, as described below, were made to the strategies over the five years of the plan.

Changes to Professional Development

The implementation of collaboration cohorts was modified in Year 2. Within the first two years, the collaboration cohort offered 42 different critical thinking instructional and assessment workshops and seminars that reached nearly 300 faculty and staff. However, this delivery approach offered broad, but limited exposure to the critical thinking concepts, models, and QEP learning outcomes. It became evident that there was a "disconnect" between faculty training and how students were being assessed. This became apparent from QEP leadership survey responses such as, "*Assessment has been frustrating because the instruments selected to measure student learning, although appropriate for the QEP outcomes, do not necessarily measure what is being taught in the classroom. Additionally, students who are selected do not have incentive to perform well because assessment is not linked to their course grade. If data are to be useful to faculty in their attempts to improve instruction, the data must be collected in ways that are more relevant to what is being taught in individual classrooms.*" In order to offer more intensive professional development to a larger network of faculty and staff, the following revisions were implemented beginning in the third year.

- Professional Learning Groups (PLGs) replaced collaboration cohorts and cohort members provided leadership for the PLGs.
- PLG facilitator training was conducted to guide the PLG leaders in forming and leading their PLGs.
- Grant funding was secured in Year 3 and Year 5 to support two summer events that were not part of the original plan. The two summer events, named the Summer Institute in 2015 and then renamed the Summer Project Forum in 2017, provided faculty and staff time to formulate, plan, and implement a critical thinking instructional or academic support project. As a result of involvement, participants developed new or revised instructional strategies, assignments, or outcomes assessments.

Changes to Outcomes Assessment

It was necessary to make some adjustments to the outcomes assessment plan. Changes were made to sampling and scheduling, and two instruments were discontinued by Year 4. Overall, there were five changes to the outcomes assessment plan over the course of the QEP.

- **CCTDI:** The original plan mistakenly stated (page 49) that the California Critical Thinking Disposition Inventory (CCTDI) would be administered annually to randomly selected students during the general education assessment process. However, the original intent was to sample students taught by faculty who were involved with QEP implementation and not the general population of students. CCTDI was implemented this way.
- **Scenario:** The sampling requirement and the instrument were modified. The sampling methodology was changed by the General Education Assessment Committee. Originally, the sample included students in courses where the average number of credits earned was 45; the criterion was changed to 35 credits during the first year. The instrument was revised in response to multiple scoring sessions. The original instrument did not explicitly ask students to demonstrate their abilities to identify and analyze information, draw conclusions, or evaluate those conclusions, all of which were necessary to effectively measure the QEP outcomes.

- **CCSSE:** The Community College Survey of Student Engagement (CCSSE) was expected to be administered in 2014 (Year 2). However, CCSSE was reschedule and administered in 2016 (Year 4) to accoMmodate other standardized assessment being conducted by the College.
- **ETS and CCTST:** The Educational Testing Serivce (ETS) Profile and the California Critical Thinking Skills Test (CCTST) were discontinued after two years and three years respectively. The insturments were originally selected because they aligned well to the QEP outcomes, but assessment results did not inform classroom instruction. To replace these instruments, the College began to focus on faculty-developed assessments embedded at the course level, which for the QEP, were called Additional Course Assessments and reported in the last two QEP years.

Changes to Career Programs and Educational Support Services
No modifications occurred.

Changes to Critical Thinking Resources
Few faculty, instructors, and staff requested or used the resources offered through the PTLC and various campus libraries. In response, the QEP leadership developed a *QEP Critical Thinking Quick Guide* in Year 3 for distribution to all college employees who worked in an instructional or academic support role. The Quick Guide, and the subsequent, *Math Quick Guide for Critical Thinking* created the following year, made it possible to more directly offer critical thinking resources to faculty and staff College-wide as it was shared in print and electronic formats. Instead of increasing resources in the PTLCs and libraries, over 2,100 Quick Guides were distributed to faculty, instructors, and academic support staff and a variety of related workshops and training sessions were conducted.

Section III: Impact on Student Learning

The implementation of professional development, career and educational support outcomes, and critical thinking resource strategies resulted in the advancement of faculty and academic support staff's knowledge and motivation to instruct and measure critical thinking. However, while QEP leadership attempted to make responsive changes to the types and methods of assessment instruments used, assessment results were mixed and suggest that overall, students made modest strides in their acquisition of critical thinking knowledge and skills. Six direct and two indirect assessments were administered over the five-year QEP period to assess the four learning outcomes. Table 1 details each instrument and related data collection.

Table 1: Description of Assesment Measures and Data Collection					
Direct Measure Instruments	**Year 1 2012-13**	**Year 2 2013-14**	**Year 3 2014-15**	**Year 4 2015-16**	**Year 5 2016-17**
California Critical Thinking Skills Test (CCTST): Multiple-choice test; directly measured LOs 1-3.	107 students[1] 119 students[2]	112 students[1] 114 students[2]	110 students[1] 38 students[2]	N/A; discontinued in Year 4	
Scenario: Faculty-developed scenario. Students provide written response; directly measured LOs 1-3.	90 students	80 students	90 students[1] 112 students[2]	111 students[1] 63 students[2]	17 students[3]
California Critical Thinking Disposition Inventory (CCTDI): Survey measured student willingness to think critically; measured LO 4. Students assessed in courses taught by QEP faculty.	136 students	219 students	124 students	104 students	107 students
General Education Embedded Assessment: Literature courses; all students complete an assignment graded with QEP rubric; measure LO1.	N/A – did not begin until Year 2	1146 students	1530 students	2139 students	2305 students
Additional Course Assessments: QEP faculty designed course assignments that measured learning outcomes 1-3.	N/A	N/A	N/A	435 students	609 students

ETS Proficiency Profile: Multiple-choice test included total score for student proficiency in critical thinking; global measure of outcomes. Students in sections randomly selected.	360 students	390 students	N/A – college discontinued ETS in Year 3		
Indirect Measure Instruments	**Year 1 2012-13**	**Year 2 2013-14**	**Year 3 2014-15**	**Year 4 2015-16**	**Year 5 2016-17**
Graduating Student Survey (GSS) College internal survey; indirect measure; students responded to a question regarding how well the College prepared them to think critically.	722 students; collected June 2012 through May 2013.	605 students; collected June 2013 through May 2014.	569 students; collected June 2014 through May 2015.	853 students; collected June 2015 through May 2016.	736 students; collected June 2016 through May 2017.
Community College Survey of Student Engagement (CCSSE) Provided college specific critical thinking data based on four benchmarks: active and collaborative learning, student effort, academic challenge, and student-faculty interaction.	N/A			1566 students; collected in Spring 2016 semester.	N/A

Notes: [1] Students randomly selected during Gen. Ed. Assessment cycle
[2] Sections taught by QEP faculty
[3] The low sample of 17 students in Year 5 occurred when the College moved to an voluntary online format.

Direct Assessment: Learning Outcomes Analysis

Learning Outcome 1: Students made strides over the five years of the QEP in their ability to analyze and interpret relevant information. Compared to the baseline scores, the achievement target was met on three of the four direct measures.

Learning Outcome 2: The results were mixed for student's ability to reach sound conclusions. While students achieved the CCTST target during the first year of QEP implementation, the target was not met on the other two measures, and final results were actually lower than the baseline scores.

Learning Outcome 3: Overall, the results for student ability to evaluate and explain relevant information demonstrated improvement. The achievement target was met on two of the three measures (CCTST and Additional Course Assessments). Student performance on the scenario was below the benchmark but showed improvement over the baseline.

Learning Outcome 4: Results for three of the seven dispositions (analyticity, open-mindedness, and confidence in reasoning) showed modest annual improvement while the other four (truth-seeking, inquisitiveness, systematicity, and maturity in judgement) did not. When results are averaged, the overall achievement target was met with a slight improvement over the benchmark.

Table 2 compares baseline to final results and indicates whether the target was met for each measure. Table 3 follows immediately to show annual results.

Table 2: Direct Measures of Learning Outcomes Students will demonstrate a 10% increase over baseline scores on outcomes 1-3. Students will demonstrate annual improvement on outcome 4.			
Measure	**Baseline**	**Year 5 2016-2017**	**Target**
LO1: Students will analyze and interpret relevant information.			
CCTST	2.9	3.3	3.2 - target met
Scenario (5-pt scale)	3.0	3.3	3.3 - target met
General Education Embedded Assessment	78% met benchmark	89% met benchmark	86% - target met
Additional Course Assessments	3.6	3.9	4.0 – target not met
LO2: Students will reach sound conclusions based on a demonstrated reasoning process.			
CCTST (max: 16)	6.25	7.2	6.9 - target met
Scenario (5-pt scale)	3.1	2.8	3.4 - target not met
General Education Embedded Assessment	N/A	N/A	N/A
Additional Course Assessments	3.5	3.4	3.9 – target not met
LO3: Students will evaluate and explain relevant information.			

CCTST (max: 11)	3.2	3.5	3.5 - target met
Scenario (5-pt scale)	3.0	3.2	3.3 - target not met
General Education Embedded Assessment	N/A	N/A	N/A
Additional Course Assessments	3.4	4.1	3.7- target met
LO4: Students will exhibit affective dispositions known to characterize critical thinkers.			
CCTDI: Truth-seeking	36.0	35.3	target not met
CCTDI: Open-mindedness	41.0	41.9	target met
CCTDI: Inquisitiveness	48.9	48.2	target not met
CCTDI: Analyticity	44.8	45.2	target met
CCTDI: Systematicity	43.2	43.2	target not met
CCTDI: Confidence in reasoning	45.2	46.1	target met
CCTDI: Maturity in judgement	43.1	42.6	target not met
Total Scores			
CCTST (max: 34)	12.3 (28th-36th percentile)	14.0 (42nd percentile)	13.6 -target met
Scenario (5-pt scale)	3.0	3.1	3.3 - target not met
General Education Embedded Assessment	78% met benchmark	89% met benchmark	86% - target met
Additional Course Assessments	3.7	4.0	4.0 – target met
ETS Proficiency Profile	110	110	121 - target not met
CCTDI	302.2	302.5	Annual Improvement – target met
Notes			
Scenario – Original instrument was revised after multiple inter-rater reliability sessions during pilot semester, but initial scores were retained as the baseline. CCTDI - Score ranges per category: 10-19 = Strong Negative; 20-29 = Negative; 30-39 = Inconsistent/Ambivalent; 40 -49 = Positive; 50-60 = Strong Positive (Source: CCTDI Instrument User's Manual, Insight Assessment /The California Academic Press 2017.)			

Table 3 Learning Outcomes Direct Measure Results Scores reported represent averages for each year and each instrument							
Measure	**Baseline**	**Year 1 2012-13**	**Year 2 2013-14**	**Year 3 2014-15**	**Year 4 2015-16**	**Year 5 2016-17**	**Target**
CCTST (max: 34)	12.3	15.1	14.0	14.6	N/A		13.6
Scenario (5 pt. scale)	3.0	2.5	2.6	2.8	2.7	3.1	3.3
General Education Embedded Assessment (5 pt. scale)	N/A		4.0 78% met benchmark	3.8 87% met benchmark	3.8 89% met benchmark	3.9 89% met benchmark	3.0 70% will score 3.00 or higher
Additonal Course Assessment (5 pt. scale)	N/A				3.7	3.96	3.3 (see note)
ETS Proficiency Profile	110	110	110	N/A			121
CCTDI (420 total score maximum)	302.2	304.9 Met	300.9 Not Met	295.2 Not Met	304.5 Met	302.5 Met	Annual Improvement
Notes							
Additional Course Assessment – Target score was based on the target for the critical thinking scenario because faculty were adapting the QEP outcomes and scoring with a 5-point rubric similar to the one used for the scenario.							

Assessment Results: Indirect Measures

Results from the Palm Beach State College Graduating Student Survey (GSS) consistently indicated that students believe their Palm Beach State College education engaged them in "…purposeful reasoning to reach sound conclusions." Aggregate results from the Community College Survey of Student Engagement

(CCSSE) were similar to national results and changed little between 2011 and 2016. Detailed results follow in Tables 4 and 5.

Table 4: Results of Indirect Measures of QEP Success - CCSSE		
Student ratings on selected questions from the Community College Survey of Student Engagement (CCSSE) will meet or exceed baseline and exceed national benchmark. Average on questions related to integration of critical thinking in courses at PBSC. CCSSE items included in average score.		
Baseline (2011)	**Year 4** **2015-16**	**Target**
Question 4: In your experiences at this college during the current school year, about how often have you done each of the following? (d) Worked on a paper or project that required integrating ideas or information from various sources (n) Discussed ideas from your readings or classes with instructors outside of class (r) Discussed ideas from your readings or classes with others outside of class		
2.68	2.4 (4 pt. scale)	Baseline 2.68; Target not met National Benchmark 2.39; Target met
Question 5: During this current school year, how much has your coursework at this college emphasized the following mental activities? (b) Analyzing the basic elements of an idea, experiences, or theory (c) Synthesizing and organizing ideas, information, or experiences in new ways (d) Making sound judgments about the value of information, arguments, or methods (e) Applying theories or concepts to practical problems or in new situations (f) Using information you have read or heard to perform a new skill		
2.68	2.79 (4 pt. scale)	2.68 (Baseline) – target met 2.81 (National Benchmark) – target not met
Question 12e: How much has your experience at this college contributed to your knowledge, skills, and personal development in the following areas? e: Thinking critically and analytically.		
2.68	2.99 (4 pt. scale)	2.68 (Baseline) 2.98 (National Benchmark) – target met

Table 5: Results of Indirect Measures of QEP Success – PBSC Graduating Student Survey						
Baseline **(2009 -10)**	**Year 1** **2012-13**	**Year 2** **2013-14**	**Year 3** **2014-15**	**Year 4** **2015-16**	**Year 5** **2016-17**	**Target**
Student ratings on Question 16 from Palm Beach State Graduating Student Survey will meet or exceed baseline and improve annually. **Question 16**: Please rate (5 pt. scale) how you feel Palm Beach State has helped you increase your achievement on the "critical thinking" outcome – "Engage in purposeful reasoning to reach sound conclusions."						
4.1	4.2	4.3	4.4	4.3	4.5	4.1 - annual improvement and target partially met

Professional Development

Professional development participation goals were exceeded. By the end of Year 5, 989 full-time and part-time faculty (nearly 82%) had engaged in a Level 1 professional development event, surpassing the goal to reach at least 50% of instructional staff by 2017.

Level 2 cohort participation reached 102 faculty, instructors, and staff, or 107% of the goal. Of these 102 participants, 85 regularly contributed to Professional Learning Groups (PLGs), and 54 completed the 2015 QEP Summer Institute and/or the 2017 Summer Project Forum.

Of further note, PLG participation led to a cross-disciplinary and cross-departmental commitment to the critical thinking learning outcomes through instruction, academic support, and assessment. Ninety one percent of those who responded to the 2017 PLG Participant Survey indicated, "I gain insights into my work as an instructor/staff person" and 87% indicated, "I am challenged to grow professionally in the PLG because it allows faculty and staff from different disciplines and departments to interact and support each other's professional growth." Furthermore, in the 2015, 2016, and 2017 PLG Participant Survey, participants indicated a growing interest in their desire to learn more about teaching and assessing critical thinking. Although by Year 5 a smaller percentage of PLG participants indicated their knowledge continued to increase (from 100% in Year 1 to 86% in Year 5), responses exceeded the 80% target.

The College reached the QEP goal to annually increase non-instructional staff participation as evidenced by the steady rise from 154 to 531 participants for a 245% increase in participation (Level 1 Professional Development). Data in Tables 6 and 7 describe the professional development results.

Table 6: Results of Level 1 Professional Development (L1PD) Initiatives					
Desired outcome	**Year 1 2012-13**	**Year 2 2013-14**	**Year 3 2014-15**	**Year 4 2015-16**	**Year 5 2016-17**
At least 80% of participants will increase knowledge & understanding of critical thinking & increase desire to learn more about teaching & assessing critical thinking.*	Not assessed	N=41; 100% agree	Not applicable		
By fall 2013, 100% of incoming new faculty/adjuncts will participate in L1PD.	Not applicable	Implemented; L1PD integrated into new adjunct training & new faculty orientation so that 100% of incoming faculty & adjuncts participate			
By 2017, at least 50% of instructional staff will have participated in L1PD. (*total unduplicated count*)	18.9% 224 of 1,188 224 total new	44.1% 545 of 1,235 321 total new	62.2% 751 of 1,207 206 total new	80.2% 975 of 1,216 224 total new	81.6% 989 of 1,212 14 total new
By 2017, non-instructional staff participating in L1PD will have increased annually.	154	295	306	479	531
Notes					
*Because of changes beginning in Year 3 (2014-15), QEP team members weren't required to offer critical thinking workshops (Level 1 PD).					

Table 7: Results of Level 2 Professional Development (L2PD) Initiatives					
Desired outcome	**Year 1 2012-13**	**Year 2 2013-14**	**Year 3 2014-15**	**Year 4 2015-16**	**Year 5 2016-17**
Avg. student scores on CCTST will exceed General Education sample (max = 34).	Gen Ed: 15.1 QEP: 15.8	Gen Ed: 14.0 QEP: 13.2	Gen Ed: 14.3 QEP: 15.6	Not assessed	
Avg. student scores on critical thinking scenario will exceed gen. ed. sample.[1]	QEP sections assessed in CCTST only		Gen Ed: 2.9 QEP: 2.7	Gen Ed: 2.9 QEP: 2.7	3.1 (no separate sample for QEP)
At least 80% of participants will agree knowledge & understanding of QEP outcomes increased.	Not assessed	Not assessed	93% of 29 respondents agree	86% of 21 respondents agree	86% of 31 respondents agree
At least 80% of participants will agree that participation has increased their knowledge & understanding of critical thinking.	100% of 11 respondents agree	90% of 10 respondents agree	93% of 20 respondents agree	86% of 22 respondents agree	86% of 31 respondents agree
At least 80% of participants will agree that participation has increased desire to learn more about teaching/assessing critical thinking.	100% of 11 respondents agree	90% of 10 respondents agree	93% of 20 respondents agree	95% of 22 respondents agree	100% of 31 respondents agree
By 2017, at least 95 faculty or staff will participate in QEP Level 2 events to improve instruction/professional practice.	10 participants *26 to date (includes pilot cohort)[2]*	15 participants *28 to date[2]*	56 participants *62 to date[2]*	54 participants *77 to date[2]*	48 participants *102 to date[2]*
Notes					
[1] While this is a direct measure of student learning, the intent was to see if there is a difference among students taught by QEP faculty. [2] "To date" totals represent unduplicated participants as of that year.					

College faculty and administration embraced creating and measuring career program and educational support area critical thinking outomes. As described in Table 8, there was a steady annual increase in career program outcomes that aligned with at least one critical thinking outcome. In Year 1, program faculty and staff identified 235 outcomes that aligned to the QEP outcomes, and by Year 4, that number

had increased to 364. Also, of the outcomes identified, most students (about 80% each year) assessed met their targeted benchmark on these outcomes that support critical thinking. A steady increase in educational support outcomes was also noted with an increase from 10 to 19 outcomes that support critical thinking, but achievement declined in the third and fourth years. Reasons for the decline are not understood, conversations were initiated in Year 5 to determine the cause and are ongoing.

Table 8: Results of Supporting Strategies Critical Thinking Outcomes in Career Programs & Educational Support Areas				
Desired outcomes	**Year 1 2012-13**	**Year 2 2013-14**	**Year 3 2014-15**	**Year 4* 2015-16**
By fall 2012, critical thinking outcomes in programs will be identified, aligned to QEP & assessed in program cycle.	235 outcomes in 100% of programs; 182 assessed	342 outcomes in 100% of programs; 294 assessed	353 outcomes in 100% of programs 349 assessed	364 outcomes in 100% of programs 279 assessed
By 2013-2014, critical thinking outcomes will be reported annually (programs).	143 out of 182 assessed (78.57%) met benchmark	237 out of 294 assessed (80.61%) met benchmark	275 out of 349 assessed (78.79%) met benchmark	225 out of 279 assessed (81%) met benchmark
By fall 2013, outcomes will be identified in educational support areas & during assessment cycle.	10 outcomes; 2 assessed	12 outcomes identified; 100% assessed	17 outcomes identified; 100 % assessed	19 outcomes identified; 100% assessed
By 2013-2014, critical thinking outcomes will be reported annually (educational support areas).	100% met benchmark	100% met benchmark	64% met benchmark	53% met benchmark
Notes				
*Final Year 5 data not available at the time of 5th Year Impact Report submission				

After the Critical Thinking Quick Guide was developed, QEP leadership promoted and distributed the guide at college events, through regular email communication, and by featuring it on the QEP webpage. In early fall 2015, over 2,100 Critical Thinking Quick Guides were distributed as a resource for faculty and staff to help inform course instruction, assessment, and educational support of the four QEP learning outcomes. Of the 250 respondents to the QEP Quick Guide Survey in November 2015, 48% indicated that they had used the Quick Guide to support course instruction or services to students, and 71% indicated they had used or planned to use the guide for assessment purposes.

The QEP webpage ultimately became an additional resource as it offered access to instructional videos, faculty and staff assignments and projects, an electronic version of the Critical Thinking Quick Guide, samples of how to use the Quick Guide specifically in various courses, and a separate guide for math.

To help faculty and staff infuse critical thinking skills and develop student dispositions, the QEP offered a variety of training. Training included the following opportunities.
- Three critical thinking modules within the online faculty development course
- Student learning center staff and tutor training
- Campus Professional Teaching & Learning Center (PTLC) events
- College Development Day break out sessions during the fall and spring semesters.

Three training sessions were offered to faculty and SLC tutoring staff specifically to help implement the use of the guide. Two faculty utilized the guide in their spring 2017 developmental math courses. For more information on the various support strategies implemented, see Table 9.

	Table 9: Results of Supporting Strategies - Critical Thinking Resources
	Desired outcomes: Inventory will increase annually on campus or online.
Year 1	Three resources available for check-out on each campus. One resource (*A Guide for Educators to Critical Thinking Competency Standards,* Paul & Elder, 2007) was distributed to all faculty, instructors, & some staff. Thirty-seven resources developed by faculty and staff to teach/assess critical thinking added to online repository (POLO). Survey respondents will agree that resources are useful. 11 of 16 users returned feedback. All agreed or strongly agreed that resources are useful for improving practice.
Year 2	Twenty-three additional resources added to each campus inventory. Three additional resources added to online repository (POLO). Eleven of 16 users returned feedback. All agreed or strongly agreed that resources are useful for improving practice.
Year 3	Quick Guides created to distribute to faculty and staff.
Year 4	2,115 Quick Guides distributed to faculty, instructors, & staff. 193 discipline-specific Quick Guide planning worksheets created and 14 added to Panther Online Learning Objects (POLO) repository. Two assessment videos created by faculty & added to QEP webpage & online repository (POLO). 48% (119) of survey respondents report using Quick Guide to support course instruction or services to students.
Year 5	Math Quick Guide created and distributed in Spring 2016 to two math instructional staff to pilot in course instruction. Guide used by twenty-four students in two developmental math courses. Student survey results indicated that 100% found the math guide helpful (n=13) with deciphering textbook math terminology and strategies for solving word problems.

Section IV: Reflection on What the Institution Learned

The QEP served as a five-year incubation period in which critical thinking was widely emphasized across college programs, departments, and classrooms. This first QEP has reminded the College that a robust emphasis on thinking critically is essential to the College's mission. The evidence suggests that learning outcomes improvement was dependent on the assessment instrument used, and in hindsight, the plan to go broadly across all academic programs may have been too ambitious to truly measure the impact. QEP strategies successfully garnered attention and involvement among many faculty and instructors, as professional development goals were largely met. The direct impact on student learning is not as clear.

Professional development. Through the various QEP professional development programs and events, and as the goals for participation were exceeded, the College confirmed that many faculty and staff had a strong desire to be better equipped to help students develop critical thinking skills. In final conversations with participants and discussion at QEP meetings, faculty and staff indicated a strong desire to continue these type of professional development programming when the QEP has concluded.

Assessment. The institution learned that to implement outcomes assessment that is effective and useful to faculty and students, better alignment is necessary. Specifically, there is a need to increase the number of measures that are embedded as course assignments and align to critical thinking outcomes. It is evident that while faculty are still engaged in their pursuit of teaching critical thinking, there is a need for a robust conversation regarding why student learning of critical thinking exhibits mixed results.

Career programs and educational support areas. The institution learned that it is not enough to simply ensure that all programs and educational support areas have outcomes related to critical thinking. The College accomplished this fairly early in the QEP, but student achievement on these outcomes was not always consistent or acceptable. It is necessary to have more frequent and more meaningful conversations about what students are and are not learning, and whether or not the assessment and outcomes are relevant to the expectations.

Critical Thinking Resources The institution observed that sometimes the best way to respond to the need for resources and tools is by developing an in-house publication designed by those faculty and staff who have first-hand knowledge of teaching and supporting critical thinking. The widespread application

of the Critical Thinking Quick Guide verified that through strategic distribution, opportunities for application, and professional development, well-designed resources can have a lasting impact.

Outcomes of QEP Implementation (Unanticipated or Unintended)
- Cross disciplinary and cross departmental commitment to critical thinking learning. Eighty-seven percent indicated, "*I am challenged to grow professionally in the PLG because it allows faculty and staff from different disciplines and departments to interact and support each other's professional growth.*"
- Students made modest strides in their acquisition of critical thinking knowledge and skills. Greater gains were expected.
- An overwhelming majority (82%) of faculty participated in the QEP's critical thinking training, far exceeding the 50% goal.
- Surpassing expectations, just over 530 non-instructional staff members participated in QEP workshops and events by the end of year five.
- Career program faculty fully embraced the integration of critical thinking into their curriculum as evidenced by a continual increase over the five years in the number of program learning outcomes that support critical thinking.
- It was more challenging than originally anticipated to successfully integrate critical thinking outcomes in some of the educational support areas that are more transactional in nature, such as admissions, financial aid, and registration.
- The campus resource centers, part of the original plan, were considerably underutilized. The Critical Thinking Quick Guide was developed as an alternative resource and was well received and widely disseminated.

Institutionalization of the QEP
The QEP as an initiative will not be sustained, nor has it been institutionalized in totality. However, Professional Learning Groups (PLGs) will continue to meet and focus on critical thinking, but the infrastructure is not in place to support them at a high level as was possible within the QEP. Critical thinking will continue to be an institutional learning outcome. It is fully integrated into the assessment and review process which is supported by the General Education and Assessment committee. The more than 360 program learning outcomes that support critical thinking remain in place, evidence that career faculty continue to embrace the efforts of the QEP and that critical thinking remains an integral part of the Palm Beach State College culture.