

Quality Enhancement Plan (QEP)
Academic Year Four 2013-2014 Report



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Introduction

The purpose of this report is to provide an update on QEP events which occurred at Fort Valley State University during the fourth academic year of the QEP’s implementation. The following areas will be covered:

- [Budget and other Updates](#)
- [Events](#)
- [Assessments](#)

BUDGET AND OTHER UPDATES

The QEP budget for 2012-2013 academic year was appropriated to be \$297, 358. However, in light of budgetary constraints, the Office of Academic Affairs, under the leadership of Interim Provost and Vice President for Academic Affairs Dr. Linda Noble made the request to the QEP Director for a reduced budget plan of 6.28%, resulting in a new 2012-'13 budget of \$278, 814. An additional request was made by the interim provost for further cuts for 2014-'15. The director offered to reduce the budget by \$18,000 resulting in a projected total of \$260,814. Yet another round of cuts by 6.28% was also requested for 2015-16, which could reduce the budget to \$244,435. The following chart summarizes areas where reductions were made.

ITEMS	2013-2014	2014-2015	2015-2016
Personnel Services	\$199, 858	\$199,858	\$199,858
Operating Supplies and Expenses	\$ 97, 500=> \$ 78,956	\$ 60,956	\$ 44,577
Total	\$297, 358=> \$278,814	\$260,814	\$244,435

Table 1

Personnel Services

Currently the director and a faculty position in the department of English are the only positions being paid from the QEP’s personnel budget.

Needs: The Clerical Assistant vacancy is expected to be filled starting July 1, 2014.

To address the need for a coordinator for the QEP reading and writing lab, it was decided that personnel currently serving as reading and writing lab director in the English department will include tutoring services to specifically address the needs of QEP classes. The other need relating to student tutors is being addressed by using tutors from the Office of Retention Services as tutors in QEP labs. These changes are expected to help improve results relating to the new graduation requirement. Students are expected to score in the top 56th percentile on the critical thinking section of College Assessment of Academic Proficiency (CAAP) Exam, or at least 70% on course-embedded assessments. These requirements mandate that the requisite support be in place to prepare and remediate students who need to take, or retake the CAAP exam.

The following (Table 2) is a summary of positions and their current status:

Positions Requested	Status
QEP Director	Filled
Clerical Assistant	Vacant – Expected to be filled July 1, 2014
Reading/ Writing Lab Coordinator	Filled by reassignment
Math Lab Coordinator	Vacant
Faculty Development Coordinator	Vacant
Student tutors	Acquired through Office of Retention Services

Table 2

EVENTS

There are two major events which are facilitated by the QEP/ ECT Office to highlight critical thinking campus-wide: Critical Thinking Day, and Research Day. Critical Thinking Day recognizes students who apply principles of the Enhancing Critical Thinking Model being used in English and Math classes (English 1102, Math 1111 & 1113), to reach exemplary levels of academic performance. Research Day is an effort to display students' critical thinking through inquiry-based learning, namely research involving data collection, analysis, and formal presentations through posters or breakout oral sessions. This is a campus-wide event that primarily focuses on student research. Research Day 2014, is being facilitated as a collaborative effort between the QEP Office and the Office of Undergraduate Research. Students get an opportunity to exhibit and discuss their research and analyses with the entire academic community. There are also judged on the quality of their research and presentations, and winners are selected by a panel of judges. Subcommittees from the QEP Steering Committee help to organize both Critical Thinking Day and Research Day.

ASSESSMENTS

There are two assessment approaches being used to evaluate students' critical thinking skills at FVSU, the first is the critical thinking subsection on the *Collegiate Assessment of Academic Proficiency (CAAP) Exam*, which is facilitated by the Office of Institutional Research. The second are *course-embedded evaluations* which are specific to the academic departments, based on the ECT reasoning strategies model, and developed by the faculty. These course embedded evaluations are administered toward the beginning (pretests) and end (posttests) of each semester, while the ECT model is being taught as part of the course content.

CAAP Exam

There are 32 items on the critical thinking subsection of the CAAP exam. As part of FVSU's Georgia Board of Regents core curriculum agreement, students must receive a scaled score in at least the top 56th percentile of those taking the exam. Starting in fall 2012 semester, it became a requirement for students to take the CAAP exam by the end of their sophomore year, when they have completed at least 45 semester credits. Students who did not score in the top 56th percentile are required to retake the critical thinking section **only**, until they do, as completion is noted on their transcript, or students can also meet the requirement if they score 70% or better on course

embedded posttests. As an additional measure, the course-embedded assessment is available in the Testing Office where students can retake the exam until the requisite score is achieved.

The QEP reading and writing lab is available to assist students with preparing for the CAAP Exam. Tutors are available to assist with class assignments, and provide individual assistance.

Fall 2013 CAAP Results

A total of 70 FVSU students were tested on the critical thinking section of the CAAP exam during fall 2013 semester. Of that number forty three students (61.4%) scored in the required top 56th percentile. The lowest scaled score was 49 and the highest was 72. The average scaled score was 58.96. These results were very encouraging as forty four FVSU students were honored for scoring above the national average on various areas of the CAAP exam. Thirty five (79.5%) of the 44 students were honored for scoring above the national average in critical thinking.

Spring 2014 CAAP Results

A total of 23 FVSU students were tested on the critical thinking section of the CAAP exam during spring 2014 semester. Of that number 13 students (56.5%) scored in the required top 56th percentile. The lowest scaled score was 48 and the highest was 71. The average scaled score was 59.04. These results were very encouraging as ten FVSU students were honored for scoring above the national average on various areas of the CAAP exam. Nine (90%) of the 10 students were honored for scoring above the national average in critical thinking.

When compared to previous years, CAAP results during fall 2013 and spring 2014 semester met projected outcomes.

Collegiate Assessment of Academic Proficiency (CAAP) FVSU Critical Thinking Summary										
Criteria	Fall 2010	Spr. 2011	Fall 2011	Spr. 2012	Fall 2012	Spr. 2013	Fall 2013	Spr. 2014	Fall 2014	Spr. 2015
No. of students tested	97	131	83	100	68	20	70	23	TBA	TBA
Scores Range	47 – 70	46-68	47 – 70	50-72	50 – 68	54-67	49-72	48-71		
Avg. Scaled Scores	58.29	57.15	57.9	58.3	58.54	60	58.96	59.04		
No. in top 56 th percent	No data	No data	No data	No data	33 (48.5%)	13 (65%)	43 (61.4%)	13 (56.5%)		
No. above nat'l avg.	No data	No data	No data	No data	28 (41%)	12 (60%)	35 (50%)	9 (39%)		
** Highest possible score = 72										

Table 3

What do these CAAP results mean for the impact of the QEP at FVSU?

When compared to previous years, CAAP results during fall 2013 and spring 2014 met projected outcomes. Average scores were strong. Since the QEP/ECT model is being implemented in every section of English 1102 and Math 1111 and 1113, it is fairly safe to assume that every student taking the CAAP exam encountered critical thinking pedagogies prior to taking the CAAP Exam. This means that CAAP results can provide meaningful information about whether or not the ECT model is effective in improving students' critical thinking skills. Consistently satisfactory results on the CAAP exam seem to suggest that the ECT model is making a difference in improving student performance in critical thinking.

COURSE EMBEDDED ASSESSMENTS

Course embedded pre and post assessments are also used to assess students' critical thinking skills in relation to the ECT reasoning strategies model that is implemented in each QEP/ECT course. The following is a list of the reasoning strategies implemented in each department:

English

- Inductive reasoning
- Deductive reasoning
- Comparative reasoning
- Abductive reasoning
- Analogical reasoning

Math

- Criteria reasoning
- Interpretive reasoning
- Deductive reasoning
- Analytical reasoning
- Adaptive reasoning
- Strategic reasoning

In English and Math, faculty who taught QEP/ ECT course sections used a standardized module for their respective discipline, which means they were likely to cover similar topics and give similar types of assignments. Once again, students are required to demonstrate proficiency in critical thinking before they can graduate. This means they must either score in the top 56th percentile on the CAAP exam, or score 70% or above on the posttest course embedded assessment. The following results are therefore a summary of what was found by examining course embedded pre and posttests.

Methodology

The central theme of the QEP at FVSU is enhancing critical thinking (ECT). In order to enhance critical thinking among students, intentional efforts must be made among faculty to enhance critical thinking pedagogy. Consequently, the QEP Director, Dr. Ian Toppin also serves as Director of the Center for Teaching and Learning (CTL), which gives him the opportunity to ensure that appropriate pedagogy training is implemented to guide the QEP process. A teaching and learning center has been established to provide adequate opportunities for faculty to engage in critical thinking training activities. The center hosted the following training sessions this semester:

- *Online New and Adjunct Faculty Orientation*
- *Strategies for Developing a well-organized pre/post tenure portfolio*
- *Strategies for Creating and Effectively Using Rubrics*
- *Strategies for Conducting Research Involving Human Subjects at FVSU*
- *Establishing a Research Agenda*
- *Understanding Student Accommodations, A Framework for Faculty in Higher Education*
- *Strategies for moderating and Reducing Faculty/ Student Disputes*
- *Research Mentoring*

Each training presenter received a certificate of appreciation for their service to the institution and their colleagues, and each attendee received a certificate of participation for attending.

English 1102, and Math 1111 and 1113, were selected because they are core classes. All FVSU students are required to take these courses, which increases the likelihood that all students will at some point encounter formal critical thinking instruction during their matriculation at FVSU, and especially before attempting the CAAP exam. Students were selected simply by being enrolled in the courses. There was no predetermined designation of which students would be in which courses. Students were asked to sign consent forms in order to be included in this study before taking the pretest at the beginning of the semester. The same tests were given as posttests at the end of the semester in order to make inferences about differences in scores and about the impact of ECT interventions during the semester. While all scores are reported to the Office of Institutional Research for record-keeping in response to the graduation requirement, only scores from students who took both the pre and posttests were used in this study, scores were discarded if the student took one test but not the other.

Questions

Results are based on the following questions:

1. What is the difference in pre and posttest average scores of students in QEP/ ECT English 1102 courses?

2. Are there overall statistically significant differences in pre and posttest scores in QEP/ ECT English 1102 courses at the .05 alpha level?
3. What is the difference in pre and posttest average scores of students in QEP/ ECT Math 1111 and 1113 courses?
4. Are there statistically significant differences in pre and posttest scores in QEP/ ECT Math 1111 and 1113 courses at the .05 alpha level?

Null Hypothesis ($H_0: \mu_1 < \mu_2$)

There is a statistically significant difference in pretest and posttest scores in QEP/ ECT English 1102, and QEP/ ECT Math 1111 and 1113 courses.

ENGLISH

Question 1: What is the difference in pre and posttest average scores of students in QEP/ ECT English 1102 courses?

Fall 2013

There were 115 students who took both the pre and post tests in QEP/ ECT English 1102. Their pretest average score was 16.30%, while their average posttest score was 51.81%. This result was somewhat troubling, as it seemed to indicate that students came to English 1102 classes with very low critical thinking skills, which means that even though their posttest average was also low it was a big improvement (35.5%) over where they started. However, overall average performance on both pre and posttests in English 1102 indicated that significant improvements are needed. The following table summarizes the results:

Test Type	QEP Eng-1102
Pretest	16.30%
Posttest	51.81%

Table 4

Spring 2014

There were 244 students who took both the pre and posttests in QEP/ ECT English 1102. Their pretest average score was 48.37%, while their average posttest score was 49.51%. This result was somewhat troubling, as posttests results only showed slight improvement over pretests results. Again, overall average performance on both pre and posttests in English 1102 indicated that significant improvements are needed. The following table summarizes the results:

Test Type	QEP Eng-1102
Pretest	48.37%
Posttest	49.51%

Table 5

Question 2: Are there overall statistically significant differences in pre and posttest scores in QEP/ ECT English 1102 courses at the .05 alpha level?

- *English 1102 – Fall 2013*

A t-test was done to compare pre and posttest scores in QEP/ ECT English 1102. Table 6 provides additional descriptive information. Degrees of freedom were 114. The results indicated that there was a statistically significant difference between students' pre and posttest scores at the .05 alpha level. Standard deviation results showed that scores were not very closely clustered to the mean. A test of Pearson's Correlation (.09) also indicated a very low correlation between pre and posttests scores, which in this case is a good thing since pretest scores on average were very low. The null hypothesis must be accepted.

Observations	115	
No. of scores less than 70%	114 (99%)	
Mean Scores	51.81 (posttest)	16.30 (pretest)
df	(n-1)=115-1=114	
Standard Deviation	19.62	
Calculate t value	0.96	
t-test P(T<=t) 1 tail	0.00	
t Critical one-tail	1.66	
t-test P(T<=t) 2 tail	0.00	
t Critical two-tail	1.96	
Pearson's Correlation	.09	

Table 6

- *English 1102 – Spring 2014*

A t-test was done to compare pre and posttest scores in QEP/ ECT English 1102. Table 7 provides additional descriptive information. Degrees of freedom were 347. The results indicated that the null hypothesis should be accepted since there was a statistically significant difference between students' pre and posttest scores (.03) at the .05 alpha level. Standard deviation results showed that scores were not very closely clustered to the mean. A test of Pearson's Correlation (.34) also indicated a very low correlation between pre and posttests scores (<.50).

Observations	348	
No. of scores less than 70%	285 (82%)	
Mean Scores	49.65 (posttest)	47..97 (pretest)
df	(n-1)=348-1=347	
Standard Deviation	11.46	
Calculate t value	0.03	
t-test P(T<=t) 1 tail	0.09	
t Critical one-tail	1.64	
t-test P(T<=t) 2 tail	0.18	
t Critical two-tail	1.96	

Pearson's Correlation	.34	
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Table 7

MATH

Question 3: What is the difference in pre and posttest average scores of students in QEP/ ECT Math 1111 and 1113 courses?

- *Fall 2013*

In Math 1111 there were 108 students who took both the pre and posttests. The average pretest score was 41.06% and the average posttest score was 48.98%, which was a slight improvement over average pretest scores. However overall averages in Math 1111 suggested that major improvements in performance are needed.

In Math 1113, there were 35 students who both took the pre and post tests. Their average pretest score was 29.66%; while the average posttest score was 43.43%. This was a moderate improvement (14%) over pretest scores. Once again, overall average performance on both pre and posttests indicated that significant improvements are needed in Math 1113. The following table summarizes average scores from QEP/ ECT Math classes:

Test Type	ECT Math-1111	ECTMath-1113
Pretest	41.06%	29.66%
Posttest	48.98%	43.43%

Table 8

- *Spring 2014*

In Math 1111 there were 91 students who took both the pre and posttests. The average pretest score was 29.09% and the average posttest score was 37.38%, which was a slight improvement over average pretest scores. However overall averages in Math 1111 suggested that major improvements in performance are needed.

In Math 1113, there were 21 students who both took the pre and posttests. Their average pretest score was 28.19%; while the average posttest score was 59.76%. This was a significant improvement over pretest scores. Yet once again, overall average performances on both pre and posttests indicated that improvements are needed in Math 1113. The following table summarizes average scores from QEP/ ECT Math classes:

Test Type	ECT Math-1111	ECTMath-1113
Pretest	29.09%	28.19%
Posttest	37.38%	59.76%

Table 9

Question 4: Are there statistically significant differences in pre and posttest scores in QEP/ ECT Math 1111 and 1113 courses at the .05 alpha level?

- *Fall 2013*

Math 1111

T values were calculated to compare pretest and posttest scores in QEP/ ECT Math 1111. The calculated *t* value as shown in table 7 is .71. At .025 alpha level (two tailed), the critical value was 1.96, and *P* = 0.00. The small *P* value is an indication that the intervention during the semester was effective. At the .05 ($\alpha = .05$, one tail) level, the critical *t*-value was 1.64, and once again *P* = 0.00. The fact that the calculated *t* value is less than the critical value, indicates that the null hypothesis should be accepted (There is a statistically significant difference in pretest and posttest scores in QEP/ ECT Math 1111 courses). Standard deviation result (13.75) was relatively moderate and indicated that scores were not scattered but rather clustered closely to the mean. A test of Pearson’s Correlation (.24) also indicated a very low correlation (<.50) between pre and posttests scores, which indicates that students’ pretest and posttest scores were not good predictors of each other. These results seemed to indicate that while there is statistical significance in improvement between pre and posttest scores, the scores were on average so low that the relationship between scores and student success was also low.

Observations	105	
No. of scores less than 70%	105 (100%)	
Mean Scores	48.98 (posttest)	41.06 (pretest)
df	(n-1)=105-1=104	
Standard Deviation	13.75	
Calculate t value	0.44	
t-test P(T<=t) 1 tail	0.00	
t Critical one-tail	1.64	
t-test P(T<=t) 2 tail	0.00	
t Critical two-tail	1.96	
Pearson’s Correlation	.24	

Table 10

Math 1113

T values were calculated to compare pretest and posttest scores in QEP/ ECT Math 1113. The calculated *t* value as shown in table 8 is .60. At .025 alpha level (two tailed), the critical value was 2.03, and *P* = 0.00. The small *P* value is an indication that the intervention during the semester was effective. At the .05 ($\alpha = .05$, one tail) level, the critical *t*-value was 1.69, and once again *P* = 0.00. The fact that the calculated *t* value is less than the critical value, indicates that the null hypothesis should be accepted (There is a statistically significant difference in pretest and posttest scores in QEP/ ECT Math 1113 courses). Standard deviation results (16.56) indicated that scores were scattered and not clustered closely to the mean. A test of Pearson’s Correlation (.22) also indicated a very low correlation (<.50) between pre and posttests scores. These results seemed to indicate that while there is statistical significance in improvement between pre and

posttest scores, the scores were on average were so low that the relationship between scores and student success was also low.

Observations	35	
No. of scores less than 70%	32 (91%)	
Mean Scores	43.43 (posttest)	29.66 (pretest)
df	(n-1)=35-1=34	
Standard Deviation	16.56	
Calculate t value	0.60	
t-test P(T<=t) 1 tail	0.00	
t Critical one-tail	1.69	
t-test P(T<=t) 2 tail	0.00	
t Critical two-tail	2.03	
Pearson's Correlation	.22	

Table 11

- *Spring 2014*

Math 1111

T values were calculated to compare pretest and posttest scores in QEP/ ECT Math 1111. The calculated *t* value as shown in table 12 is .40. At .025 alpha level (two tailed), the critical value was 1.99, and *P* = 0.00. The small *P* value is an indication that the intervention during the semester was effective. At the .05 ($\alpha = .05$, one tail) level, the critical t-value was 1.66, and once again *P* = 0.00. The fact that the calculated t value is less than the critical value, indicates that the null hypothesis should be accepted (There is a statistically significant difference in pretest and posttest scores in QEP/ ECT Math 1111 courses). Standard deviation result (14.54) was indicated that scores were scattered and not clustered closely to the mean. A test of Pearson's Correlation (.22) also indicated a very low correlation (<.50) between pre and posttests scores, which indicates that students' pretest and posttest scores were not good predictors of each other. These results seemed to indicate that scores were on average so low that the relationship between scores and student success was also low.

Observations	91	
No. of scores less than 70%	91 (100%)	
Mean Scores	37.38 (posttest)	29.09 (pretest)
df	(n-1)=91-1=90	
Standard Deviation	14.54	
Calculate t value	0.40	
t-test P(T<=t) 1 tail	0.00	
t Critical one-tail	1.66	
t-test P(T<=t) 2 tail	0.00	
t Critical two-tail	1.99	
Pearson's Correlation	.06	

Table 12

Math 1113

T values were calculated to compare pretest and posttest scores in QEP/ ECT Math 1113. The calculated t value as shown in table 13 is .79. At .025 alpha level (two tailed), the critical value was 2.08, and P = 0.00. The small P value is an indication that the intervention during the semester was effective. At the .05 ($\alpha = .05$, one tail) level, the critical t-value was 1.72, and once again P = 0.00. The fact that the calculated t value is less than the critical value, indicates that the null hypothesis should be accepted (There is a statistically significant difference in pretest and posttest scores in QEP/ ECT Math 1113 courses). Standard deviation results (26.07) indicated that scores were scattered and not clustered closely to the mean. A test of Pearson’s Correlation (.25) also indicated a very low correlation (<.50) between pre and posttests scores. These results seemed to indicate that while there is statistical significance in improvement between pre and posttest scores, there is no predictive relationship between pre and posttest scores and student success.

Observations	21	
No. of scores less than 70%	12 (57%)	
Mean Scores	59.76 (posttest)	28.19 (pretest)
df	(n-1)=21-1=20	
Standard Deviation	26.07	
Calculate t value	0.79	
t-test P(T<=t) 1 tail	0.00	
t Critical one-tail	1.72	
t-test P(T<=t) 2 tail	0.00	
t Critical two-tail	2.08	
Pearson’s Correlation	.25	

Table 13

Summary of Assessment Results

Student performances on the CAAP exam during fall 2013 semester were very encouraging. The goal was for 50% to score in the top 56th percentile; however, 61.4% scored in the top 56th percentile, and 50% of those who took the exam scored above the national average. This means that FVSU students performed better on average on the CAAP instrument than was projected.

In spring 2014 semester, again students performed well on the CAAP exam. They surpassed the FVSU goal of a 50% passing rate with 56.5% scoring in the top 56th percentile. Nine (39%) scored above the national average in critical thinking. Again, this means that FVSU students performed better on average on the CAAP instrument than was projected.

As it relates to course-embedded assessments, too many students are underperforming on these measures. Scores in fall 2013 and spring 2014, English 1102 did not showed significant gains between pre to posttests, but pretest scores were so low that gains on the posttests, while higher on average than pretest were lower than acceptable.

Average pretest scores in fall 2013 and spring 2014, were routinely low in both Math 1111 and 1113, which seemed to indicate that students came in with low critical thinking skills. However, posttest scores showed improvements in both classes, particularly Math 1113, albeit they did not reach high enough. This lead could lead to the suggestion that students' critical thinking aptitude in Math was generally below average.

Results seem to be suggesting that academic maturity may be a significant factor in improving students' critical thinking skills. This is borne out in the fact that course-embedded assessments, which students take during their freshman year, continue to show routinely low results in both English and Math. However, results on the CAAP exam, which students take following their sophomore year, provide a more positive outlook. However, the reverse was expected when this QEP study commenced. These results suggest that by the time students reach the end of their sophomore year when they take the CAAP, and when they should be more academically mature, their critical thinking skills are significant improved.