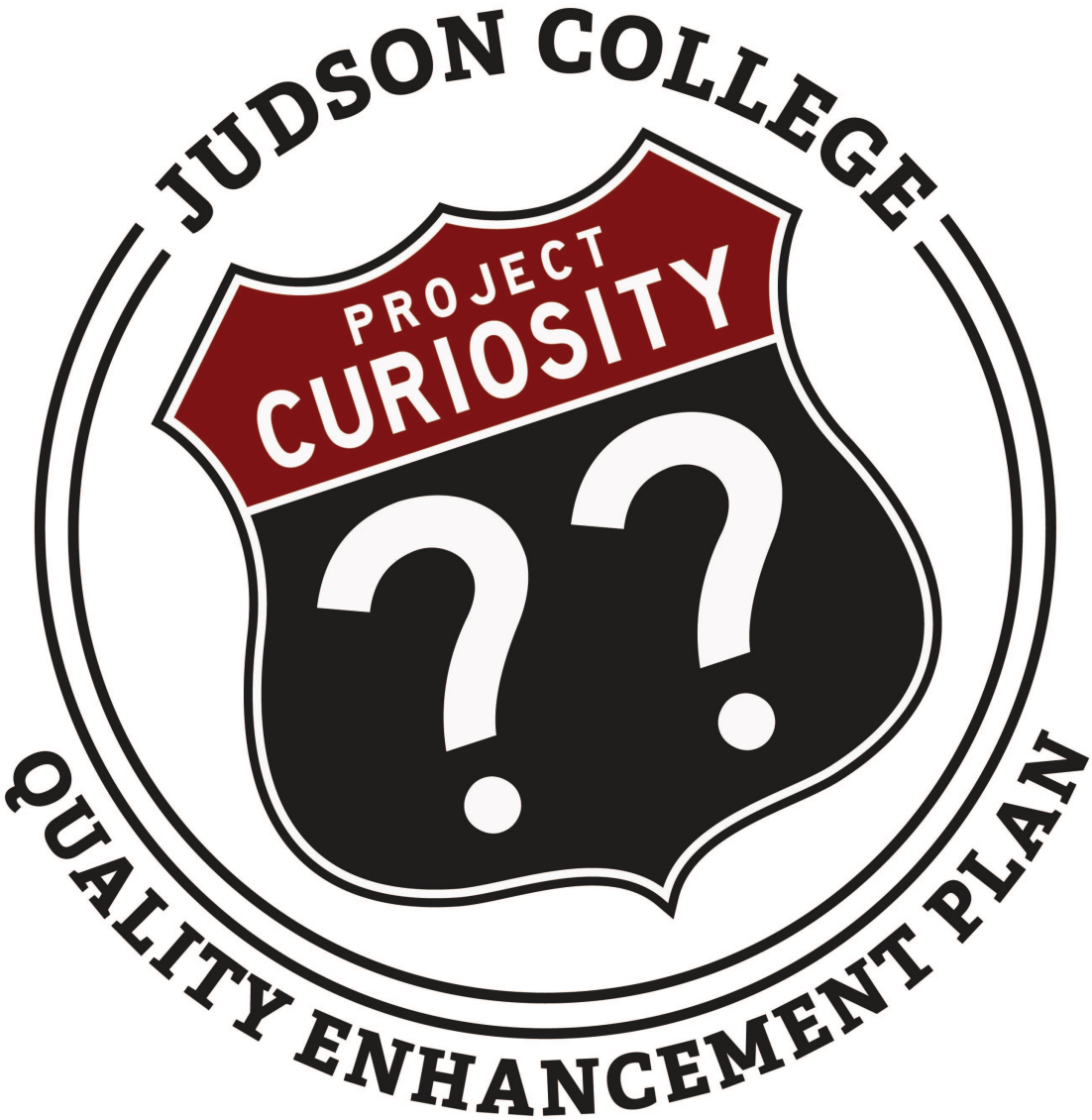

Judson College

On-Site Review: September 16-18, 2014

Dr. David Potts, President

Dr. Scott Bullard, SACSCOC Accreditation Liaison

Project Curiosity

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Section 1: Executive Summary

The Quality Enhancement Plan (QEP) of Judson College, entitled Project Curiosity, concentrates on strengthening critical thinking in students seeking a bachelor's degree by guiding them to become more self-regulated and self-motivated thinkers, catalyzed by their intellectual curiosity to seek more knowledge. Central to the QEP's design is how intellectual curiosity can intrinsically motivate students to persist and engage in higher-order thinking for a greater amount of time and sustain concentration. The abilities to reason well and analyze and evaluate large amounts of disparate information are vital critical thinking skills that students need to possess in today's technological and information-driven society.

The College identified the need in students to improve their critical thinking skills through analysis of student data from nationally standardized assessments and broad-based input from faculty, staff, students, and trustees over the past two years. Specifically, Judson College's QEP goals concentrate on the following components of critical thinking: developing both students' disposition toward intellectual curiosity that will drive them to ask pertinent questions, be open-minded, and be self-directed learners and students' skills at gathering and evaluating pertinent information in route to developing and articulating well-reasoned and supported conclusions or actions about an issue, problem, or idea. The College will also provide faculty members the training and resources needed to help them improve the critical thinking abilities of their students.

The College has appointed a faculty member to serve as QEP Director who will oversee with the assistance of the QEP Advisory Committee the implementation of the QEP, assessment efforts, and professional development of faculty.

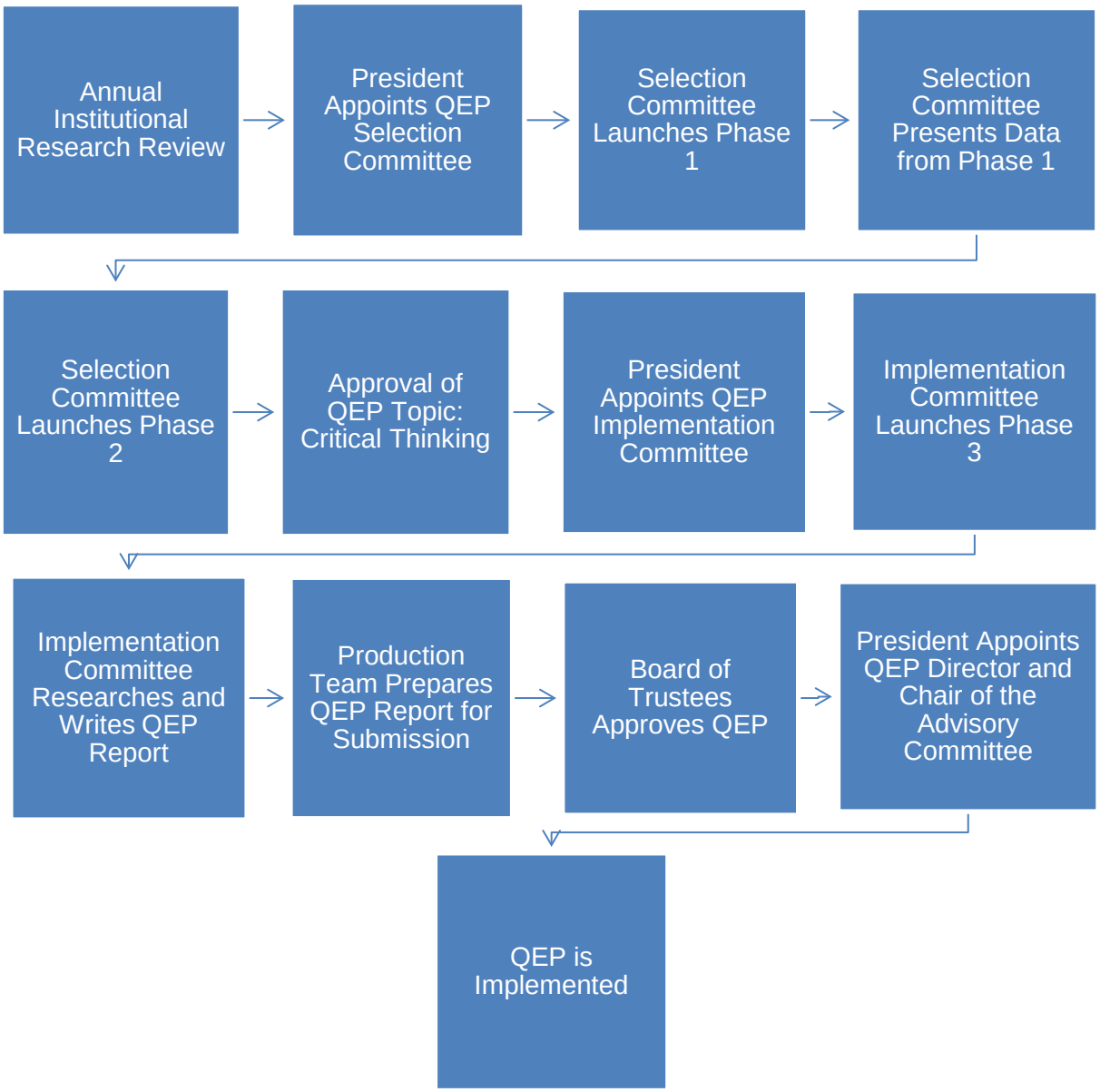
First-year students and transfer students, who are not exempted from the course, will be introduced to critical thinking in JUD 101, the College's Foundations for Success course for new students. Each department has identified courses that will be re-designed as Critical Thinking (CT) courses. Students will have to take 3 CT courses as a graduation requirement. In the new course, CRT 325: Research Methods for Critical Thinking, juniors and seniors will write a research paper on a topic that engages their intellectual curiosity and will also individually or in a small group organize a Critical Thinking (CT) Event for the College community of their own design and implementation. Each semester, students will share their work from CRT 325 and/or a CT class with poster presentations at the Critical Thinking Day assemblies. Students may apply for QEP grants to help them realize their visions for the events. Students will be required to create a critical thinking e-portfolio that highlights their work from CT courses, CRT 325, and the CT Event they designed and write in their last semester a comprehensive self-assessment of their growth as critical thinkers by evaluating all the work submitted to their e-portfolios.

Assessment of the QEP learning outcomes will include both national standardized tests and internally designed rubrics. Standardized assessments will include: the ETS Proficiency Profile, California Critical Thinking Dispositions Inventory, California Critical Thinking Skills Test, National Survey of Student Engagement, Standardized Assessment of Information Literacy Skills, and Curiosity Exploration Inventory. Tests will be given as both pre- and post-tests, and changes in scores will be used to evaluate the effectiveness of the QEP. In addition, internal rubrics and other course-embedded assessment instruments will be used to measure students' progress in improving in the areas of critical thinking identified in the QEP's student learning outcomes. All these measurements will inform continuous improvement of the QEP to maximize its impact.

Section 2: Process for Identification, Selection, and Development of QEP Topic

Judson College's Quality Enhancement Plan (QEP), Project Curiosity, is a product of faculty, staff, administration, and student collaboration over the past two years. The QEP Selection Committee examined data and brainstormed specific ideas from a wide range of stakeholders through focus group discussions, surveys, and voting opportunities. With a topic chosen, the QEP Implementation Committee was formed, which further reviewed Institutional Research data and academic literature to help narrow the topic into a workable QEP. The institutional process used to select the topic and to develop the QEP action plan is outlined in Figure 1.

Figure 1 Institutional Process: QEP Selection and Development Flow Chart



The QEP's focus on critical thinking emerged in part from the College's ongoing institutional planning efforts. Annual reviews of institutional research data led the QEP Selection Committee, the faculty, and the staff to consider the improvement of critical thinking as a possible focus of the QEP (Appendix A). The "Proficiency Profile," a test designed by the Educational Testing Service (ETS), is one test that is given each fall to students at Judson College who have completed at least 61 credit hours. Across several years, these data revealed a particular student weakness in the area of critical thinking as did data from the National Survey of Student Engagement (NSSE) when comparisons were made to Judson's Carnegie Class and to other women's colleges (specific data provided below). Moreover, the College's efforts over the last four years to improve departmental Institutional Effectiveness Reports by including student learning outcomes and departmental mission statements have led to focused discussions and identifications of the higher-order thinking skills developed within majors (Appendix B).

President Appoints QEP Selection Committee. Judson College began the QEP selection process with President David Potts's appointment of members to the QEP Selection Committee in May of 2012. The broad-based committee consisted of representatives from a diversity of academic disciplines and administrative and staff positions. The members were as follows:

Ex officio members:

- Dr. Sara Kiser, Vice President and Academic Dean (left College in August 2012)
- Dr. Scott Bullard, Interim Vice President and Academic Dean (moved from a standing committee member to an ex officio position in August 2012)

Co-chairs:

- Dr. Harold Arnold, Department Head and Associate Professor of Psychology, Chair of the Social Sciences Division
- Ms. Sandra Fowler, Vice President and Dean of Students (left College in July 2013)

Committee members:

- Ms. Andrea Abernathy, Librarian and Instructor of Library Resources
- Dr. Jonathan Brown, Department Head and Assistant Professor of Music
- Dr. Scott Bullard, Department Head and Assistant Professor of Religious Studies, Chair of the Humanities Division (became ex officio member of committee in August 2012)
- Ms. Angela Dennison, Assistant Professor of Social Work
- Dr. Chris Hokanson, Department Head and Assistant Professor of English, Interim Chair of the Humanities Division (joined committee in August 2012 to replace Dr. Scott Bullard)
- Dr. Ray Price, Department Head and Professor of Mathematics
- Ms. Mary Amelia Taylor, Marketing/Web Communications Specialist
- Dr. Joann Williams, Department Head and Associate Professor of Business
- Ms. Anna Wood, Head Volleyball and Tennis Coach (left position at College in December 2012)

Table 1 Timeline of Key Events in the QEP Topic Selection Process (2012-2013)

Timeframe	Key Event
May 9, 2012	QEP Selection Committee members appointed.
May 2012	Institutional data disseminated and reviewed.
June 2012	Initial discussions of possible QEP topics begin.
August 2012	Dr. Bullard was appointed Interim Vice President and Academic Dean. Dr. Hokanson joined the QEP Selection Committee.
August 29, 2012	Dr. Bullard encouraged the QEP Selection Committee to employ institutional data in selection process.
August 30, 2012	Direction from Dr. Arnold to consider the College's mission and broad-based campus involvement in the selection process.
September 2012	QEP members reexamined institutional data and all possible ideas.
September 11, 2012	Dr. Wiliams met with student focus group to record student ideas for the QEP topic.
October 10, 2012	Email with Google form survey soliciting idea for the QEP was sent to faculty.
October 19, 2012	The QEP Selection Committee shared with the faculty at Institutional Effectiveness Day all ideas submitted by students and faculty, openly discussed new and previously submitted ideas, and held a vote to rank topics.
October 29, 2012	Email with Google form survey soliciting idea for the QEP sent to students.
October 29, 2012	Dr. Hokanson and Ms. Fowler met with JUD 101 first-year students to solicit QEP ideas.
November 15, 2012	The QEP Selection Committee collaborated with Residence Life to solicit votes from students as they left residence halls for Thanksgiving Break.
December 6, 2012	The QEP Selection Committee examined data and responses from faculty and students and voted, sending the recommended QEP topic to the President, which was approved.
February 22, 2013	Faculty members were informed of the selection of critical thinking as the new QEP topic at the spring semester Institutional Effectiveness Day.
May 9, 2013	The Academic and Curriculum Subcommittee of the Board of Trustees approved the QEP topic selection.

The QEP Selection Committee first met in June 2012. Dr. Kiser briefed the committee on the core elements of the SACSCOC re-affirmation process. This overview included a discussion of the purpose of the QEP to improve student learning and/or the learning environment. The members of the committee were charged with researching potential topics for the QEP during the summer of 2012.

Phase 1: Identification of Potential QEP Topics. Throughout the summer of 2012, committee members posted articles and conducted discussions about possible QEP topics using Moodle, the College's web-based course management system. Topics that emerged from these discussions included: career development and intentional advising, health and fitness education and opportunities, and discussions of learning environment changes that might help improve retention rates at the College.

In an email sent on August 29, 2012, Dr. Bullard encouraged the committee to continue with the selection process, reminding the committee to employ institutional data in the selection of the QEP topic and to make sure data flow to narrative in the QEP report. In an email sent on August 30, 2012, Dr. Arnold reminded the committee to keep in mind the College's Mission Statement and the need for broad-based involvement in the topic selection process. Throughout September and October 2012, the committee sought to reexamine institutional data and seek input from faculty and students.

Student Participation: To begin the committee's concerted effort to have an official conversation with students regarding ideas for the new QEP, Dr. Williams, on September 11, 2012, facilitated a focus group comprised of students recommended by department heads for their capacity for candor and their care for Judson. An e-mail invitation explaining the importance of the QEP to improving student learning and/or the learning environment was sent to the sixteen students who were nominated. The students were asked to be prepared to discuss candidly the strengths and weaknesses of the College's academics and learning environments. Twelve of the sixteen nominated students attended the focus group. They represented sophomores to seniors and most academic disciplines either as a major or minor. During the discussion, a list of possible topics for the next QEP was developed. Students were then asked to discuss these potential QEP topics. At the end of the meeting, the students felt that career development, critical thinking, math skills, reading comprehension, and health and fitness were the most important topics bearing upon academics and the learning environments.

Because first-year students had not shared their ideas yet, on October 29, 2012, Dr. Hokanson and Ms. Fowler facilitated a discussion with first-year students during the lecture session of JUD 101, the College's Foundations for Success course required of first-year students. The students submitted the following ideas as possible topics for the QEP:

- Communication and Interview Skills
- Resume Writing/Career Help
- English/Grammar
- Health and Wellness
- Math
- Instructional Teaching Styles
- Chemistry
- History
- Debates
- Interactive Classroom/Fun (games like Jeopardy! in class to review materials)

Based on the feedback from the student focus groups, the committee sent out an email to all students on October 29, 2012, explaining the QEP and asking for ideas, which were to be submitted electronically through a Google Form (Appendix C). Unfortunately, very few responses were received.

It was determined that given the lack of student engagement with the October 29th survey, the committee needed more student feedback. The committee collaborated with Residence Life to require students to vote on career development/discovering one's purpose, critical reading and critical thinking skills, health and fitness (wellness), and mathematic skills improvement (Appendix D). The first three topics were included based on the faculty ranking from Institutional Effectiveness Day (see below). The last topic was included based on recommendations from the students, the Academic Dean, and the President of the College. A

flyer and color-coded stickers were distributed to each student, with clear instructions to vote before they left for the Thanksgiving Break. Banners were hung on each residence hall floor, listing the topics. The students selected critical reading and critical thinking skills and career development/discovering one's purpose as their top two choices. (Exact numbers are not available because the documentation was inadvertently destroyed by housekeeping prior to final recording of the data.)

Faculty Participation: To obtain faculty input on potential QEP topics, the members of the QEP Selection Committee held individual conversations with many of their colleagues. Formally, an email was sent to the faculty on October 10, 2012 explaining the QEP process and its purpose to improve student learning or the learning environment. Faculty members were requested to submit potential QEP topics electronically through a survey format (Appendix E). The following topics were identified:

- Critical Reading Knowledge
- Ethical Behavior
- Campus Continuity and Community/Family
- Leadership
- Mathematics
- Healthy Lifestyle
- Information Literacy
- Public Speaking
- Intellectual Curiosity
- Critical Thinking
- Career Development
- Study Abroad

QEP Selection Committee: From September through November 2012, the QEP Selection Committee regularly held meetings to discuss the topics that students and faculty had raised in connection to institutional data and previous institutional planning efforts. The institutional data that were reviewed included:

- Mission and Vision Statements of the College, which had been recently updated by the Strategic Planning Committee.
- Review of NSSE data, which are collected every other year and reflect students' opinions regarding their overall college experiences.
- Review of data from the ETS Proficiency Profile, which is administered every year to students who have completed 61 hours of coursework.

From these exchanges and subsequent discussions, the committee identified various topics and sorted them into the following categories:

- Reading Comprehension/Critical Thinking
- Promoting a Healthy Lifestyle
- Career Development/Vocational Calling
- Mathematical Knowledge and Competence
- Building Character and Integrity
- Information Literacy
- Study Abroad
- Public Speaking Knowledge and Competence

- First-Year Experience/Learning Communities (Campus Continuity and Community Family)

To further narrow down potential topics, the QEP Selection Committee approached faculty during the Institutional Effectiveness Day held on October 19, 2012 with the list of emerging QEP topic themes compiled primarily from student focus groups and the faculty survey. Dr. Arnold began the discussion with a review of the College's mission and the QEP guidelines, specifically stating the selection criteria for a QEP topic. These criteria included: (1) a topic supported by institutional data, (2) feasibility of implementation, and (3) acceptance by broad-based constituencies. The faculty members were then asked if they had any additional ideas for the QEP. In all, there were fifteen ideas that were discussed at length. After this discussion, the faculty combined several similar ideas, leaving eleven to be considered. Faculty members were invited to vote and given three color-coded stickers: green indicating one's first choice; yellow indicating one's second choice, and red indicating an idea that did not match some or all of the discussed criteria. The results of this vote are found in Table 2.

Table 2 Institutional Effectiveness Day – Faculty Vote

QEP IDEA	1st Choice	2nd Choice	Did not match
Reading Comprehension and Critical Thinking	12	2	1
Leadership Knowledge and Competence with a Servant's Heart	0	1	0
Career Development with Vocational Calling—Employing Interpersonal Communication and Electronic Portfolios	3	10	0
Advanced Learning Skills and Techniques	0	1	0
Building Character and Integrity (Ethical Behavior)	0	2	1
Healthy Lifestyle	7	7	2
Public Speaking: Knowledge and Competence	0	1	1
First-year Experience/ Learning Communities and Campus Continuity and Community Family	0	1	0
Mathematical Knowledge and Competence	1	0	10
Informational Literacy	1	0	1
Study Abroad	1	0	0

Following Institutional Effectiveness Day, the committee met to discuss the results and begin refining a potential learning enhancement project.

Phase 2: Selection of the QEP Topic. On December 6, 2012, the QEP Selection Committee met to discuss the results of faculty and student rankings of QEP topics. It was noted that critical thinking was at the top for both groups. Further discussion was held regarding the criteria needed for selection of QEP, specifically, (1) congruence with the strategic mission and vision of Judson College, (2) review of institutional data, (3) something that could be broadly implemented across the bachelor's degree programs and involved broad-based participation of stakeholders, and (4) the availability of resources to implement the QEP.

Congruence with the strategic mission and vision: The Judson College Mission Statement reads:

> Judson College, a private, undergraduate institution committed to academic excellence in the arts, sciences, and professional studies, offers distinguished student-centered academic programs in a residential, single-gender setting and through distance education to both genders. As a caring, collegiate community related to the Alabama Baptist Convention, Judson College is dedicated to maturing its students into well-adjusted and productive citizens through the transmission of knowledge, the refinement of intellect, the nurturing of faith, the promotion of service, and the development of character. Resulting from these efforts, Judson graduates will:
>
> - Be knowledgeable in their academic area and be informed and contributing members of their communities;
> - Think critically and communicate effectively;
> - Be persons of enduring faith and character who are eager to serve and to lead.

The College's Mission Statement intends for all Judson students to "be informed" and "think critically and communicate effectively." The College's new QEP will further assist the College in achieving its mission to graduate astute thinkers and communicators who will be ready to serve and lead.

Review of institutional data. Judson College regularly gathers and examines summative assessment data from the National Survey of Student Engagement (NSSE) and the Educational Testing Service (ETS) Proficiency Profile. The NSSE data indicate freshmen and seniors' self-reported perceptions of exposure to critical thinking activities and exercises in their classes and coursework at Judson. The ETS Proficiency Profile (combined 2007, 2009, 2010) reported that 72% of Judson test takers were not proficient in critical thinking. While these tests are not solely designed to evaluate critical thinking dispositions and skills, the data revealed that critical thinking is an area of student learning needing to be improved at Judson College.

Moreover, the QEP Selection Committee's analysis of students' self-reported data about their experiences at Judson College from the 2009, 2011, and 2013 National Survey of Student Engagement greatly influenced the committee's decision to focus on critical thinking for the next QEP.

Provided below are tables of data from the NSSE reflecting student responses to specific questions assessing their application of critical thinking skills in their Judson College courses. When the NSSE was redesigned in 2013, some questions were posed in slightly different ways. Below each table is printed the 2009/2011 question, followed by its 2013, except for Table 12, which reflects a category first provided to Judson College in 2013—higher-order thinking.

Key: Fr.=Freshmen and Sen.=Seniors
*= statistically significant results at the .05 level
**= statistically significant results at the .01 level
***= statistically significant results at the .001 level

Table 3 NSSE Question 1a (2009, 2011) and Question 1a (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Effect Size	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	3.00	3.12	-.14	3.09	-.11	2.84	.19
2009	Sen.	3.48	3.42	.08	3.35	.16	3.11*	.43
2011	Fr.	2.99	3.05	-.07	3.11	-.15	2.81	.20
2011	Sen.	2.83	3.38**	-.70	3.35**	-.67	3.10	-.31
2013	Fr.	2.9	3.2*	-.37	3.1	-.29	2.9	-.02
2013	Sen.	3.5	3.4	.14	3.4	.21	3.2*	.43

Academic and Intellectual Experiences: Asked questions in class or contributed to class discussion (2009, 2011)
During the current school year, about how often have you done the following?: Asked questions or contributed to course discussion in other ways (2013)

Asking questions in class and actively contributing to class discussion are indicators that a student is moving toward or has achieved higher-level critical thinking (Savage, 1998; Seker and Komur, 2008; Jirout & Klahr, 2011). The NSSE data revealed that freshmen self-reported that they were less likely to ask questions in class or contribute to class discussion when compared to their peers at Women's Colleges and Carnegie Class institutions. In 2013, the effect size (the mean difference divided by the pooled standard deviation) between Judson freshmen students and their peers at Women's Colleges was statistically significant at the .05 level, with a moderate-level of negative effect (-.37). In 2011, the self-reported data from Judson College seniors when compared to their peers at Women's Colleges and Carnegie Class institutions reached a statistically significant level of difference at the $p<.01$ level with a high level of negative effect (-.70 and -.67).

Table 4 NSSE Question 1e (2009, 2011) and NSSE Question 2c (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	2.84	3.04	-.24	2.91	-.09	2.80	.04
2009	Sen.	2.76	3.18*	-.51	2.98	-.25	2.83	-.08
2011	Fr.	2.76	3.06**	-.35	2.93	-.20	2.79	-.03
2011	Sen.	2.94	3.21	-.32	2.99	-.06	2.83	.11
2013	Fr.	2.5	2.9	-.42	2.7	-.28	2.6	-.08
2013	Sen.	3.2	3.0	.15	2.9	.30	2.77**	.49

Academic and Intellectual Experiences: Included diverse perspectives (different races, religions, genders, political beliefs, etc.) in class or writing assignments (2009, 2011)
During the current school year, about how often have you done the following?: Included diverse perspectives (political, religious, racial/ethnic, gender, etc.) in course discussions or assignments (2013)

Paul and Elder (2008) included openness to engaging with diverse thoughts that challenge one's preconceived notions as an important element of critical thinking. The Judson College data revealed that in several years the level of difference on this element had reached statistically significant levels of difference with moderate to high negative effect. The 2009 data reported a difference between seniors at Judson and other Women's Colleges that reached the .05 level of statistical significance (effect size=-.35), while freshmen in 2011 reported a statistically significance difference from Women's Colleges at the .01 level (effect size=-.51). The most recent data revealed that Judson College seniors showed no statistically significant difference from the Women's Colleges and Carnegie Class students; however, when compared with NSSE data, Judson College seniors in 2013 self-reported as more likely to have engaged with diverse perspectives in course discussion and assignments than their counterparts across the nation ($p<.01$ with a moderate level of effect size [effect size=.49]).

Table 5 NSSE Question 1i (2009, 2011) and NSSE Questions 2a (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	2.51	2.75*	-.29	2.72	-.26	2.63	-.14
2009	Sen.	2.76	3.12*	-.44	3.04	-.36	2.95	-.23
2011	Fr	2.49	2.81**	-.37	2.78**	-.35	2.65	-.19
2011	Sen.	2.93	3.14	-.26	3.09	-.20	2.98	-.05
2013	Fr.	2.4	2.8*	-.45	2.7*	-.41	2.7	-.33
2013	Sen.	3.4	3.2	.29	3.1	.39	3.0**	.49

Academic and Intellectual Experiences: Put together ideas or concepts from different courses when completing assignments or during class discussion (2009, 2011)
During the current school year, about how often have you done the following?: Combined ideas from different courses when completing assignments (2013)

The ability to synthesize information is another marker of critical thinking (Paul & Elder, 2008). Table 5 displays that when compared to freshmen at Women's Colleges, Judson College freshmen in 2009, 2011, and 2013 self-reported a statistically significant difference ranging from moderate to high negative effect in being asked to engage in synthesis of ideas in their class assignments and discussions (2009, p<.05; 2011, p<.01; 2013, p<.01). In 2011 and 2013, these results were similar to the Carnegie Class comparison, too. The most recent data for Judson seniors from 2011 and 2013 revealed no statistically significant difference in their reported scores when compared to their peers at Women's Colleges and the Carnegie Class; however, when compared to the composite NSSE data from 2013, Judson seniors reported having been asked to synthesize course content at a p<.01 level of statistical significance at a high positive effect level.

Table 6 NSSE Question 2c (2009, 2011) and Question 4e (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	2.89	3.07	-.23	3.10	-.26	2.93	-.05
2009	Sen.	3.00	3.29	-.38	3.29	-.37	3.08	-.10
2011	Fr	2.84	3.17***	-.41	3.15***	-.39	2.95	-.14
2011	Sen.	3.31	3.38	-.10	3.33	-.02	3.11	.24
2013	Fr.	2.7	3.1*	-.48	3.0	-.36	2.9	-.21
2013	Sen.	3.4	3.2	.25	3.1	.33	3.0*	.46

Mental Activities: Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships (2009, 2011)
During the current school year, how much has your coursework emphasized the following?: Forming a new idea or understanding from various pieces of information (2013)

The data in Table 6 can be used to assess students' perceptions of being asked to perform synthesis to form a new interpretation or idea. Of note is the data about the 2011 Judson College freshmen who self-reported on the element at a statistically significant (p<.001, two-tailed) level, with a moderately high negative effect size, compared to freshmen at Women's Colleges and Carnegie Class institutions.

Table 7 NSSE Question 2b (2009, 2011) and Question 4c (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	3.09	3.28	-.26	3.30	-.29	3.14	-.06
2009	Sen.	3.12	3.43*	-.45	3.43*	-.45	3.28	-.22
2011	Fr	3.12	3.34*	-.29	3.36**	-.33	3.17	-.06
2011	Sen.	3.37	3.50	-.20	3.46	-.14	3.31	.08
2013	Fr.	2.8	3.2*	-.52	3.1*	-.41	3.0	-.25
2013	Sen.	3.3	3.2	.10	3.1	.20	2.0	.35

Mental Activities: Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth or considering its components (2009, 2011)
During the current school year, how much has your coursework emphasized the following?: Analyzing an idea, experience, or line of reasoning in depth by examining its parts (2013)

Analyzing a topic by breaking it up into component parts is another feature of critical thinking (Paul and Elder, 2008). Until the 2013 seniors' self-report, Judson College students (both freshmen and seniors) reported scores with negative effect size when compared to students at Women's Colleges and the Carnegie Class. In various years, the level of negative effect size reached the $p<.05$ level of statistical significance, and a $p<.01$ level of statistical significance with moderate negative effect was reported in 2011 when comparing Judson freshmen to Carnegie Class freshmen.

Tables 8, 9, 10 and 11 also record data that reflect students' self-reporting on critical thinking. For many of the elements being measured, negative effect sizes existed when comparing Judson freshmen and seniors to their peers at Women's College, the Carnegie Class, and NSSE institutions; however, only occasionally did the differences achieve statistical significance.

Table 8 NSSE Question 2d (2009, 2011) and Question 4d (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	2.81	3.00	-.23	3.03	-.27	2.93	-.14
2009	Sen.	2.92	3.21	-.35	3.16	-.29	3.03	-.13
2011	Fr	2.99	3.11	-.15	3.07	-.11	2.95	.05
2011	Sen.	3.32	3.26	.07	3..2	.15	3.05*	.31
2013	Fr.	3.0	3.1	-.21	3.0	-.11	2.9	.04
2013	Sen.	3.3	3.2	.10	3.1	.20	3.0	.35

Mental Activities: Making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions. (2009, 2011)
During the current school year, how much has your coursework emphasized the following?: Evaluating a point of view, decision, or information source (2013)

Table 9 NSSE Question 2e (2009, 2011) and Question 4b (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	2.96	3.15	-.23	3.15	-.23	3.08	-.13
2009	Sen.	3.12	3.38	-.34	3.31	-.24	3.24	-.15
2011	Fr	3.08	3.17	-.11	3.17	-.10	3.09	-.01
2011	Sen.	3.44	3.43	.01	3.33	3.14	3.25	.23
2013	Fr.	2.9	3.1	-.35	3.0	-.21	3.0	-.15
2013	Sen.	3.3	3.3	-.03	3.2	.16	3.2	.17

Mental Activities: Applying theories or concepts to practical problems or in new situation (2009, 2011)
During the current school year, how much has your coursework emphasized the following?: Applying facts, theories, or methods to practical problems or new situations (2013)

Table 10 NSSE Question 11e (2009, 2011) and Question 17c (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	3.51	3.33	.24	3.38	.17	3.23**	.37
2009	Sen.	3.52	3.52	.00	3.57	-.08	3.36	.21
2011	Fr.	3.40	3.42	-.03	3.43	-.04	3.25	.20
2011	Sen.	3.62	3.59	.05	3.57	.07	3.37	.32
2013	Fr.	3.31	3.2	-.17	3.2	-.15	3.1	-.02
2013	Sen.	3.4	3.5	-.16	3.5	-.13	3.3	.12

Educational and Personal Growth: Thinking critically and analytically (2009, 2011)
How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?: Thinking critically and analytically (2013)

Table 11 NSSE Question 11m (2009, 2011) and Question 17i (2013)

Year	Class	Judson College Mean	Women's Colleges Mean	Women's Colleges Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2009	Fr.	2.71	2.76	-.06	2.78	-.08	2.72	-.01
2009	Sen.	2.72	2.85	-.13	2.85	-.15	2.80	-.09
2011	Fr.	2.90	2.89	.01	2.82	.09	2.73	.19
2011	Sen.	3.06	2.94	.13	2.91	.17	2.84	.24
2013	Fr.	2.8	2.8	.05	2.7	.14	2.6	.19
2013	Sen.	2.7	3.0	-.37	2.9	-.21	2.8	-.16

Educational and Personal Growth: Solving complex real-world problems (2009, 2011)
How much has your experience at this institution contributed to your knowledge, skills, and personal development in the following areas?: Solving complex real-world problems (2013)

The assessment questions recorded in Tables 8, 9, 10, and 11 address attributes of the highest level of critical thinking: making informed and analytical judgments about information, arguments, methods, and the soundness of conclusions and applying theories and concepts to new situations or solutions to real world problems (Ennis, 1985; Paul & Elder, 2008; Facione, 2013). Although the data in Tables 8, 9, 10, and 11 provide very little statistically significant information, the QEP Selection Committee believed that concerted efforts by the College through a QEP focused on critical thinking would have a strong positive and statistically significant effect in future assessments. For the most part, Judson College has performed above the NSSE data's mean, sometimes with statistical significance, and we believe that our students can achieve gains when compared to the other two comparison groups.

Table 12 Higher-Order Learning

Year	Class	Judson College Mean	Women's Colleges Mean	Women's College Effect Size	Carnegie Class Mean	Carnegie Class Size Effect	NSSE 2009 Mean	NSSE Effect Size
2013	Fr.	36.1	42.8*	-.51	41.0	-.38	39.1	-.22
2013	Sen.	47.4	45.2	.17	43.3	.32	41.3*	.43

According to the 2013 NSSE results, Judson freshmen's average in the Higher-Order Learning engagement indicator was lower when compared to freshmen at participating Women's Colleges at a statistically significant level ($p<.05$) with an effect size of at -.51. By senior year, the differences were no longer statistically significant. Judson College seniors, when compared to overall NSSE results, averaged significantly higher ($p<.05$) with an effect size of .43.

The ETS Proficiency Profile provides a useful assessment of students' abilities to integrate critical thinking into reading and writing. For example, the basic writing score, Writing 1, reflects basic skill with grammar and transitions. Writing 2 measures proficiency with more complicated sentence constructions.

The ETS Proficiency Profile scores are cumulative in that a student must show proficiency at the lower level skills in order to be able to "pass" to the higher ranking. The Judson data indicated a marked deficiency in the lower-level skills required to proceed on to the "critical thinking" level in reading. Judson's data reflect the skill level of students who had reached junior status (at least 61 credit hours).

According to the ETS Proficiency Profile, students who were proficient in reading at the Critical Thinking Level should be able to:

- Evaluate competing causal explanations
- Evaluate hypotheses for consistency with known facts
- Determine the relevance of information for evaluating an argument or conclusion
- Determine whether an artistic interpretation is supported by evidence contained in a work
- Recognize the salient features or themes in a work of art
- Evaluate the appropriateness of procedures for investigating a question of causation
- Evaluate data for consistency with known facts, hypotheses, or method.

Table 13 Combined 2007, 2009, 2010 ETS Proficiency Profile

Skill Dimension	Proficient (%)	Marginal (5)	Not Proficient (%)
Reading, Level 1	73	16	11
Reading, Level 2	43	21	36
Critical Thinking	10	18	72
Writing, Level 1	70	20	10
Writing, Level 2	28	36	35
Writing, Level 3	11	32	57

Only 10% of Judson students who took the ETS Proficiency Profile in 2007, 2009, and 2010 (n=142) were proficient in critical thinking.

Table 14 2011 ETS Proficiency Profile

Skill Dimension	Proficient	Marginal	Not Proficient
Reading, Level 1	80	11	8
Reading, Level 2	56	21	23
Critical Thinking	15	21	63
Writing, Level 1	72	23	6
Writing, Level 2	23	41	37
Writing, Level 3	13	24	63

In 2011, only 15% of Judson students who took the exam (n=72) were proficient in critical thinking.

These data from the NSSE and the ETS Proficiency Profile made critical thinking stand out to the committee as an area of student learning at Judson College that needs to be greatly improved.

Broad-based implementation across bachelor's degree programs and broad-based involvement of stakeholders. The committee felt that a QEP focusing on critical thinking skills would allow the College to address needs of virtually all students in every discipline and involve faculty participation from all disciplines and widespread professional staff involvement from the Student Services, Academic Support, and Distance Learning divisions of the College as well as the Registrar's Office. The topic would also encourage cross-disciplinary interactions and knowledge creation—key elements of critical thinking itself.

Availability of Institutional Resources. In reviewing the financial and physical resource needs for a QEP which focuses on critical thinking, it was determined that the allocation of resources for the previous QEP could be easily reallocated to the new program with a few additions. See budget in Section 8 for more details.

Following the discussion, the committee voted critical thinking as the new QEP topic. This choice was relayed to the President, who approved it. The committee informed the faculty of the QEP topic selection during Institutional Effectiveness Day on February 22, 2013. The QEP topic was also sent to the Board of Trustees for its review and approval. On May 9, 2013, the Academics and Curriculum Subcommittee of the Board of Trustees approved critical thinking as the new QEP topic.

Phase 3: Development of the QEP. In mid-September 2013, Dr. Potts created the QEP Implementation Committee; many members had also served on the QEP Selection Committee in 2012-2013. The broad-based QEP Implementation Committee consisted of faculty members, professional and administrative staff, and students representing different areas of the College.

Ex officio member:
Dr. Scott Bullard, Vice President and Academic Dean

Chair:
Dr. Chris Hokanson, Department Head and Assistant Professor of English, Chair of the Humanities Division

Committee members:
Ms. Andrea Abernathy, Assistant Professor of Library Resources
Ms. Angela Dennison, Assistant Professor of Social Work
Dr. Eric Gilchrest, Department Head and Assistant Professor of Religious Studies
Dr. Robert Metty, Assistant Professor of Education
Dr. Ray Price, Department Head and Professor of Mathematics
Ms. Mary Amelia Taylor, Marketing/Web Communications Specialist
Dr. Joann Williams, Department Head and Associate Professor of Business

Two student representatives were chosen to join this committee during the Spring 2014 semester: Amanda Creel, Class of 2015 (Social Work) and Laura Thompson, Class of 2015 (Chemistry).

Fall 2013: The QEP Implementation Committee met frequently to discuss the following activities:

- Sample critical thinking QEPs from other colleges and universities, which were posted on Moodle, the College's course management system, were reviewed by all members of the committee.
- Members of the committee were assigned different areas of critical thinking to research and post articles and summaries on Moodle. These topics included but were not limited to: Critical Thinking (Dispositions and Skills), Critical Thinking Pedagogy/Best Practices, Critical Thinking Assessment, and Faculty Buy-In.
- On October 9, 2013, the QEP Implementation Committee attended the webinar, Assessing Writing and Critical Thinking Skills, led by Dr. Trudy W. Banta from Indiana University-Purdue University Indianapolis.
- In November 2013, a rough outline of the QEP Report was developed to guide further discussions.

The committee began envisioning differing aspects of critical thinking and, as a result, began narrowing the focus to dispositions and skills related to intellectual curiosity because the committee determined that student self-motivation and self-directedness (dispositions closely aligned with curiosity) were essential attributes needed for students to persist in engaging in critical thinking for a sustain amount of time. Towards the end of the fall semester, the committee began to draft specific student and environmental learning outcomes.

Spring 2014: The following subcommittees were developed. The QEP Implementation Design Committee focused on identifying critical thinking activities that could be implemented within classes, academic centers, and student services. The QEP Learning Outcomes Assessment Committee focused on identifying nationally standardized assessment tools that could be

adopted as well as internal assessment tools that could be developed. The Selection Writing Committee was charged with writing Section 2 (Phase 1 and 2) of this report. All members continued to work on the development of student learning outcomes and continued to research for the literature review. In order to learn more about project-based learning, Dr. Metty and Ms. Abernathy traveled to Winterboro High School in Talladega, AL on April 2, 2014 to observe a combined English and history class. Through a panel and small group discussions, students shared their reflections about project-based learning directly with Dr. Metty and Ms. Abernathy who reported their findings to the committee.

The literature review research and discussions became the foundation for drafting student and environmental learning outcomes for the QEP. The outcomes were discussed and refined over multiple meetings. During the development phase, the proposed outcomes were continually assessed based on the mission of the College, the institutional data reviewed during the topic selection process, the nationally standardized assessment tools available for adoption, and the ability to adapt or develop in-house assessment tools. All members of the committee unanimously approved the student and environmental learning outcomes. A detailed discussion of these learning outcomes is presented in Section 4.

Summer 2014: The student and environmental learning outcomes were then presented to the faculty at the faculty meeting on May 22, 2014 and via e-mail (Appendix F). Faculty were asked to provide feedback concerning these outcomes, to identify classes that could be potentially designated as critical thinking courses, and to describe the ideal learning environment that would promote critical thinking at Judson College. This information was incorporated into the design of the QEP.

Members of the committee were also assigned to write different sections of the QEP report (e.g. literature review, implementation plan, assessment plan, etc.), which represents broad-based involvement in the QEP process.

Project Curiosity was chosen as the title of the QEP, and the production team edited the report and prepared it for submission.

In July 2014, Dr. David Potts appointed Dr. Robert Metty as the QEP Director and Dr. Joann Williams as chair of the QEP Advisory Committee.

On July 24, 2014, the Executive Committee of the Board of Trustees approved Project Curiosity as the QEP for Judson College (Appendix G).

Section 3: Literature Review and Best Practices

The following literature review summarizes research that informed Judson College QEP's definition of critical thinking, the development of the QEP's goals and student and environmental learning outcomes (Section 4), the QEP's Implementation Plan (Section 5), and the QEP's Assessment Plan (Section 10).

What is Critical Thinking?

The Difficulty in Defining Critical Thinking: Today's educational systems at all levels, particularly undergraduate education, seem to be concerned with the concept of critical thinking. As one group of researchers noted, " . . . higher education, in particular, is now placing an overwhelming emphasis upon exposing matriculates to the concept of critical thinking and

challenging them to develop those skills and dispositions necessary for improving the quality of their lives as individuals and members of the global community" (Crenshaw, Hale, & Harper, 2011, p. 13). Yet, notwithstanding this attention, it seems that ambiguity surrounds critical thinking despite politicians, employers, and academicians appealing to critical thinking as foundational to the goal of post-secondary education (Crenshaw et al., 2011; Facione & Facione, 2007; Willingham, 2007). Crenshaw et al. (2011) noted that "critical thinking suffers from a lack of conceptual clarity" (p. 45), and Paul (2005) called critical thinking a "vague notion" to many faculty members (p. 27).

Much of the ambiguity centers on whether critical thinking is indeed skill-based, dispositional, a combination of both, a process, or something altogether different (Behar-Horenstein & Niu, 2011; Facione, 2013; Paul, 2005; Krupat et al., 2011; Mulnix 2010; Minter, 2010; Papastephanou & Angeli, 2007; Pithers, 2000). A further complication is that many scholars argue over whether critical thinking is discipline-specific. Crenshaw et al. (2011) determined:

> There are as many definitions of critical thinking as there are publications on the topic, yet . . . when examined closely, common principles are present [that] form a base-line conception of critical thinking that works within and moves across disciplinary boundaries. In this sense, a cross-disciplinary interpretation of critical-thinking is most consistent with the history of the concept and the ideals of a liberal education. (p. 14)

On the other hand, other researchers have contended that demonstrations of effective thinking in one domain might not transfer across the spectrum of academic and/or professional pursuits (Leamnson, 1999; Willingham, 2007).

Critical Thinking as a Transferable Skill across Disciplines: By placing critical thinking at the heart of the process of imparting discipline-specific knowledge, Paul and Elder (2008) asserted critical thinking is not a concept divorced from the context of learning discipline-specific knowledge. Rather this kind of thinking lies at the center of applying that foundational knowledge in practical ways. Paul (2005) referred to this synergy between content and knowledge as " . . . the means for knowledge to become a permanent acquisition in the mind" (p. 31). He also took into consideration the need for discipline-specific knowledge to be imparted through teaching for "acquisition of substantive knowledge . . . found in the set of fundamental concepts and principles that lie at the heart of understanding everything in a discipline or subject" (pp. 30-31). Paul (2005) noted that a discipline is not "a collection of isolated and assorted facts despite the fact that it is often taught as such" (p. 29). Mulnix (2010) argued that having the ability to "grasp evidential relations is exactly the sort of skill that is transferrable across domains" (p. 470). Noting that critical thinking is applicable to any discipline, Mulnix (2010) quoted Scriven and Paul (2008):

> Critical thinking is that mode of thinking—about any subject, content, or problem—in which the thinker improves the quality of his or her thinking by skillfully analyzing, assessing, and reconstructing it. Critical thinking is 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, as well as a commitment to overcome our native egocentrism and sociocentrism. (p. 466)

A commitment to infusing critical thinking across disciplines within a liberal arts environment presents Judson College with the opportunity to create an effective and purposeful QEP that can be applied across all disciplines within the College.

Critical Thinking as a Combination of Dispositions and Skills: Judson College has designed its QEP with an understanding of critical thinking being both dispositional and skill-based in nature. Zhang (2003) merged the ideas of abilities and disposition with this definition: "Critical thinking is a general term that is often used to refer to two related and yet very different concepts—ability and disposition. The former refers to one's ability to think critically, whereas the latter refers to one's propensity for thinking critically" (p. 520). Two of the most oft-cited frameworks of critical thinking as both dispositional and skill-based are those of Richard Paul and Linda Elder, founders of the Foundation for Critical Thinking (Paul & Elder, 2008), and Peter and Noreen Facione, developers of both the California Critical Thinking Skills Test (CCTST) and the California Critical Thinking Dispositions Inventory (CCTDI).

The Paul and Elder (2008) model categorizes various critical thinking skills and dispositions/traits into Elements of Thought, Intellectual Standards, and Intellectual Traits. The Elements of Thought are: Point of View, Purpose, Question at Issue, Information, Interpretation and Inference, Concepts, Assumptions, and Implications and Consequences. The Intellectual Standards are: Clarity, Accuracy, Precision, Relevance, Depth, Breadth, Logic, and Fairness. The Intellectual Traits are: Intellectual Humility, Intellectual Courage, Intellectual Empathy, Intellectual Autonomy, Intellectual Integrity, Intellectual Perseverance, Confidence in Reason, and Fair-mindedness.

Similar to the Paul and Elder model is how Facione (2000) conceptualized critical thinking as both skills-based and dispositional in nature. He describes the skills-based components of critical thinking as "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological or contextual considerations upon which judgment is based" (pp. 64-65). Facione (2013) identified purposeful, reflective judgment as being comprised of the following elements or skills: interpretation, analysis, evaluation, inference, explanation, and self-regulation (p. 5). He stressed that these skills are somewhat irrelevant if one is not inclined to put them into practice. One must become willing or perhaps motivated to do so; in other words, one must also develop dispositions receptive to engaging in critical thinking. Facione (2000) defined disposition as " . . . a person's consistent internal motivation to act toward, or to respond to, persons, events, or circumstances in habitual, and yet potentially malleable ways" (p. 64). All of the skills above may be within the skill set of any student, but without a significant impetus or disposition to deploy those skills in problem solving, they do little to move a student forward academically and cognitively. Facione (2000) quotes a description of an ideal critical thinker who employs both skills and dispositions from the Delphi Research Report on critical thinking, which he compiled in 1990 from the insights and collaboration of 46 experts in the field:

> The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgments, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused on inquiry, and persistent in seeking results which are as precise as the subject and circumstances of inquiry permit. (pp. 65-66)

Facione (2000) cited John Chaffee, a philosopher and nationally recognized scholar in the field of critical thinking, who concurred that "[a] critical thinker is not only capable of reflecting, exploring, and analyzing, but chooses to think in these advanced, sophisticated ways" (p. 65).

Ennis (1985) likewise subdivided critical thinking into dispositions and abilities. These categories are simply for planning purposes; Ennis contended that in the practice of critical thinking, that is actually deciding what to think or do, they form an integrated whole in the process of critical thinking. Critical thinkers have the following dispositions or attitudes toward learning: "being open-minded, paying attention to the total situation, seeking reasons, and trying to be well-informed" (Ennis, 1985, p. 48). Critical thinkers have the following abilities, or do the following things when thinking critically: think clearly, make supported inferences, and make decisions following an orderly and useful process (that is they solve problems logically or take positions based on a process supported by evidence).

Project Curiosity's Definition of Critical Thinking: Supported by the current research that critical thinking is not discipline-specific and that it is comprised of both dispositions as well as a set of skills, Judson College's developed the following definition of critical thinking for its QEP:

Critical thinking is both the dispositions that make one receptive to engage in higher-order thinking (inquisitiveness, self-directedness, and open-mindedness) and the continual and mindful process of improving one's higher-order thinking by asking pertinent questions, gathering and analyzing relevant information, evaluating diverse and alternative points of view, and developing and articulating well-reasoned and supported conclusions.

Intellectual Curiosity: A Key Critical Thinking Disposition

Why Connect Intellectual Curiosity with Critical Thinking? The following research influenced the QEP Implementation Committee's decision to concentrate on intellectual curiosity as the central, measureable critical thinking disposition around which the QEP's implementation plan is based.

Curiosity has been identified as an important motivational drive that helps improve academic performance and advances critical thinking. Curiosity is different from other emotional drives because it triggers a strong desire both to explore and persist in the activity that initially stimulated an individual's interest (Kashdan & Steger, 2007). Experiencing curiosity evokes positive affect, motivating individuals to seek new experiences and reinforcing their exploration. Litman and Spielberger (2003) defined curiosity broadly as "a desire to acquire new knowledge and new sensory experiences that motivates exploratory behavior" (p. 75). They distinguished between two types of curiosity: information seeking, or cognitive [intellectual] curiosity, and sensory curiosity, which stimulates sensation-seeking, exploratory behavior.

John Dewey and Jean Piaget both identified the importance of curiosity to cognitive development. Dewey (1910) claimed that curiosity is a vital component of thinking and identified three types: physical, social, and intellectual. According to Dewey, intellectual curiosity is aroused when an individual believes there is more to discover about information and facts. He saw intellectual curiosity as leading to interest in both problem solving and the accumulation of knowledge and asserted that curiosity could lead to the development of an enduring interest if the appropriate conditions were present. Piaget (1952) asserted that curiosity is required for the construction of knowledge because it motivates the acquisition of new information and seeking of new stimuli.

Berlyne (1954) identified two types of curiosity: epistemic and perceptual. Epistemic curiosity, which triggers the desire for greater knowledge, is more relevant to the development of critical thinking skills in the college classroom. Epistemic curiosity is very similar conceptually to intellectual curiosity in that they share trait constructs that "describe tendencies to seek out,

engage in, enjoy, and pursue opportunities for effortful cognitive activity" (von Stumm, Hell, & Chamorro-Premuzic, 2011, p.577).

Berlyne (1954) also classified two types of exploratory behavior activated by curiosity: specific and diversive. Specific curiosity is sparked when a lack of information arouses one's curiosity. Specific curiosity is best described as an orientation toward exploring and investigating specific objects, events, and problems to understand them better and to be challenged by them (Cacioppo, Petty, Feinstein, & Jarvis, 1996). The need for novel experiences catalyzes diversive curiosity. Silvia (2008) proffered that heightened curiosity may not be due to a lack of knowledge but results from enjoyment associated with simply experiencing something novel. In contrast, specific curiosity leads one to be more open to new values and ideas and the pleasures of problem solving (Berlyne, 1954). Reio (2008) reaffirmed Berlyne's (1978) research for demonstrating that curious individuals will persist at seeking answers and problem solving without extrinsic reward.

The Importance of Fostering Students' Intellectual Curiosity: Curiosity's role in the cognitive development of adolescents and adults is a growing field of research. Reio and Choi (2004) found that cognitive types of novelty seeking (a form of curiosity) actually increase across lifespan until leveling off around age 60. Enhancing intellectual curiosity in college students is difficult without taking into account constructs such as interest and engagement (Arone, Small, Chauncy, & McKenna, 2011). Intellectual curiosity, in particular, has been identified as an important predictor of student success in college (von Stumm et al., 2011). They determined that academic performance could be increased if students' intellectual curiosity was regularly stimulated and renewed. They concluded: "curiosity may start as a hungry and exploratory mind but ultimately transforms into intellectual maturity" (p. 582).

Lowenstein (1994) developed the "information gap theory" to explain curiosity's role in developing higher-order thinking. Lowenstein's experiments demonstrated that when one approached closing gaps in one's information, one's curiosity increased. When one did not perceive a gap in one's knowledge, one did not identify feelings of curiosity. When curiosity is triggered in search of filling in one's gap in knowledge, one becomes more motivated to find answers and inquire deeply into a subject in order to satisfy one's curiosity. Pluck and Johnson (2011) stressed that the gaps in information need to be incremental. Presenting students with problems that involve too much new learning stifled curiosity. Teachers should assess students' information gap regularly and provide students with regular feedback in order to design lessons in which the information gap is not too large, so that curiosity in students is maximized.

Schmitt and Lahroodi (2008) sought to explain the instrumental epistemic value that curiosity plays in education, inquiry, and higher-order knowledge-building. The authors emphasized that:

> by virtue of tenacity, interest bias, and interest independence, curiosity supplements and opposes our practical and epistemic interests in epistemically valuable ways. The tenacity and interest bias of curiosity enhance the depth of our inquiry by focusing our attention on topics within our specialty. The interest independence of curiosity enhances the breadth and sometimes the depth of our inquiry by diverting our attention to topics outside our specialty. (p. 145)

Epistemic interests bias one's curiosity so that one's interest in topics that one finds meaningful is increased. Curiosity's tenacity expands one's knowledge on a subject by driving one to continue to examine the subject beyond one's normal attention span. Curiosity, thus, plays a role in the cognitive development of sustaining thinking and interest, essential attributes for performing critical thinking.

Much research linking curiosity with critical thinking focuses on curiosity as an intrinsic motivator. Ryan and Deci (2000) defined intrinsic motivation as the desire to do something purely because of enjoyment or fun. They sought to identify under what conditions a person would freely seek to engage in academic endeavors. They determined that intrinsically motivated learning occurs when one feels freedom to make choices in the process, when the activity is challenging, and when the challenge can be overcome. Vansteenkiste, Lens, and Deci (2006) demonstrated that intrinsic goal framing (as compared to extrinsic goal framing or no goal framing at all) resulted in deeper engagement in learning activities, more advanced conceptual learning, and greater persistence in engaging in learning activities. Müller and Louw (2004) listed curiosity as one of the reasons why a student would perform an activity for its own sake. Their understanding of intrinsic motivation is closely aligned with the drive to satisfy intellectual curiosity. Intrinsic motivation originates in part by the need to pursue interests and exercise capabilities that derive from one's curiosity. Ryan and Deci (2000) identified the following characteristics of intrinsically motivated learners: they are more content in their learning process, retain the information they learned longer, acquire knowledge in a more differentiated and coherent form, apply their knowledge more often than others, demonstrate higher academic achievement, and perceive themselves as more competent individuals. Schapiro and Livingston (2000) reiterated the importance of intrinsic motivation and argued that the most successful students take control of their own efforts to learn. They contended that qualities such as curiosity, enthusiasm, risk-taking, and persistence are essential, internally driven, and dynamic dispositions that lead students to be more self-regulated, self-motivated, and self-reflective—all important characteristics that help students' cognitive development.

The Academic Environment That Fosters and Supports Critical Thinking

Overcoming Students Barriers to Critical Thinking: Critical thinking involves the development of higher-order cognitive skills that are unlikely to develop through maturity; rather, students must make a conscious effort to develop these skills (Angelo, 1995). Students have difficulty mastering these skills even when faculty members make a direct, conscious effort to provide clear instructions on how to develop them. Because of the difficulty in achieving critical thinking, students are more likely to resist instructional efforts and the development of the skills. Resistance can be defined as any behavior that the student engages in that prevents her or him from becoming a critical thinker (Keely & Schemberg, 1995). Resistance comes from three primary issues – motivation, intellectual labor, and beliefs.

Motivation. Critical thinkers purposefully engage in evaluating and integrating information (Bailin, Case, Coombs, & Daniels, 1999; Crenshaw et al., 2011). This requires that individuals who wish to be critical thinkers must put forth energy, time, and effort to search for relevant material regarding the question/problem to be considered (Currie, Devlin, Emde, & Graves, 2010; Whitmire, 2002), to carefully evaluate the material, and to thoughtfully communicate the conclusion regarding the material (Bailin et al., 1999; Crenshaw et al., 2011). These activities do not occur in one hour or one night of work but over multiple hours and multiple days of work. Students often lack motivation to complete this work because (1) multiple tasks vie for their attention (Arum & Roksa, 2011) and (2) the problem or question is not interesting (Barkley, 2010).

Bureau of Labor Statistics from 2008-2012 showed that the average, full-time college student spent approximately 3.4 hours a day engaged in educational activities while they spent 3.8 hours on leisure and sports activities, 2.7 hours on working, and another 2.3 hours on activities not defined (see Table 15). If one subtracts the average number of hours a student spends in the classroom from the 3.4 hours of educational activities, one finds that students spent less than an hour a day studying or preparing for class (based on 15-hour full-time course load across 5 days – 3 hours per day spent in class). Thus, the average student does not spend sufficient time, energy, and effort during a given day to develop critical thinking skills.

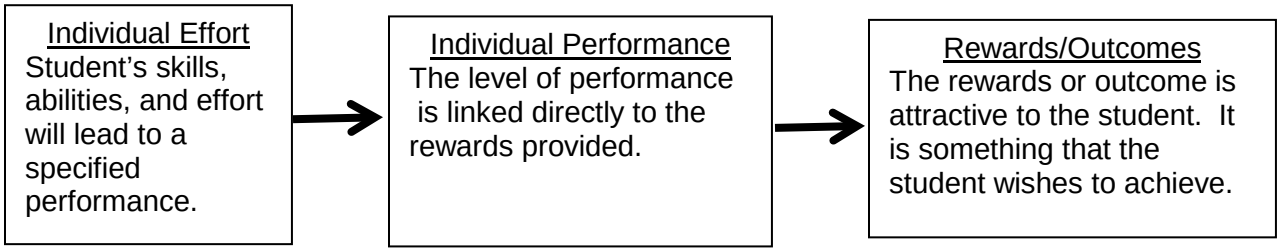
Table 15 How Average, Full-time College Students Spend Their Weekdays

Activity	Hours
Sleeping	8.6
Leisure and sports	3.4
Educational activities	2.7
Other	2.3
Traveling	1.5
Eating and drinking	1.0
Grooming	0.7
Total	24.0

NOTE: Data include individuals, ages 15 to 49, who were enrolled full-time at a university or college. Data include non-holiday weekdays and are averages for 2008-2012.
SOURCE: Bureau of Labor Statistics, American Time Use Survey

The second issue surrounding motivation is the lack of interest in the problem or question. If the student is not interested in the problem or question, then he or she will not be engaged in seeking the answer to this problem or question. Engagement in this context refers to the frequency a student participates in activities that promote the development of learning or critical thinking skills (Barkley, 2010). Barkley (2010) stated that "student engagement is a process and a product that is experienced on a continuum and results from the synergistic interaction between motivation and active learning" (p. 8). Expectancy motivation theory as proposed by Vroom (1964) suggests that students who value the expected outcomes (e.g. attractiveness of reward) and know that their efforts (effort-performance) will help them obtain these outcomes (performance-reward) will increase effort and drive to reach these outcomes (see Figure 2). Thus, students who value the expected outcomes are more likely to be engaged in the learning process.

Figure 2 Expectancy Theory and Student Engagement



Intellectual Labor: Critical thinking is a higher-order, cognitive skill, which includes "analysis, synthesis, problem recognition and problem solving, inference and evaluation" (Angelo, 1995, p. 6). Thus, critical thinking moves beyond the memorization of terms, concepts, and facts, which is the first level of Bloom's Taxonomy, to Levels 4 (Analysis), 5 (Synthesis) and 6 (Evaluation) within the taxonomy, which requires more intellectual labor than just absorbing information (Halx & Reybold, 2005). (Bloom's taxonomy is discussed in detail in the How to Assess Critical Thinking section of this literature review). In their study of faculty perspectives regarding critical thinking, Halx and Reybold (2005) noted that some faculty felt that "learners must be tricked or even coerced into higher levels of learning and knowing" (p. 303). Additionally, students find these skills difficult to learn (Angelo, 1995; Bailin et al., 1999; Crenshaw et al., 2011) and may refuse to learn the skills needed to become critical thinkers (Halx & Reybold, 2005).

Critical thinking also requires purpose and direction. This requires that the individual actively seeks information regarding the problem or project. Information in this context refers to the ideas, thoughts, or facts that an individual seeks from a formal or informal information source (Dresang, 2005). In her meta-analysis of studies examining information-seeking behavior of youth, Dresang (2005) noted that youths tend to take the easiest possible path in obtaining information. This path of least resistance in information search continues at the college level. Students are more likely to use Google, Wikipedia, and blogs to search for information rather than library resources (Currie et al., 2010). In reviewing 5,157 undergraduate responses to the College Student Experiences Questionnaire, Whitmire (2002) noted that students did not often use the library card catalog or databases or seek help from the reference librarian when researching for a paper. Low quality searches for information will more than likely lead to low quality information. Low quality information will ultimately impact the quality of the analysis, synthesis, and evaluation (Halpern, 1999). Therefore, students must be willing to exert the intellectual labor necessary to be good critical thinkers.

Beliefs. The problem of poor analysis and synthesis is further exacerbated by an individual's beliefs. Beliefs are defined as a system of norms and values. These beliefs will guide what information is processed (Anderson, 1990). Information is processed in two basic forms: iconic (visual) and echoic (auditory). The iconic and echoic sensory systems store a great deal of information for a short time period. Information is stored longer or processed more thoroughly through conscious, controlled efforts (Anderson, 1990). In short, information that students pay attention to or that students put forth the effort to think about will be stored longer. An individual's belief system, when not recognized, will guide the student to concentrate on specific pieces of information that fits within that system. A weak thinker will rely heavily on his or her value system in interpreting information. Such a thinker will base decisions on pre-established assumptions and may ignore conflicting information. Thus, the individual has not fully evaluated and analyzed the information, leading to poor and possibly inappropriate inferences (Bailin et al., 1999; Crenshaw et al., 2011).

Overcoming Faculty Resistance to Teaching Critical Thinking: Arum and Roska (2011) criticized American colleges and universities for their lack of rigor and failure to help students develop significant improvement in their learning. Smith and Colby (2007) reviewed the findings of a study examining teaching practices and learning outcomes in the classrooms of 64 teachers, spanning 17 different states. The teachers had all attempted to receive National Board Certification (NBC) and were divided into two groups: those who had achieved NBC and those who had not. Unfortunately, most of the learning in the observed classrooms was characterized as reproduction, categorization of information, and replication of simple procedures, which the authors classified as "surface" rather than "deep" learning (p. 206). Although the study yielded statistically significant differences between the two groups, perhaps the most interesting finding

was that a majority (64%) of the teachers (regardless of NBC status) examined focused instruction and assignments toward surface outcomes rather than deeper understanding. In other words, the majority of teachers tended to teach and most students tended to respond/learn at the surface level. Faculty may give deference to critical thinking without a real "active encouragement" of it (Crenshaw et al., 2011, p. 17).

Paul, Elder, and Bartell's (1997) research further confirmed a disparity between faculty members' perceptions of teaching critical thinking and the classroom realities. They interviewed faculty at 38 public colleges and institutions and 28 private secondary schools across California and found that despite 89% of faculty claiming that critical thinking is a primary objective in their courses, only 19% could provide a clear explanation of what critical thinking is. The majority of faculty members (81%) felt that their graduates developed good or high-level critical thinking skills through their classes, but only 20% of the faculty members identified that their departments had a shared approach to teaching critical thinking. Furthermore, only 9% of the faculty members could articulate assessment strategies for determining whether their colleagues were fostering critical thinking. (pp. 18-19)

Haas and Keeley (1998) offered a variety of strategies and advice for overcoming faculty resistance to integrating best practices for critical thinking instruction into their classroom. They advocated creating a supportive faculty environment wherein matters of critical thinking can be discussed and openly shared, ideally in small groups that meet throughout the school year and that are facilitated by a leader who conducts discussions of specific readings and is well prepared with a lot of knowledge and experience to offer to the group. Creating a sense of trust and respect toward one's colleagues is also essential, for nobody wants to be told they are not a good teacher. The authors noted that

> [s]uccessfully changing one's teaching emphasis is a complex task, and its consequences are uncertain; in fact, in the short term, they may be negative. For example, teaching evaluations may fall, and it may be more difficult for faculty to receive tenure, promotions, and salary increases. Thus, it will be important to devise ways to minimize the impact of such short-term drawbacks. (p. 67)

The authors also stressed the need to create high hopes—to create expectations that the changes to the classroom and the campus culture will result in positive change.

Tsui (2001) contended that student learning is largely dependent upon a teacher's actions and intent. A teacher is much more likely to infuse her/his class with critical thinking if she/he intends to do so. Without intent, however, it is unlikely to happen on its own accord. Findings suggest that teachers who believe they are personally effective in class and are capable of promoting learning are more likely to be effective. She calls this "self-efficacy." She cited Gibson and Dembo's (1984) study of teachers with high and low instructional self-efficacy that

> revealed that the former group was more apt to devote classroom time to academic learning, provide assistance to those experiencing learning difficulties, and praise students for their accomplishment. Meanwhile, the latter group was more apt to spend time on nonacademic activities, give up on students when they do not achieve the desired results, and criticize students for failures. (pp. 1-2)

Furthermore, teachers with high self-efficacy developed students' intrinsic interests while those with low self-efficacy were likely to use extrinsic inducements and negative sanctions. All in all, faculty attitudes find their way into student success, especially with regard to critical thinking.

Best Practices in Critical Thinking Pedagogy

Four Approaches to Teaching Critical Thinking: Bailin et al. (1999) and others (Crenshaw et al., 2011; Halpern, 1999) stated that institutions should consider carefully the curricula and programs used for teaching critical thinking. In examining these curricula and programs, an institution should consider how to approach critical thinking on an institutional scale and what to teach within the critical thinking curricula. Crenshaw et al. (2011) reported on four general approaches to teaching critical thinking: general, infusion, immersion, and mixed. They identified five areas of what to teach within the critical thinking curriculum: knowledge of critical thinking, standards of critical thinking, strategies of critical thinking, knowledge of the discipline, and habits of mind regarding critical thinking. The approaches and methods are summarized in Table 16.

Table 16 Four Approaches to Teaching Critical Thinking

Approaches/Content	Knowledge of Critical Thinking	Standards of Critical Thinking	Strategies of Critical Thinking	Knowledge of the Discipline	Habits of Mind
General Approach	x	x	x		
Infusion Approach			x	x	x
Immersion Approach				x	x
Mixed Approach	x	x	x	x	x

In the general approach, critical thinking is taught in a course designed specifically to teach and only teach the concept and skills of critical thinking. As the table shows, the focus of this class would be to teach the students what is critical thinking, standards of critical thinking, and strategies of critical thinking. “Knowledge of critical thinking” focuses on a set of vocabulary that helps identify critical thinking behaviors. For teaching of critical thinking to be successful, both faculty and students need to have a common reference language (Bailin et al., 1999) not only for development of teaching approaches, but also to help students organize and communicate what they are thinking (Crenshaw et al., 2011). The language of critical thinking would also help students apply their critical thinking strategies from one domain to another. This is one of the strengths of a liberal arts education (Pascarella, Wang, Trolian, & Blaich, 2013). The terms and knowledge help individuals classify the standards of critical thinking and the strategies of critical thinking.

To understand what is good critical thinking, standards of critical thinking are applied. There are two sets of standards that are relevant to critical thinking: (1) judging intellectual products and (2) guiding practices of deliberation or inquiry. These standards are linked to but separate from the strategies of critical thinking. These standards evaluate the outcome of the strategies of critical thinking. They include standards of logic, standards of deliberation, standards of argumentation, standards in developing plans of action, and standards of governing rationale/justification (Bailin et al., 1999). Students who are taught these standards should eventually be able to self-evaluate the quality of their critical thinking or engage in purposeful evaluation, deliberation, and reflection of their thinking.

Strategies of critical thinking have also been labeled as procedures and heuristics of critical thinking (Bailin et al., 1999; Crenshaw et al., 2011). Heuristics and procedures guide the performance of a task. When a person no longer thinks about how to complete the task but rather engages in an automatic response, it becomes a heuristic skill. These strategies would

include how to search for information to solve the problem or question, how to evaluate the creditability of the information, how to review the strengths and weaknesses of the information, and how to compare and contrast information gathered. Individuals would require a rich set of procedures/heuristics to guide their critical thinking. These procedures would not only be related to critical thinking but also to procedures within their respective disciplines.

Infusion and immersion approaches focus on the application of critical thinking to the academic discipline. The primary difference between the two approaches is that in infusion, the class would also specifically state that the student is engaged in critical thinking and would teach specific critical thinking procedures as well as discipline-specific knowledge. The students in the infusion approach would be encouraged to think through the process and not simply memorize facts (Bailin et al., 1999). In contrast, the immersion approach would use these procedures, but the students would not be informed that they are engaging in critical thinking or that these procedures are set for critical thinking. Instead, the students would be encouraged to solve a problem or work on a project using the knowledge, concepts, and language of the respective discipline. It should be noted that the basic concepts and language of the discipline may have been taught in previous courses (e.g. a general approach for that specific discipline). The focus of these courses (infusion or immersion) is the application of the knowledge to solve a problem or develop a project that is specific to that discipline.

The mixed approach is a combination of the general and the infusion approach. The student would be explicitly introduced to critical thinking concepts, standards, and procedures associated with the use of the knowledge within the respective academic discipline. The mixed approach, the infusion approach, and the immersion approach all encourage the development of the habits of mind (Bailin et al., 1999).

Within this context, habits of mind are the dispositions necessary to be a good critical thinker. Thus, an individual who is taught to use a procedure for finding multiple sources, who evaluates the credibility of sources, and who practices this procedure through the three approaches described above should eventually develop the habits of inquiry and open-mindedness. The consistent application of the standards of good critical thinking should lead one to develop a respect for reason and truth as well as for high-quality products and performance (Bailin et al., 1999). Thus, it is the practice and application of critical thinking skills within the discipline that influences the development of the habits of mind or dispositions of critical thinking. Pascarella et al. (2013) noted that a liberal arts education strengthens the cognitive development of critical thinkers, but it is not limited to a single academic discipline but applied across multiple disciplines. Additionally, a liberal arts education provides a broader base of knowledge for the student to use when engaged in critical thinking.

Writing and Information Literacy Pedagogies: Because improving one's critical thinking skills is also highly connected to one's ability to write analytically and read critically, Judson College's QEP has created a research course, CRT 325: Research Methods for Critical Thinking, which will require students to write a research essay on a topic about which they are intellectually curious. Bean (2001) addressed the essential interconnectedness of thinking, writing, and reading in helping to teach students to become stronger critical thinkers. Bean saw teaching thinking and teaching writing to be interdependent. He wrote:

> The writing process itself provides one of the best ways to help students learn the active, dialogic thinking skills valued in academic life. . . . Thesis-governed writing is thus the exterior sign of an interior thinking process that we as faculty need to help our students develop. The habit of problem posing and thesis making does not come naturally to beginning college students, who write more clearly when given assignments that do *not* challenge them as thinkers. (p. 20)

Leamnson (1999) connected advancement in students' critical thinking skills to students' deliberate attention to their "languaging" abilities (p. 23). He saw "the inculcation of the language of the particular discipline" as central to the development of critical thinking skills (p. 23). Tsui (2002) offered a variety of suggestions for improving critical thinking pedagogy. She stressed the importance of assigning writing assignments that require students to synthesize material, evaluate arguments, and deduce conclusions. She also lauded the importance of writing drafts and viewing writing as a series of revisions through which one's ideas are developed and refined. She acknowledged that critical thinking is activated in the classroom when instructors pose questions and discussions arise in which students challenge each other to defend their claims and ideas. A safe environment is essential to learning, and, therefore, minority viewpoints should not be dismissed but acknowledged.

Research also shows that the development of one's information literacy is central to developing self-directed learning and critical thinking skills. Information literacy, for Shapiro and Hughes (1996) should be "something that enables individuals not only to use information and information technology effectively and adapt to their constant changes but also to think critically about the entire information enterprise and information society" (p. 31). Rockman (2004) contended that a curriculum that incorporates information literacy instruction strengthens students' abilities to evaluate and synthesize information.

Student-Centered Pedagogies: Student-centered and student-driven pedagogies, such as problem-based learning, inquiry-based learning, problem-based learning, and metacognition, have become popular in classes focused on improving students' critical thinking abilities and dispositions toward intellectual curiosity.

A problem-based critical thinking pedagogy directs students to find solutions to complex, real world problems. Students identify and research concepts that they will need to know and apply to solve the problem at hand. Collaborative learning is a key component of problem-based learning, as students work and communicate together to integrate the information they have learned into their well-reasoned solutions (Duch, Groh, & Allen, 2001). Larmer (2014) provided a short history of project-based learning, a term coined by John Dewey in 1918, and labeled problem-based learning a subset of project-based learning. He provided the following table to show the similarities and differences between the two approaches to help students develop a critical thinking habit of mind (see Table 17). Whereas problem-based learning usually ends with the proposal of a solution, project-based learning sees students following through with their ideas and creating a product or performance.

Table 17 Project-based Learning vs. Problem-based Learning

Similarities	
Both PBLs: • Focus on an open-ended question or task • Provide an authentic application applications of content and skills • Build 21st-century 4C's competencies • Emphasize student independence and inquiry • Are longer and more multifaceted than traditional lessons or assignments	
Differences	
Project-based Learning	*Problem-based Learning*
Often multi-disciplinary	More often single-subject
May be lengthy (weeks or months)	Tends to be shorter
Follows general, variously-named steps	Follows specific, traditionally prescribed steps
Includes the creation of a product or performance	The "product" may simply be a proposed solution, expressed in writing or in an oral presentation
Often involves real-world, fully authentic tasks and settings	More often uses case studies or fictitious scenarios as "ill-structured problems"

SOURCE: (Larmer, 2014)

Inquiry-based learning differs from problem-based learning in that the inquiry question being studied and answered originates with the student not the teacher. Inquiry-based pedagogy requires students to engage in all stages of the research process to find answers to the questions they posed themselves, wherever their research takes them. Problem-based learning is generally more prescriptive, with the educational purpose of mastering specific knowledge within the discipline being studied (Hudspith & Jenkins, 2001). Each of these three closely related pedagogical strategies requires students to play an active role in researching answers to their questions or solutions to a problem and activates higher-level thinking along the way.

Jones (2012) contended that critical thinking not only hones skills such as problem solving, creativity, analysis, and synthesis, but also metacognition. That is, students should develop an understanding of their own learning styles and the strategies most effective for facilitating learning within themselves. She called for more than just the promotion of critical thinking via good subject area pedagogy, but also the direct teaching of critical thinking skills in a classroom environment where learning strategies, authentic application, and cross-curricular relationships are explored in the normal course of learning. She labeled this a "thinking-centered classroom" (p. 68). The thinking-centered classroom is one where students are active learners, intellectually engaged with the subject matter. Metacognitive strategies that assist in the development of critical thinking skills can be taught, but repeated practice and strong base knowledge are also necessary to develop consistently functioning critical thinking skills in a particular subject area (Willingham, 2007).

Lastly, researchers have also considered what an ideal classroom environment for developing a disposition toward intellectual curiosity in students would be like. Kashdan and Yuen (2007) observed that intellectual curiosity is best nurtured in classes that included a challenging curriculum, supportive teachers, and a general sense of happiness among students. This observation is consistent with evidence that curiosity in college students is diminished in unsupportive or threatening environments with high degrees of anxiety, unfamiliarity, or uncertainty (Peters, 1978).

How to Assess Critical Thinking

Critical Thinking Measurements for Internal Rubrics: Judson College has based its Global Critical Thinking Scoring Template on Bloom's taxonomy. In 1949 a group of educators decided to create a test bank for use by instructors teaching the same course. The first step, led by Benjamin Bloom, was to create a framework for classifying expectations for student learning. Bloom's original taxonomy consisted of six separate levels, conceptualized as a pyramid or triangle with the base level of cognition being "knowledge." The acquisition of knowledge, defined as simply the memorization of specific facts, is the lowest level of the pyramid of the taxonomy. This "low level" should not, however, be discounted as not meaningful or of little importance. Although the higher levels indicate graduated, deeper understanding and are "higher" in the sense of indicating a greater personal engagement by the individual learner with the subject matter, knowledge, at the bottom, is in fact the base or foundational level of learning. It supports the higher levels; that is, knowledge is a necessary, but not alone sufficient, condition for deeper understanding. Bloom held this relationship to be true for each level, as conceptualized in his original taxonomy. The levels are knowledge, comprehension, application, analysis, synthesis, and evaluation. According to Bloom, each higher level "subsumes" the levels beneath it, indicating that a learner functioning at a higher level requires mastery of functioning at each lower level. Critical thinkers must have the appropriate background knowledge to engage in a problem-solving process, which includes comprehension, application, analysis, synthesis, and evaluation. Students who are critical thinkers are expected to do more than just "know" information but to also be able to apply it to solve real-world problems (Forehand, 2005).

Bloom's taxonomy was initially a framework for classifying expectations of student learning. Institutions often use the upper-three levels of Bloom's taxonomy (analysis, synthesis, and evaluation) as a definition for critical thinking. This can be problematic because the levels are not hierarchical as the model suggests, but actually interdependent (Ennis, 1993). In 2001, a group convened to address limitations of the original taxonomy. The resulting product, known as the revised Bloom's taxonomy, is two-dimensional, incorporating a revised cognitive process dimension and an updated knowledge dimension. In addition to the three subcategories of the knowledge dimension (factual, conceptual, and procedural) used in the original taxonomy, a metacognitive knowledge subcategory was added (Krathwohl, 2002). The 2001 revision of Bloom's taxonomy is useful in improving planning and delivery of instruction, leading to better assessment of critical thinking objectives (Krathwohl, 2002). Specifically, the revised taxonomy can be used in the development of rubrics, as authentic formative assessment measures. Developing a student's critical thinking involves encouraging those intellectual skills and activities which are higher up on Bloom's taxonomy (application, analysis, synthesis, and evaluation). The Global Critical Thinking Scoring Template, which is internally designed, is based on Bloom's taxonomy (Appendix H). This template can be adapted across problem-based, project-based, and inquiry-based assignments associated with critical thinking classes and events.

Using External Assessments: Standardized, selected-response assessments reliably test the lower-level thinking skills listed in Bloom's taxonomy such as core knowledge and basic skills, but underemphasize higher-order thinking skills related to critical thinking. Thus, an assessment model at Judson College must incorporate both lower-level skills to capture the foundational skills as well as higher-level cognitive skills (Epstein & Hundert, 2002). There are challenges, however, associated with developing an evidence-based, continuous-improvement assessment culture. Changing student profiles and timing issues can result in at least initially

something less than “apples-to-apples” type comparisons between entering freshmen (who may have benefited from new interventions) and graduating seniors (who may not have received the same newly adopted intervention strategies designed to foster higher-level critical thinking skills). Another challenge is getting students to take seriously the critical thinking assessment tests, which are generally not high-stakes tests (Ekman and Pelletier, 2008). Shepard (2000) suggested a model of assessment that elicits higher-order thinking, addresses processes as well as outcomes, is formative by embedding various methods of assessment throughout instruction in support of student learning, and incorporates self-evaluation as well as evaluation of teaching in the teaching and learning process.

Utilizing a standardized test such the California Critical Thinking Skills Test (CCTST) or the California Critical Thinking Dispositions Inventory (CCTDI), along with other methods of assessment, can result in a cultural shift at the institution level. The Curiosity Exploration Inventory (CEI-II), developed by Kashdan, Rose, and Fincham (2004), assesses one’s degree of curiosity (Appendix I). Assessment becomes focused on objectively improving educational quality and the student educational experience (Ekman and Pelletier, 2008). The universal use of a standardized critical thinking assessment through pre-tests and post-tests in connection with internal rubrics purposefully adopts a strategy of using empirical rather than anecdotal evidence to measure both critical thinking dispositions, such as intellectual curiosity, and critical thinking skill development.

In conclusion, assessment of critical thinking, therefore, should be a purpose-driven, ongoing, multi-dimensional process in order to be effective. It is not just something to be done at the end of a learning intervention, but rather, a planned, integrated process that informs instruction and leads to instructional modifications as needed to better meet the needs of diverse learners. In order for a program of assessment to be valuable, the teacher needs to determine the purpose of a particular assessment within a program of assessment.

Section 4: Desired Student and Environmental Learning Outcomes

As stated in Judson College’s Mission Statement, the College is committed to maturing its students into graduates who think critically. Based on the review of the literature about critical thinking, Judson College views critical thinking as comprised of both dispositional characteristics and higher-order reasoning skills (Facione, 2000; Paul and Elder, 2008; Ennis, 1985; Zhang, 2003). Another view foundational to this QEP is that critical thinking is not a discipline-specific activity. Certain dispositions and cognitive skills are transferrable across disciplines (Paul, 2005; Paul and Elder, 2008; Mulnix 2010).

Therefore, Judson College’s definition of critical thinking is:

Critical thinking is both the dispositions that make one receptive to engage in higher-order thinking (inquisitiveness, self-directedness, and open-mindedness) and the continual and mindful process of improving one’s higher-order thinking by asking pertinent questions, gathering and analyzing relevant information, evaluating diverse and alternative points of view, and developing and articulating well-reasoned and supported conclusions.

The QEP Goals and Student and Environmental Learning Outcomes are listed below.

In order for critical thinking dispositions and skills to develop within a student, Judson College needs to provide an academic environment that promotes critical thinking. Mitigating student and faculty resistance is key. Essential components of such an environment would include: a clear understanding of what critical thinking is and its importance to intellectual growth and faculty members who incorporate best practices in critical thinking into their classrooms and course design and who model steps in the critical thinking process for students. Classroom instruction and course assignments need to move beyond asking students to merely reproduce knowledge, categorize information, and repeat simple procedures. Deep understanding of concepts and the ability to develop one's own informed ideas about subject matter are attainable when students employ critical thinking. Faculty must create a classroom atmosphere and assignments that will spark students' interests and motivate them to assert the intellectual labor needed to complete their work.

QEP Goal #1: The College will provide an academic environment that will help students to mature as critical thinkers.

Environmental Learning Outcome #1 (ELO #1): Faculty will clearly communicate the definition of critical thinking.
Environmental Learning Outcome #2 (ELO #2): Faculty will emphasize the importance of critical thinking.
Environmental Learning Outcome #3 (ELO #3): Faculty will model critical thinking behaviors.
Environmental Learning Outcome #4 (ELO #4): Faculty will utilize best pedagogic practices for critical thinking.

Project Curiosity rationalizes that Judson students can best improve their critical thinking abilities if a strong sense of intellectual curiosity drives them to find answers to their questions on topics of their own interest. The research (Lowenstein, 1994; Ryan & Deci, 2000; Schmitt & Lahroodi, 2008; von Stumm et al., 2011) that shows that students who are intrinsically motivated tend to engage more deeply in the ideas they are studying and thus make greater advancements in critical thinking and conceptual learning than apathetic or disinterested students greatly influenced the design of Project Curiosity. Facione (2000) identified inquisitiveness as one of the dispositions needed for one to be receptive to engaging with ideas with a high level of complex thought. Project Curiosity targets intellectual curiosity, a type of inquisitiveness, as the key intrinsic motivational drive that will lead students to persist and engage in learning activities for a greater sustained amount of time, which is needed for more complex thoughts to develop. Intellectually curious students seek new knowledge and experiences, and when given the freedom to follow their academic interests and to make choices about what they are going to research and write about, they can become better self-regulators of their learning development. Central to this QEP is granting students the license to explore and take ownership of their learning in the belief that cognitive gains in critical thinking will accompany the enjoyment of tenaciously pursuing an academic question along a circuitous route of dead ends and new discoveries to its unexpected end.

QEP Goal #2: The College will foster students' intellectual curiosity.
Student Learning Outcome #1 (SLO #1) Students will be inquisitive and ask pertinent questions.
Student Learning Outcome #2 (SLO #2) Students will be self-directed and intrinsically motivated learners.
Student Learning Outcome #3 (SLO #3) Students will be open-minded and consider diverse and alternative points of view

Judson College desires to see its students develop a critical thinking habit of mind that will lead them to delve deeply into topics they are studying and form strong, informed ideas about subject matter that move beyond the surface level toward deep understanding. In order to engage students with each step of the critical thinking process (gathering and analyzing information, evaluating diverse and alternative points of view, and developing sound conclusions grounded in reasoning and evidence), the faculty will employ a variety of student-centered pedagogies in their classrooms and assignments, including project-based learning, problem-based learning, inquiry-based learning, and/or metacognition. These pedagogical methods require students to be active in the learning process—developers of new knowledge themselves. In order to strengthen their critical thinking, students will need to improve their information literacy and library research skills and write research-based analytical and argumentative essays about topics that interest them. Ideas are questioned, reformulated, complicated, and developed through both the process of engaging with and being in conversation with other scholars' ideas and the process of writing to discover what one really understands and thinks about the topic at hand.

QEP Goal #3 The College will enhance students' skills to think critically about an issue, problem, or idea.
Student Learning Outcome #4 (SLO #4) Students will gather and analyze relevant information.
Student Learning Outcome #5 (SLO #5) Students will evaluate diverse and alternative points of view.
Student Learning Outcome #6 (SLO #6) Students will develop and articulate well-reasoned and supported conclusions or actions about the issue, problem, or idea.

Section 5: Implementation Plan for QEP Goals and Environmental and Student Learning Objectives

A brief description of key components of Project Curiosity's implementation plan follows:

- Implementation of an introduction to critical thinking and intellectual curiosity unit in JUD 101: Foundations for Success (Appendix J).
- Development of CT courses in each major. Each department will choose several upper-division courses within its major to be developed into CT courses. The QEP Advisory Committee will vet course proposals that include curricular and assessment designs (Appendix K).

- Development of a new course, CRT 325: Research Methods for Critical Thinking. This course will replace the current graduation requirement, ENG 325: Research Composition. Like the previous course, this course will guide students through the steps of designing a research project and writing a research essay. In this new course, students will be researching topics driven by their own intellectual curiosity.
- Critical Thinking (CT) Events will be student-initiated, -planned, and -executed enrichment programming for the campus and community developed in CRT 325. Students may design an event by themselves or with up to two partners and may apply for a CT Event Grant, a designated component of Project Curiosity's budget.
- All students participating in Project Curiosity will be required to keep an electronic portfolio of work demonstrating their engagement in critical thinking on Project Curiosity's electronic management platform. Work from at least 3 CT courses and CRT 325 will need to be uploaded along with reflective pieces addressing all submissions. Also, evidence of critical thinking engagement during the development of a CT Event will also need to be provided in a reflective essay. Students may also submit work (essays, artwork, experiment designs, etc.) from other classes (or from independent endeavors) that demonstrate growth in critical thinking. Before graduation, all seniors will need to write a comprehensive self-assessment of their growth as critical thinkers by reviewing and commenting upon all the work they have submitted to their portfolios (Appendix L).
- Bowling Memorial Library will provide literacy instruction, and other library services to students and faculty. This will be done through the JUD 101 classes, CT courses, CRT 325, and CT events. The library will provide training sessions examining the shared goals of critical thinking and information literacy, as this will inform the efforts of the faculty.
- Critical Thinking Day will be an Attendance Expected (AE) event each semester. Students in CT courses and CRT 325 will prepare poster presentations displaying their research into topics about which they were intellectually curious, and the student body will spend several hours interacting with and learning from these students.
- Judson College will begin to provide co-curricular transcripts through the Registrar's Office as an official record of students' extra-curricular involvements and leadership positions. The College intends to promote these new transcripts to encourage students to become more involved in extra-curricular activities (clubs, mission trips, service-learning projects) that will enable students to make connections between theory and praxis and to sharpen their critical thinking skills by placing them in new situations that may complicate their questioned presuppositions.
- First-year students, recent transfer students, and graduating students will be administered a variety of tests to create a database of pre- and post-test scores of students who have participated in Project Curiosity. These data will help with the assessment of the impact Project Curiosity has on students' critical thinking dispositions and skills. Assessment measures that will be administered include: the California Critical Thinking Dispositions Inventory (CCTDI), the California Critical Thinking Skills Test (CCTST), the Curiosity Exploration Inventory (CEI—II), the ETS Proficiency Profile, the National Survey of Student Engagement (NSSE), and the Standardized Assessment of Information Literacy Skills (SAILS).

- All full-time faculty at Judson College will participate in professional development training at Faculty-Staff Institute (August) and Institutional Effectiveness Days (October and February) and will be encouraged to attend Critical Thinking Best Practices Workshops presented throughout the academic year. Adjunct faculty will be encouraged to attend critical thinking professional development training events, too. Because Judson College maintains a small faculty size of around 30, all faculty members will be trained together, instead of in cohorts across several years. Because CT classes will be offered in every major, all full-time faculty members at Judson will be trained in critical thinking course development and pedagogy so that they will be ready to propose and teach CT courses.

Project Curiosity is designed to introduce students gradually to the QEP learning goals and environmental and student learning outcomes—beginning with understanding the concept of critical thinking and its importance and the nurturing of critical thinking dispositions. Foundations for critical thinking will be established immediately for first-year students in JUD 101. Recognizing that full brain develop may not be reached until age 25 (Petitto & Dunbar, 2004), Project Curiosity's implementation plan will be rolled out over four years with expectations of improved critical thinking greatly occurring while students are taking upper-division, Critical Thinking (CT) courses in their last two years at Judson College.

Each QEP Goal and Environmental and Student Learning Outcome will now be discussed in detail.

QEP Goal 1: The College will provide an academic environment that will help students to mature as critical thinkers.

Through its QEP plan, Judson College is dedicated to providing students and faculty with the resources they need to see a change in campus culture that will result in Judson students graduating with higher critical thinking abilities and stronger critical thinking dispositions.

ELO #1: Faculty will clearly communicate the definition of critical thinking.

As mentioned earlier, Judson College has adopted the following definition of critical thinking for its QEP:

> Critical thinking is both the dispositions that make one receptive to engage in higher-order thinking (inquisitiveness, self-directedness, and open-mindedness) and the continual and mindful process of improving one's higher-order thinking by asking pertinent questions, gathering and analyzing relevant information, evaluating diverse and alternative points of view, and developing and articulating well-reasoned and supported conclusions.

All courses chosen as CT courses (as well as CRT 325) will be required to include this definition in their syllabi, and each course will include QEP Goals 2 and 3 and their respective QEP Student Learning Outcomes for these goals in its description of learning outcomes. Prominent displays of this definition of critical thinking will be included in the marketing and promotion plan of the QEP on campus.

First-year students and transfer students, who are not exempted from the course, must take JUD 101: Foundations of Success as a graduation requirement. The course, taught every fall semester, will be revised to include a Critical Thinking and Intellectual Curiosity Unit that will

include lessons and activities that will allow students to begin to sharpen their critical thinking skills and identify dispositional areas they can develop that will make them more receptive to the higher-order thinking that will be expected of them in their college classes. This course will emphasize the importance of being inquisitive and satisfying one's intellectual curiosity. In this course, students will be introduced to basic concepts of critical thinking and will be identifying topics about which they are curious and want to find answers. Helping students to learn and internalize the QEP's definition of critical thinking into their habit of mind, identify the strengths of their dispositions toward critical thinking, engage in the process of critical thinking and communication of their ideas, and demonstrate an understanding of the importance of critical thinking to success in college will be among the course goals of JUD 101. The Critical Thinking and Intellectual Curiosity Unit will represent the infusion approach to teaching critical thinking.

ELO #2: Faculty will emphasize the importance of critical thinking.

The importance of critical thinking for student success in college and for a lifetime of learning and engagement with ideas and happenings in the world will be particularly stressed in the JUD 101 curriculum and in each CT course across the disciplines as well as CRT 325.

Critical thinking's importance will also be apparent to the Judson community through the implementation of CRT 325: Research Methods for Critical Thinkers. This course is designed to provide students with the opportunity to research an unanswered question or solve a problem about a topic they are curious about and to teach students effective strategies for building information literacy skills and writing an academic research paper using a citation style properly. Students in this course will also work independently or in collaboration with one or two students on initiating, designing, and implementing a CT Event during the semester that will generate discussions on campus about complex issues and ideas and that will engage students' higher order thinking. The College's commitment to the importance of improving its students' critical thinking skills will be clear when the College begins offering CT Event grants as part of the QEP budget, which students may apply for to fund their CT Event.

The importance of critical thinking will also be made prominent through the students' poster presentations of their work from CT courses and CRT 325 at the new Critical Thinking Day assemblies.

Faculty professional development at Faculty-Staff Institute, Institutional Effectiveness Days, and Critical Thinking Best Practices Workshops will focus on critical thinking. These events will include guest speakers who are experts on critical thinking and faculty presenters who have attended critical thinking symposia at off-campus locations (i.e., a train the trainer program).

All these implementation plans will highlight for the Judson community the importance the College places on graduating students who strive to be advanced critical thinkers possessing dispositions receptive to engaging in critical thinking. In their e-portfolio final assessment, students should reflect upon the importance of critical thinking and how development of these skills have helped them recognize the value of developing their critical thinking skills.

ELO #3: Faculty will model critical thinking behaviors.

Professors through teaching methods and course design and CT Event speakers through their presentations will especially model critical thinking for the Judson community. Full-time faculty will be required to participate in faculty professional development workshops held during

Faculty-Staff Institute each August and Institutional Effectiveness Day each semester. Faculty will be encouraged to attend special Critical Thinking Best Practices Workshops arranged by the QEP Director throughout each semester. These training opportunities will provide faculty members with expertise in critical thinking pedagogy that they can incorporate into their classrooms.

Moreover, students will model critical thinking for other students through participation in class discussions and by presenting their research findings through poster presentations as part of the Critical Thinking Day assemblies. Students will model good critical thinking practices in their work for CT courses and their research essay for CRT 325.

Students' e-portfolios should also demonstrate improvement across their work in CT courses and CRT 325, modeling effective best practices in critical thinking.

ELO #4: Faculty will utilize best pedagogical practices for critical thinking.

Focused and intentional faculty professional development training in critical thinking and its facilitation in the classroom will be necessary. While faculty members already integrate the teaching and assessment of critical thinking skills to different degrees in their courses, the specificity of Project Curiosity's student learning outcomes will require them to redesign, in part, their curricula, student learning outcomes, and assignments. Faculty workshops that keep participants up-to-date on innovations in the teaching of critical thinking will be provided so that they maintain recency in the classroom applications of what educators, cognitive scientists, neuroscientists, and others are continually learning about critical thinking. Faculty professional development workshops will be conducted each fall and spring semester over the course of Project Curiosity's duration during the College's Institutional Effective Day workshops. Outside trainers who are professionals skilled in faculty development and in integrating critical thinking and teaching will also be invited to campus to address the faculty and larger Judson community. They will be brought to campus periodically, such as for the Faculty-Staff Institute held every year before the start of the school year. Because Judson is a small college with around thirty full-time faculty members, the QEP designers determined that it was feasible for all faculty members to receive professional development training beginning in Year 1 of the QEP. Project Curiosity envisions a broad-based participation from faculty teaching in every major on campus from the start of the QEP's implementation. Furthermore, the QEP Director will organize Critical Thinking Best Practices Workshops periodically throughout each semester that faculty will be encouraged to attend. Workshops will be varied and focused on topics ranging from best practices in assessment and critical thinking pedagogy to recent research articles highlighting breakthroughs about critical thinking. More discussions of critical thinking best practices and discipline-specific application of critical thinking will take place during academic division meetings held each semester.

Moreover, Project Curiosity's budget includes funds to buy each faculty member the newest edition of John Bean's useful primer for incorporating strategies for teaching critical thinking into one's courses: *Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom*. Ideas from the book will be used during the IE Day faculty professional development sessions, during the Critical Thinking Best Practices Workshops, and during academic division meetings throughout each semester. Cross-disciplinary conversations between classes with crossover lessons, readings, and projects will be encouraged. Peers (other faculty teaching CT courses) will conduct teaching observations of another faculty member who is teaching a CT course. These evaluations will focus on the

degree of a faculty member's success at engaging students to think critically in class, the degree the activity/lesson encourages critical thinking, and how the faculty member models critical thinking. These evaluations will be used for continuous improvement only.

Each department on campus will be submitting proposals for CT courses so that every major on campus will be participating in the QEP. Course proposals must meet strict standards. Professors will work with a Division CT Course Coordinator, the QEP Advisory Committee, and the QEP Director to improve their syllabi, course design, assignments, assessment rubrics, and course delivery.

QEP Goal 2: The College will foster students' intellectual curiosity.

Project Curiosity's goal of improving students' disposition toward intellectual curiosity will be addressed by encouraging students to become more inquisitive and to keep a record of ideas and concepts about which they desire to know more. As a marker of intrinsic motivation, intellectual curiosity helps students maintain interest in what they are learning for longer amounts of sustained time, which is needed for students to follow through with their analyses and interpretations to the higher stages of critical thinking.

SLO #1: Students will be inquisitive and ask pertinent questions.

Inquisitiveness leads one to want to find out more about a topic and is thus an important disposition needed to become an adept critical thinker.

Inquiry-based learning is the pedagogical technique of having students' interests become the focal point of their own learning in a class. Students are assessed on the quality of their work that originated with the persistent and nagging questions to which they sought answers.

During their first semester in JUD 101, students will be asked to keep a journal about what they are intellectually curious about and record ideas brought up in their courses and discussions with peers that intrigue them. Helping students design a research proposal for a manageable research project that could offer answers for one of their inquiry questions will be part of the JUD 101 curriculum.

The development of CT courses will emphasize the need for courses to allow students to explore topics that excite their intellectual curiosity and to develop inquiry questions that are complicated and involve research to find an answer or formulate an informed interpretation.

The research essay and the CT Events that students complete in CRT 325 will also have originated with questions that the students were compelled to find answers to because of their intellectual curiosity. Moreover, students who attend Critical Thinking Days will be able to identify and pose pertinent questions to their peers about their research.

SLO #2: Students will be self-directed and intrinsically motivated learners.

Another essential disposition needed to be a critical thinker is being self-directed. The ability to anticipate one's gaps in one's knowledge that need to be filled so that one can reach a well-informed conclusion is a key attribute of a critical thinker. Being a self-directed learner means that one is intrinsically motivated to see a project through to its end, anticipating and reacting to obstacles along the way that are overcome with patience, reason, and research.

Student-centered pedagogies, such as inquiry-based learning and project-based (or performance-based) learning, place students' interests front and center and require intrinsic motivation from each student to see a project through to its end. Both the research project that will culminate in a poster presentation on a Critical Thinking Day and the CT Event project that are part of the CRT 325 curriculum involve inquiry-based and project-based learning that will require students to be self-directed in their research and project designs. Likewise, students in CT courses will be directed to develop projects related to the course material that are connected to ideas about which they are intellectually curious.

SLO #3: Students will be open-minded and consider diverse and alternative points of view

Students with a disposition toward open-mindedness consider diverse and alternative points of view so that they can fully understand the intellectual debates surrounding an issue and, thus, be able to better weigh the evidence they uncover to form informed interpretations. Being open-minded means being receptive to overcoming what Paul and Elder (2008) call native egocentrism and sociocentrism and willing to see the world through other points of view.

Requiring students to be open-minded as they research and write about what interests them will be incorporated into the curriculum of CT courses and CRT 325. Moreover, CT Events will certainly challenge students at times to consider alternative perspectives. Students trained in critical thinking will be able to weigh the pros and cons of speakers' arguments and find places of agreement and/or disagreement.

Students who elect to participate in service-learning projects will interact with people of diverse backgrounds and beliefs that may challenge their preconceptions. Working together with people of different mindsets and life stories will help students to humanize issues being debated in the classroom and should help students be more receptive to listening to and learning from others who hold different beliefs. Being open-minded means being receptive to learning more about the world and then using reason to determine if one's stance on an issue or belief system has been reaffirmed or challenged.

QEP Goal #3 The College will enhance students' skills to think critically about an issue, problem, or idea.

Developing one's ability to reason and assess information so that one can offer rational and well-supported claims to support one's stance on an argument is essential to developing one's critical thinking. Finding information about the topic at hand, evaluating the credibility of sources, identifying key assumptions in the texts one is studying, and challenging what one learns are all essential steps in helping one reach a well-reasoned conclusion or defense of a position that is the product of assiduous critical thinking.

SLO #4: Students will gather and analyze relevant information.

Honing research skills will be a key focus of CRT 325. Students will be required to complete a well-researched and well-written essay based on a topic about which they are intellectually curious. Students will develop ideas about their topics by asking increasingly complex questions, while pursuing both primary and secondary sources. The course will inform students how to locate source material both in the library and online, read and evaluate this material critically, analyze and summarize points of view and assumptions, and synthesize sources in order to write an extended essay incorporating source materials in an effective and logical

manner. Students will also be required to understand that citation formats vary from discipline to discipline and be able to apply a discipline-appropriate citation style in their essays. The course will help students to understand that academic research is ethical and to demonstrate ethical quoting, paraphrasing, and summarizing of source materials.

Moreover, Judson College's Bowling Memorial Library will directly aid students in developing their critical thinking by acting as a resource for them to learn how to gather and analyze information. For this reason, it is important that the library and the rest of the college community be fully informed and work together. Information literacy is at the heart of critical thinking. The library will support the student learning outcome of gathering and analyzing relevant data by incorporating the Association of College and Research Library's (ACRL's) Framework for Information Literacy for Higher Education in all research assistance, information literacy instruction, and other library services to students and faculty. This will be done through the JUD 101 classes, CT courses, CRT 325, and CT events. In addition to the library's role in equipping Judson students to gather and analyze relevant information, the faculty will be integral in communicating the skills and dispositions needed to meet this learning outcome. The library will reinforce the faculty's efforts by providing training sessions that examine the shared goals of critical thinking and information literacy.

SLO #5: Students will evaluate diverse and alternative points of view.

Essential to critical thinking is strengthening one's ability to evaluate sources, particularly viewpoints that differ from one's own. New knowledge cannot be achieved if one refuses to consider and assess what those with differing points of view contend.

CRT 325 will teach students to engage with sources of varying points of view so that one can achieve a bigger picture of the academic conversations and debates at hand concerning a topic. In their essays, especially if they are argumentative in nature, students should acknowledge opposing points of view in order to forestall objections that one's reader may form if differing points of view are left out of the essay.

Students will also be required to evaluate diverse and alternative points of view as they engage with various students' poster presentations on Critical Thinking Days.

SLO #6: Students will develop and articulate well-reasoned and supported conclusions or actions about the issue, problem, or idea.

This student learning outcome represents the ultimate goal of critical thinking—the achievement of a rational and well-substantiated determination about the issue, problem, or idea being examined. Information has been synthesized, evaluated, and interpreted so that one can be confident about the conclusions one has reached.

The best students in their research essays in CRT 325 and written work in CT courses will achieve this display of critical thinking prowess.

Students' reflections of their work from CT classes and projects submitted to their Critical Thinking e-Portfolio should assess their success at achieving this student learning outcome.

Table 18 provides a complete summary of the QEP Implementation Plan for achieving QEP goals and environmental and student learning outcomes and identifies key participants and an implementation timeframe.

Table 18 QEP Implementation Plan

QEP GOAL #1: The College will enrich its environment in order for students to mature as critical thinkers.				
Outcomes	*Key Activity*	*Targeted Participants*	*Responsible Unit(s)*	*Timeframe*
ELO #1: Faculty will clearly communicate the definition of critical thinking.	JUD 101 Unit on Critical Thinking and Intellectual Curiosity	Freshmen	JUD 101 Faculty	Fall
	Faculty Development Workshops (Faculty-Staff Institute, IE Days, and Critical Thinking Best Practices Workshops)	Faculty	Academic Dean, QEP Director, and QEP Advisory Board	Fall and Spring
ELO #2: Faculty will emphasize the importance of critical thinking.	JUD 101	Freshmen	JUD 101 Faculty	Fall
	CT Courses	Sophomores, Juniors, and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Juniors and Seniors	CRT 325 Faculty	Fall and Spring
	CT Events	Juniors and Seniors	Faculty, CT Event Liaison, and Director of Distance Learning	Fall and Spring
	Critical Thinking Day	Juniors and Seniors	CRT 325 Faculty and CT Course Faculty	Fall and Spring
	CT e-Portfolios	Freshmen, Sophomores, Juniors, and Seniors	QEP Director and QEP Advisory Committee	Fall, Spring, and Summer
	Faculty Development Workshops	Faculty	Academic Dean, QEP Director, and QEP Advisory Committee	Fall and Spring

Outcomes	*Key Activity*	*Targeted Participants*	*Responsible Unit(s)*	*Timeframe*
ELO #3: Faculty will model critical thinking behaviors.	JUD 101	Freshmen	JUD 101 Faculty	Fall
	CT Courses	Sophomores, Juniors, and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Juniors and Seniors	CRT 325 Faculty	Fall and Spring
	CT Events	Juniors and Seniors	Faculty, CT Event Liaison, and Director of Distance Learning	Fall and Spring
	Critical Thinking Day	Juniors and Seniors	CRT 325 Faculty and CT Course Faculty	Fall and Spring
	Faculty Development Workshops	Faculty	Academic Dean, QEP Director, and QEP Advisory Board	Fall and Spring
ELO #4: Faculty will utilize best pedagogical practices for critical thinking.	JUD 101	Freshmen	JUD 101 Faculty	Fall
	CT Courses	Sophomores, Juniors, and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Juniors and Seniors	CRT 325 Faculty	Fall and Spring
	CT Events	Juniors and Seniors	Faculty, CT Event Liaison, and Director of Distance Learning	Fall and Spring
	Critical Thinking Day	Juniors and Seniors	CRT 325 Faculty and CT Course Faculty	Fall and Spring
	Faculty Development Workshops	Faculty	Academic Dean and QEP Advisory Board	Fall and Spring

QEP Goal #2: The College will foster students' intellectual curiosity.				
Outcomes	*Key Activity*	*Targeted Participants*	*Responsible Unit(s)*	*Timeframe*
SLO #1: Students will be inquisitive and ask pertinent questions.	JUD 101: Critical Thinking and Intellectual Curiosity Unit	Freshmen	JUD 101 Faculty	Fall
	CT Courses	Sophomore, Juniors, and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Juniors and Seniors	CRT 325 Faculty	Fall and Spring
	CT Events	Juniors and Seniors	Faculty, CT Event Liaison, and Director of Distance Learning	Fall and Spring
	Critical Thinking Day	Juniors and Seniors	CRT 325 Faculty and CT Course Faculty	Fall and Spring
SLO #2: Students will be self-directed and intrinsically motivated learners.	CT Courses	Juniors and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Juniors and Seniors	CRT 325 Faculty	Fall and Spring
	CT Events	Juniors and Seniors	Faculty, CT Event Liaison, and Director of Distance Learning	Fall and Spring
	Critical Thinking Day	Juniors and Seniors	CRT 325 Faculty and CT Course Faculty	Fall and Spring
SLO #3: Students will be open-minded and consider diverse and alternative points of view.	CT Courses	Juniors and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Juniors and Seniors	CRT 325 Faculty	Fall and Spring

	Key Activity	*Targeted Participants*	*Responsible Unit(s)*	*Timeframe*
	CT Events	Juniors and Seniors	Faculty, CT Event Liaison, and Director of Distance Learning	Fall and Spring
	Critical Thinking Day	Juniors and Seniors	CRT 325 Faculty and CT Course Faculty	Fall and Spring
	CT e-Portfolio	Freshmen, Sophomores, Juniors, and Seniors	QEP Director and QEP Advisory Committee	Fall, Spring, and Summer
QEP Goal #3 The College will enhance students' skills to think critically about an issue, problem, or idea.				
Outcomes	*Key Activity*	*Targeted Participants*	*Responsible Unit(s)*	*Timeframe*
SLO #4: Students will gather and analyze relevant information.	Bowling Memorial Library Information Literacy Workshops	Freshmen, Sophomores, Juniors, Seniors, and Faculty	Librarian	Fall, Spring, and Summer
	CT Classes	Sophomore, Juniors, and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Juniors and Seniors	CRT 325 Faculty	Fall and Spring
	CT e-Portfolio	Freshmen, Sophomores, Juniors, and Seniors	QEP Director and QEP Advisory Committee	Fall, Spring, and Summer
SLO #5: Students will evaluate diverse and alternative points of view.	CT Courses	Sophomores, Juniors, and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinkers	Juniors and Seniors	CRT 325 Faculty	Fall and Spring

	Key Activity	*Targeted Participants*	*Responsible Unit(s)*	*Timeframe*
	Critical Thinking Day	Juniors and Seniors	CRT 325 Faculty and CT Course Faculty	Fall and Spring
	CT e-Portfolio	Freshmen, Sophomores, Juniors, and Seniors	QEP Director and QEP Advisory Committee	Fall, Spring, and Summer
SLO #6: Students will develop and articulate well-reasoned and supported conclusions or actions about the issue, problem, or idea.	CT Courses	Sophomore, Juniors, and Seniors	CT Course Faculty	Fall, Spring, and Summer
	CRT 325: Research Methods for Critical Thinking	Junior and Seniors	CRT 325 Faculty	Fall and Spring
	CT e-Portfolio	Freshmen, Sophomores, Juniors, and Seniors	QEP Director and QEP Advisory Committee	Fall, Spring, and Summer

Section 6: Timeline of QEP Implementation

Table 19 provides a year-by-year breakdown of Project Curiosity's implementation benchmarks for Years 1-5.

Table 19 Timeline Years 1-5

Year 1 (2014-2015)

- Incoming students (Cohort 1) and graduating students will be administered the California Critical Thinking Dispositions Inventory (CCTDI), the California Critical Thinking Skills Test (CCTST), the Curiosity Exploration Inventory (CEI-II), the Standardized Assessment of Information Literacy Skills (SAILS), and the National Survey of Student Engagement (NSSE).
- The ETS Proficiency Profile will be administered to first-year students and to students who have achieved junior-class standing (61 credit hours).
- Critical Thinking and Intellectual Curiosity Unit in JUD 101: Foundations for Success will be launched.
- Selection and development of CT courses in each major on campus will begin.
- Collection of critical thinking resources for campus-wide use will continue.
- Faculty professional training workshops will be held at the Faculty-Staff Institute (August 2014), Institutional Effectiveness Day (October 2014), and Institutional Effectiveness Day (February 2015).
- QEP Director and other QEP Advisory Committee members will seek out conferences and workshops on critical thinking that they can attend, so that they can return to campus ready to train the faculty in the best practices they learned.

Year 1 (Continue) • Critical Thinking Best Practices Workshops will be conducted throughout the academic year at academic division meetings and as open workshops. • Faculty will receive personal copies of John C. Bean's *Engaging Ideas: The Professor's Guide to Integrating Writing, Critical Thinking, and Active Learning in the Classroom*. (2nd edition). The book will be integrated into the faculty professional development sessions. • e-Portfolio electronic management system will be selected. • QEP Director will organize CT Events. • Implementation of QEP promotion plan will continue. • QEP website development will continue. • QEP assessment for 2014-2015 will be completed. • Review and adjustment of QEP process will be performed.
Year 2 (2015-2016) • Incoming students (Cohort 2) and graduating students will be administered the California Critical Thinking Dispositions Inventory (CCTDI), the California Critical Thinking Skills Test (CCTST), the Curiosity Exploration Inventory (CEI-II), the Standardized Assessment of Information Literacy Skills (SAILS), and the National Survey of Student Engagement (NSSE). • The ETS Proficiency Profile will be administered to first-year students and to students who have achieved junior class standing/61 credit hours. • First CT courses will be offered. • Review of CT courses will continue. • Peer-to-Peer CT course evaluations will be implemented. • Project Curiosity e-Portfolios will be launched. • QEP Director will organize CT Events. • Faculty professional development workshops and Critical Thinking Best Practices Workshops will continue. • QEP assessment for 2014-2015 will be completed. • QEP training workshop for new hires will be held. • Review and adjustment of QEP process will be performed.

Year 3 (2016-2017)

- Incoming students (Cohort 3) and graduating students will be administered the California Critical Thinking Dispositions Inventory (CCTDI), the California Critical Thinking Skills Test (CCTST), the Curiosity Exploration Inventory (CEI-II), the Standardized Assessment of Information Literacy Skills (SAILS), and the National Survey of Student Engagement (NSSE).
- The ETS Proficiency Profile will be administered to first-year students and to students who have achieved junior-class standing (61 credit hours).
- New CT course offerings will be added.
- Review of CT courses will continue.
- Peer-to-Peer CT course evaluations will continue.
- CRT 325: Research Methods for Critical Thinking will be launched.
- Student-organized CT Events will begin, and CT events organized by the QEP Director will continue.
- First Critical Thinking Days will be held.
- Faculty professional development workshops and Critical Thinking Best Practices Workshops will continue.
- QEP assessment for 2014-2015 will be completed.
- QEP training workshops for new hires will continue.
- Review and adjustment of QEP process will be performed.

Year 4 (2017-2018)

- Incoming students (Cohort 4) and graduating students will be administered the California Critical Thinking Dispositions Inventory (CCTDI), the California Critical Thinking Skills Test (CCTST), the Curiosity Exploration Inventory (CEI-II), the Standardized Assessment of Information Literacy Skills (SAILS), and the National Survey of Student Engagement (NSSE).
- The ETS Proficiency Profile will be administered to first-year students and to students who have achieved junior-class standing (61 credit hours).
- New CT course offerings will be added.
- Review of CT courses will continue.
- Peer-to-Peer CT course evaluations will continue.
- CT Events (student-organized and QEP Director-organized) will continue.
- Critical Thinking Days will continue.
- Faculty professional development workshops and Critical Thinking Best Practices Workshops will continue.
- QEP training workshop for new hires will continue.
- QEP assessment for 2014-2015 will be completed.
- Assessment for Cohort 1 (pre- and post- test scores comparisons) will be completed.
- Review and adjustment of QEP process will be performed.

Year 5 (2018-2019)

- Incoming students (Cohort 5) and graduating students will be administered the California Critical Thinking Dispositions Inventory (CCTDI), the California Critical Thinking Skills Test (CCTST), the Curiosity Exploration Inventory (CEI-II), the Standardized Assessment of Information Literacy Skills (SAILS), and the National Survey of Student Engagement (NSSE).
- The ETS Proficiency Profile will be administered to first-year students and to students who have achieved junior-class standing (61 credit hours).
- New CT course offerings will be added.
- Review of CT courses will continue.
- Peer-to-Peer CT course evaluations will continue.
- CT Events (student-organized and QEP Director-organized) will continue.
- Critical Thinking Days will continue.
- Faculty professional development workshops and Critical Thinking Best Practices Workshops will continue.
- QEP training workshops for new hires will continue.
- QEP assessment for 2014-2015 will be completed.
- Assessment for Cohort 2 (pre- and post- test score comparisons) will be completed.
- Review and adjustment of QEP process will be performed.

Section 7: Organizational Structure

The QEP Director, who will report to the Academic Dean, will lead Project Curiosity. The QEP Advisory Committee will advise the QEP Director and will serve as an oversight committee to the QEP process and assessment. As with all faculty committee and special leadership positions at Judson College, the QEP Director and QEP Advisory Committee are made by presidential appointment.

The responsibilities of the QEP Director include:

- Direct the administrative duties associated with the QEP
- Act as a liaison to the Academic Dean
- Direct the implementation, assessment, and adjustment of the QEP processes
- Organize the professional development training for faculty throughout the academic year
- Work with faculty members and the QEP Advisory Committee in designing student learning outcomes, curricula, and assessment of proposed CT courses
- Work with faculty members to ensure that their work products (syllabi, assignment sheets, and examinations) demonstrate evidence of implementation of best practices in critical thinking
- Organize college-initiated CT Events
- Help assess CT e-Portfolios
- Manage the QEP budget
- Work with the Institutional Research Office to implement and integrate assessment of the QEP into the College's assessment plan
- Supervise the QEP student worker
- Solicit faculty feedback about the QEP annually
- Lead QEP training workshops for new hires, beginning in Year Two.

- Work with the Student Services and Academic Support CT Coordinators to ensure quality CT programming is being provided to students in these divisions
- Work with the CT Event Liaison to oversee the development, scheduling, and implementation of students' CT Events
- Prepare annual QEP assessment reports for the Academic Dean and Board of Trustees
- Prepare the QEP Reports for SACSCOC at the end of the QEP's first five years
- Perform other assignments as needed for the success of the QEP

The QEP Director will receive a one course load reduction and assume responsibilities in August 2014.

The responsibilities of the QEP Advisory Committee include:

- Act in an advisory capacity to faculty and the QEP Director to ensure successful implementation of the QEP
- Work in subcommittees to help implement, evaluate, and revise the QEP
- Work with Division CT Course Coordinators to help faculty members design and assess their CT courses
- Review and approve proposed CT courses
- Aid the Academic Dean and the QEP Director in the planning, design, and presentation of QEP faculty professional development and Critical Thinking Best Practices Workshops
- Oversee the assessment of students' Critical Thinking e-Portfolios
- Oversee the training of faculty assigned to assess CRT 325 research essays
- Perform other assignments as needed for the success of the QEP

Members of the QEP Advisory Committee will include the following:

Chair
At least 1 Faculty Member from each Division
Library Representative
Student Representative
Student Services Representative
The Academic Dean, ex officio
The QEP Director, ex officio

Other leadership positions in Project Curiosity include:

The CT Event Liaison (along with the QEP Director) will provide guidance and advice to students creating their CT Events as needed and manage the CT Event calendar so that events are scheduled relatively evenly throughout the academic year. The CT Event Liaison will also take into consideration the Judson College master calendar of events when scheduling CT Events so that the calendar does not get overloaded at certain times of the semester. The CT Event Liaison will also help with the assessment of student learning outcomes connected with the students' CT Events and aid faculty project advisors who are assigned to advise students who are working on organizing CT events.

Each academic division (Fine Arts, Humanities, Sciences, and Social Sciences) will appoint a Critical Thinking Coordinator who will work along with members of the QEP Advisory Committee with other faculty members on designing CT courses and plans for assessing the QEP student learning outcomes. Similarly, the Director of Distance Learning (DL), along with members of the QEP Advisory Committee, will help assist DL faculty in designing DL-compatible CT courses in each major.

A Student Services Critical Thinking Coordinator will oversee and help assess the development of critical thinking enrichment programming in the following divisions, each represented by a Critical Thinking Liaison: Career and Calling Initiative, Student Development and Activities, and Faith-Based Service and Learning.

An Academic Support Critical Thinking Coordinator will help train tutors in how to help tutees engage in critical thinking and assess the development of students' critical thinking in the following academic learning centers: The Bowling Memorial Library, the Writing Center, the Business Lab, the Mathematics Lab, and the History Lab.

The College's Marketing and Web Design Specialist will work with the QEP Director on the design and upkeep of the Project Curiosity website. Critical thinking resources for faculty and students will be posted here as well as up-to-date information on CT courses, CT events, Critical Thinking Days, guest speakers, faculty professional development training days, and Critical Thinking Best Practices Workshops.

Student Worker: The student worker will provide 7-10 hours of clerical assistance per week to the QEP Director.

The flow chart in Figure 3 illustrates the chain of command and organizational structure of Project Curiosity.

Figure 3 Organizational Structure of Project Curiosity

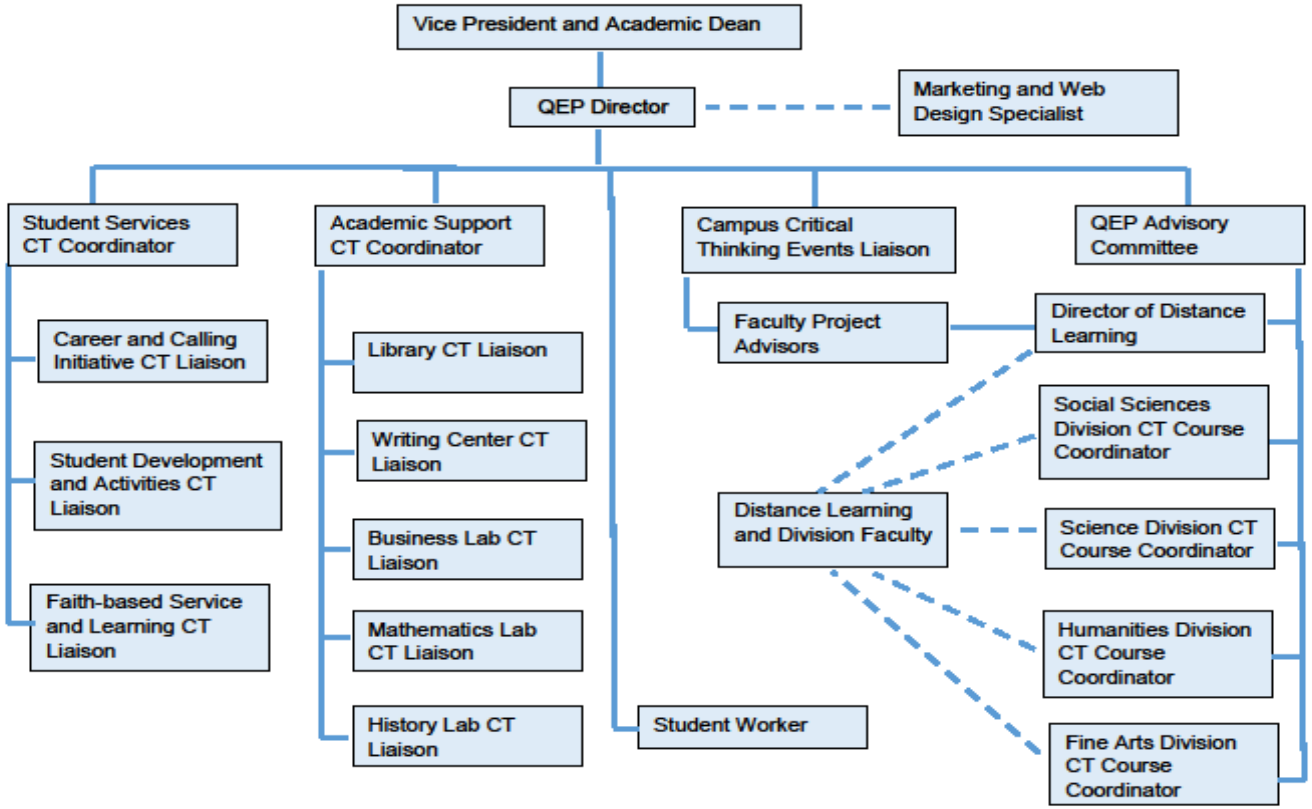


Table 20 provides further description of the broad-based support incorporated into the design of Project Curiosity.

Table 20 Broad-based Support from Stakeholders

Stakeholder	Group Method of Involvement
Students	At least one student representative will serve on the QEP Advisory Committee. The student representative(s) will help with the informational promotion of the QEP to the student body. Students will complete CT evaluation forms in all CT classes and in CRT 325.
Faculty	Faculty will be involved in all phases of the QEP's implementation. The QEP Director will solicit feedback on the QEP from faculty each year.
Administration	The Administration will be involved in all phases of the QEP's implementation. The QEP Director reports to the Vice President and Academic Dean and works with the Institutional Research Office.
Staff	Staff members' input will be solicited in the form of surveys and questionnaires distributed at the QEP events they attend.
Alumnae	Alumnae input will be solicited in the form of surveys and questionnaires distributed at the QEP events they attend. Alumnae will be sought to be CT event speakers.
Board of Trustees	An annual update on the progress of the QEP will be given to the Academics and Curriculum Subcommittee of the Board of Trustees.
General Public	The Marketing and Web Specialist and the College's Public Relations Coordinator will inform the public of QEP events via the website and press releases. The general public can provide feedback by filling out evaluation forms distributed at CT events.

Section 8: Resources

Judson College has budgeted adequate resources for the successful implementation of Project Curiosity. As part of the regular budgeting process of the College in the spring of 2014, an initial QEP startup budget was established for the 2014-2015 academic year. In addition, tentative budgets were prepared for 2015-2019 fiscal years. All are provide below in Table 21.

The QEP budget includes funds assigned for the administration of Project Curiosity, faculty professional development, assessment, CT Events, and grant money for student projects.

Table 21 Proposed QEP Budgets 2014-2019

	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	Total
QEP Director Salary	$15,000	$15,000	$15,000	$15,000	$15,000	$75,000
Travel	$2,500	$2,500	$2,500	$2,500	$2,500	$12,500
Software	$8,000	$2,000	$1,000	$1,000	$1,000	$13,000
Critical Thinking Assessments	$5,000	$7,000	$7,000	$7,000	$7,000	$33,000
Co-Curricular Transcripts	$1,000	$1,000	$1,000	$1,000	$1,000	$5,000
Instructional Material	$2,500	$2,500	$2,000	$1,500	$1,500	$10,000
Office Supplies	$250	$500	$350	$350	$350	$1,800
Critical Thinking Projects/Events (faculty- and/or admin- initiated)	$5,000	$7,000	$5,000	$5,000	$5,000	$27,000
Promotion/Campus Awareness	$2,500	$2,500	$1,000	$1,000	$1,000	$8,000
QEP Work-Study Student	$4,200	$4,200	$4,200	$4,200	$4,200	$21,000
QEP CT Event Grants (for students)	n/a	n/a	$7,000	$7,000	$7,000	$21,000
Total	$45,950	$44,200	$46,050	$45,550	$45,550	$227,300

Section 9: Promotion and Marketing of the QEP

The College is also allocating adequate resources for the marketing and promotion of Project Curiosity. New students will receive a copy of the Project Curiosity Student Guide that provides an overview of the QEP's learning goals, implementation plan and timeline, and assessment plan. Students will also be informed about the QEP via informational posters that will be displayed around campus. In all campus computer labs, the QEP logo and project name will be displayed as a screensaver and as wallpaper on the desktop. Flat screen televisions positioned in several well-trafficked locations on campus will also advertise the QEP. Other promotional items, such as pencils, pens, and highlighters, displaying the QEP logo and name will also be distributed to students. T-shirts will be made and passed out to each first-year class. Students will write informational articles about the QEP for publication in *The Triangle*, Judson College's online student newspaper, and student podcasts about the QEP will also be planned. An ongoing educational process and promotion effort about the QEP will be maintained to ensure future stakeholders are familiar with the purpose and structure of Project Curiosity.

The academic support centers on campus, which includes the library and academic tutoring centers, will also be resources for QEP promotion and marketing.

Bowling Memorial Library will support the QEP by fostering the intellectual curiosity of Judson students through programming designed to create an open forum for students' questions. Programming will include dedicated spaces for student questions and answers, research assistance, a student-led lecture series entitled: *Inquiring Intellects Brown Bag Lecture Series*, and a research award.

A space in the front of the library will be dedicated for posting questions. In keeping with Judson culture, scrapbooking supplies will be provided for students to post their questions. Students who are interested in finding the answers to a posted question will have the support of research assistance from the librarians. The librarians will assist students in finding the answers to their questions, focusing on equipping the students to become information literate researchers.

Students may post their answers on the provided space. Additionally, students will be given the opportunity to present a 30-minute lecture on their topics. These lectures will occur throughout the year, at the very least on a monthly basis. Students must fill out a proposal form for scheduling and record keeping purposes. The lectures, which will be held in the library's periodicals section on the first floor, will create a place for students to gather, discuss, and articulate ideas. Each lecture will be student-led, with the library only providing support.

In addition to the *Inquiring Intellects Brown Bag Lecture Series*, Bowling Memorial Library will begin awarding the *Christian Library Consortium Research Award* at Honors Convocation. This award is available to seniors demonstrating excellence in research, leadership, ability, and Christian character. The recipient must meet the faculty Awards Committee's approval.

Writing Center tutors will be trained in applied critical thinking methods. They will be trained to work in the interrogative mode—to ask questions and get the tutee to do most of the talking. Poignant questions can help steer students in directions that will lead them to make previously unperceived connections between their ideas and the texts they are responding to in their papers.

The Business Lab, History Lab, and Mathematics Lab will also facilitate student growth in critical thinking by working one-on-one with students, helping them to understand better the concepts in the readings and homework. Once students have mastered foundational knowledge in a subject, they can begin to ask more complex questions that elevate their higher-order thinking.

Various divisions in Student Services will also serve as resources for students.

For example, the Division of Student Services will support and promote the QEP by fostering the critical thinking of all first-year students enrolled in JUD 101: Foundations for Success by administering pre-tests that assess students' knowledge, skills, and abilities related to critical thinking. Learning outcomes related to critical thinking will be established for JUD 101. An example of these outcomes include the expectation that students will be able to define critical thinking, understand the value of critical thinking, and be able to identify and practice habits that can improve their critical thinking ability.

JUD 101 students will also be expected to maintain an intellectual curiosity journal as one of the course requirements. After reflecting individually, students will engage in small and large group discussions about questions that each student records in her journal. Furthermore, pedagogical best practices will be utilized in JUD 101 that will provide students opportunities to engage in critical thinking by corporately reflecting and thinking critically about literature, quotes, and

works of art related to transition, wellness, spiritual formation, community, and Christian scholarship. For example, in the course discussion related to critical thinking, the class will interact with the following quote by Elie Wiesel, survivor of the Holocaust: "Questions unite people, and answers divide them." Students will also be given the opportunity to engage in problem-based learning by observing and actively participating in role plays and case studies centering around problems that first-year students face as they embark on their collegiate journey.

The Office of Career & Calling Initiatives will also support and promote the QEP by fostering critical thinking in students who participate in career and calling initiatives. This support will primarily take place in the form of fostering student identity development, particularly related to the choice of one's major and career. Students will engage in diagnostic testing that will help them identify strengths and vocational interests and will work with professional staff members and peer mentors to discuss and evaluate results. Students will be educated about the importance of identity and value integration into their major (and ultimately their careers) for greatest long-term professional satisfaction. Students will also be invited to participate in listening groups, fashioned after the Quaker tradition, where there will be dedicated time, space, and committed community members. Community members will sit with inquiring students and will only ask questions (and offer no advice) as the inquiring student reflects on issues related to identity, career, and calling.

Likewise, the Office of Faith-Based Service and Learning and the Office of Student Development and Activities will help students achieve the College's mission of developing critical thinkers who maintain enduring faith and can apply their critical thinking skills outside of the classroom, especially in positions of leadership.

Section 10: Assessment

Judson College will measure the attainment of critical thinking skills at the course and college levels. The College will use both authentic assessments embedded in the coursework as well as standardized performance assessments at the college level to properly evaluate Project Curiosity's effect on the QEP's environmental and student learning outcomes.

Key assessment measures of Project Curiosity include:

External, Standardized Measures:

- The California Critical Thinking Dispositions Inventory (CCTDI), a valid and reliable standardized test that measures truth-seeking, open-mindedness, analyticity, systematicity, confidence in reasoning, inquisitiveness, and maturity of judgment. This test will be useful in measuring changes in two dispositions for critical thinking identified in QEP Goal #2: inquisitiveness and open-mindedness.

- The California Critical Thinking Skills Test (CCTST) is a valid, reliable, and discipline-neutral standardized test that measures test-takers' abilities in analysis, inference, evaluation, deduction, and induction.

- The Association of College and Research Library's Standardized Assessment of Information Literacy Skills (SAILS) is a valid and reliable assessment exam of student competency in information literacy.

- The ETS Proficiency Profile is a nationally standardized exam that measures students' abilities in mathematics, writing, and reading, with Level 3 reading scores being an indicator of strong critical thinking skills.

- The National Survey of Student Engagement (NSSE) is a self-assessment instrument that provides useful data on student perceptions of their critical thinking skills and the degree of critical thinking instruction they received in their college courses.

- The Curiosity Exploration Inventory (CEI-II) is a valid and reliable self-assessment instrument that measures individual differences in the recognition, pursuit, and integration of novel and challenging experiences and information. It is a useful instrument to measure changes in intellectual curiosity when given as a pre- and post-test.

Internal, Summative and Formative Measures:

To assess student proficiency in critical thinking and to measure the effectiveness of faculty teaching in CT courses, Judson College will use the following internally-designed rubrics to assess student work:

- The Global Critical Thinking Scoring Template will be used to assess course assignments such as e-portfolios, essays, class projects, and CT Events. Faculty members will adapt the rubric to become discipline-specific as needed.

- The Bowling Memorial Library's Information Literacy Training Rubric follows the Association of College and Research Libraries' (ACRL) information literacy standards and will be used to measure the effectiveness of the information literacy training workshops (Appendix M).

- CRT 325 and CT Courses Student Evaluation (Appendix N) and Peer-to-Peer Evaluation (Appendix O).

Some courses do not have assignments that align to all the skills described in the Global Critical Thinking Scoring Template. In these cases, faculty could use multiple assignments in their assessment of students' demonstration of critical thinking.

The Chair of the QEP Advisory Committee will oversee assessment of students' critical thinking e-portfolios. Faculty who teach critical thinking classes will evaluate the work submitted during students' junior and senior years and the students' reflective assessment of their work and provide students with written feedback. To be eligible for graduation, students must complete all aspects of the portfolio.

The QEP Advisory Committee members will receive training in the assessment of CRT 325 research essays to establish inter-rater reliability. The Global Critical Thinking Scoring Template will be used to assess the essays. Students need to achieve an average score from two readers of at least a 3 (Proficiency) to pass the research essay graduation requirement. Students who do not reach that threshold will be given an Incomplete in the course and allowed to revise the paper for resubmission by the end of the sixth week of the new semester.

As part of the longitudinal and treatment/control design of the QEP assessment plan, the scores of students who have completed Project Curiosity will be compared with scores (pre- and post-test of NSSE, CCTDI, CCTST, ETS Proficiency Profile) of students who did not participate in Project Curiosity.

Assessment of each of the QEP Goals and Environmental and Student Learning Outcomes are summarized in Table 22.

Table 22 QEP Assessment Plan

QEP GOAL #1: The College will enrich its environment in order for students to mature as critical thinkers		
Outcomes/Impact on Student Learning	Method of Assessment	Year 5 Target Measures
ELO #1: Faculty will clearly communicate the definition of critical thinking.	• Critical Thinking Course Evaluation Form – Questions #12 & 13	• 90% of the faculty teaching critical thinking courses will receive a score of “agree” or “strongly agree.”
	• JUD 101 – Exam on critical thinking terms and learning objectives	• 90% of the students will score an 80% or better on this exam.
	• Peer-to-Peer Evaluation of Critical Thinking Courses	• 90% of the faculty teaching critical thinking courses will receive a score of “meets expectations” or “exceeds expectations”
ELO #2: Faculty will emphasize the importance of critical thinking.	• Critical Thinking Course Evaluation Form – Questions #13	• 90% of the faculty teaching critical thinking courses will receive a score of “agree” or “strongly agree.”
	• Peer-to-Peer Evaluation of Critical Thinking Courses	• 90% of the faculty teaching critical thinking courses will receive a score of “meets expectations” or “exceeds expectations”

Outcomes/Impact on Student Learning	Method of Assessment	Year 5 Target Measures
ELO #3: Faculty will model critical thinking behaviors.	• Critical Thinking Course Evaluation Form – Questions # 15	• 90% of the faculty teaching critical thinking courses will receive a score of "agree" or "strongly agree."
	• Peer-to-Peer Evaluation of Critical Thinking Courses	• 90% of the faculty teaching critical thinking courses will receive a score of "meets expectations" or "exceeds expectations"
ELO #4: Faculty will utilize best pedagogical practices for critical thinking.	• Critical Thinking Course Evaluation Form – Questions #7, 8, 9, 10, 11, & 15	• 90% of the faculty teaching critical thinking courses will receive a score of "agree" or "strongly agree."
	• Peer-to-Peer Evaluation of Critical Thinking Classes	• 90% of the faculty teaching critical thinking courses will receive a score of "meets expectations" or "exceeds expectations"
QEP Goal #2: The College will foster students' intellectual curiosity.		
Outcomes Impact on Student Learning	Method of Assessment	Measure
SLO #1: Students will be inquisitive and ask pertinent questions.	• Critical Thinking Course Evaluation Form – Questions # 4, 5, & 8	• 80% of the students will mark "very often" or "always" for the indicated questions on Critical Thinking Course Evaluation Form
	• Critical Thinking Scoring Template - Question #1	• 80% of the students will score at least 3 or better (proficient & exemplary)
	• Critical Thinking e-Portfolio Rubric	• 80% of the students will score at least an average score of 3 or better (proficient & exemplary).
	• Assessment Test: CCTDI	• 80% of the students will score at 70th percentile or above compared to a nationally normed referenced group.

	Method of Assessment	Year 5 Target Measures
	• Assessment Test: NSSE	• The College average score will be significantly greater than the mean score of comparable group at the .10 level of significance
	• Assessment Test: CEI-II	• Average scores on the post-test administered to graduating seniors will be significantly greater than the pre-test administered to the same group of students as incoming freshman at the .10 level of significance.
SLO #2: Students will be self-directed and intrinsically motivated learners.	• Critical Thinking Course Evaluation Form – Questions # 1, 2, 3, 4, 5, & 6	• 80% of the students will mark “very often” or “always.”
	• Global Critical Thinking Scoring Template - Question #3	• 80% of the students will score at least 3 or better (proficient & exemplary)
	• Critical Thinking e-Portfolio Rubric	• 80% of the students will score at least an average score of 3 or better (proficient & exemplary).
	• Assessment Test: CCTDI	• 80% of the students will score at 70th percentile or above compared to a nationally normed referenced group.
	• Assessment Test: NSSE	• The College average score will be significantly greater than the mean score of comparable group at the .10 level of significance.

Outcomes/Impact on Student Learning	Method of Assessment	Year 5 Target Measures
SLO #3: Students will be open-minded and consider diverse and alternative points of view.	• Critical Thinking Course Evaluation Form – Questions # 9 & 10	• 80% of the students will record a score of “agree” or “strongly agree.”
	• Critical Thinking e-Portfolio Rubric	• 80% of the students will score at least an average score of 3 or better (proficient & exemplary).
	• Assessment Test: CCTDI	• 80% of the students will score at 70th percentile or above compared to a nationally normed reference group.
	• Assessment Test: NSSE	• The College average score will be significantly greater than the mean score of comparable group at the .10 level of significance.
QEP Goal #3 The College will enhance students’ skills to think critically about an issue, problem, or idea.		
Outcomes/ Impact on Student Learning	Method of Assessment	Measure
SLO #4: Students will gather and analyze relevant information.	• Critical Thinking Course Evaluation Form – Question # 10	• 80% of the students will record a score of “agree” or “strongly agree.”
	• Global Critical Thinking Scoring Template – Questions #2 & 4	• 80% of the students will score at least 3 or better (proficient & exemplary).
	• Critical Thinking e-Portfolio Rubrics	• 80% of the students will score at least an average score of 3 or better (proficient & exemplary).
	• Assessment Test: SAILS	• Judson College’s average score will be significantly higher than the average score of the nationally normed reference group at the .10 level.

	Method of Assessment	Year 5 Target Measures
	• Assessment Test: CCTST	• 80% of the students will score at 70th percentile or above compared to a nationally norm reference group.
	• Assessment Test: NSSE	• The College average score will be significantly greater than the mean score of comparable group at the .10 level of significance
	• Assessment Test: ETS Proficiency Profile	• At least 80% of the students will score in the proficient category in regards to critical thinking.
SLO #5: Students will evaluate diverse and alternative points of view.	• Critical Thinking Course Evaluation Form – Question #11	• 80% of the students will record a score of "agree" or "strongly agree."
	• Global Critical Thinking Scoring Template – Questions #2, 4, & 5	• 80% of the students will score at least 3 or better (proficient & exemplary).
	• Critical Thinking e-Portfolio	• 80% of the students will score at least an average score of 3 or better (proficient & exemplary).
	• Assessment Test: SAILS	• Judson College's average score will be significantly higher than the average score of the nationally norm reference group at the .10 level.
	• Assessment Test: CCTST	• 80% of the students will score at 70th percentile or above compared to a nationally norm reference group.
	• Assessment Test: NSSE	• The College average score will be significantly greater than the mean score of comparable group at the .10 level of significance

	Method of Assessment	Year 5 Target Measures
	• Assessment Test: ETS Proficiency Profile	• At least 80% of the students will score in the proficient category in regards to critical thinking.
SLO #6: Students will develop and articulate well-reasoned and supported conclusions or actions about the issue, problem, or idea.	• Critical Thinking Course Evaluation Form – Question # 11	• 80% of the students will record a score of "agree" or "strongly agree".
	• Critical Thinking Scoring Template – Questions #2, 4, & 5	• 80% of the students will score at least 3 or better (proficient & exemplary).
	• Critical Thinking e-Portfolio Rubric	• 80% of the students will score at least an average score of 3 or better (proficient & exemplary).
	• Assessment Test: SAILS	• Judson College's average score will be significantly higher than the average score of the nationally normed reference group at the .10 level.
	• Assessment Test: CCTST	• 80% of the students will score at 70th percentile or above compared to a nationally normed reference group.
	• Assessment Test: NSSE	• The College average score will be significantly greater than the mean score of comparable group at the .10 level of significance
	• Assessment Test: ETS Proficiency Profile	• At least 80% of the students will score in the proficient category in regards to critical thinking.

Improved critical thinking skills will be measured to analyze the effect of the QEP on Judson College students. The QEP Director will analyze data from both embedded and national assessments to evaluate the effectiveness of Project Curiosity's impact on student learning at Judson College. For example, pre- and post-tests will be used to analyze changes in students' critical thinking scores. Students' scale scores on assessments will be analyzed using a matched-pair t-test. Statistical significance in improved scores would imply that Project

Curiosity is making a difference in the teaching and learning of applied critical thinking skills at the college level.

Regression analysis will be used to determine if there is a statistically significant relationship between the improvement of a student's scale scores and the number of CT courses a student takes. The number of CT courses a student completes will be the independent variable and the improvement of the student's scale score will be the dependent variable. A statistically significant relationship would suggest a correlation between a student's CT skills and the number of CT courses the student completes.

Longitudinal assessment will also be used to determine improvement in teaching critical thinking over time across the College. Each year the data from seniors will be analyzed for trends using regression. The year of implementation will be the independent variable and the improvement of the student's score will be the dependent variable. Statistical significance will imply the College is improving as an institution in teaching critical thinking skills over time.

In addition, formative data will be collected to determine whether implementation activities achieved the desired outcomes. The QEP Director will also examine the work products (i.e. syllabi, assignment sheets, examinations) of faculty who have participated in the workshops to look for direct evidence of implementation. These data will be used primarily for formative purposes to assess whether student learning outcomes are being achieved.

Formative findings will be distributed annually so that appropriate modifications can be made, and summative findings will be presented to SACSCOC in the five-year report.

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Appendix A: Institutional Research Calendar, Judson College Institutional Research Procedures Manual

Performance Date	Instrument	Responsible Office
Summer Orientation	College Student Inventory (CSI)	Institutional Research
9/15	Fall Enrollment Report	Registrar
9/15	Freshman ACT/High School GPA	Admissions
9/30	Recent Graduate Activity Survey	Registrar
9/30	Graduation Rate	Registrar
10/2	Academic Profile (GEC Test)	Institutional Research
10/9	Student Satisfaction Inventory (SSI)	Institutional Research
10/31	Residence Hall Focus Groups	President
11/3-14	Senior Exit Survey	Institutional Research
12/1-5	Course/Instructor Evaluations	Dean of Faculty
1/15	Interim Effectiveness Report	Departmental/Divisional
1/15	Spring Enrollment Report	Registrar
2/1	Residence Hall Focus Groups	President
3/1/Odd	Administrator Effectiveness Survey	Institutional Research
3/1/Even	Employer/Graduate School Advisor Survey	Institutional Research
4/12-16	Course/Instructor Evaluations	Dean of Faculty
5/15	Short Term/Annual Enrollment Report	Registrar
5/15	Annual Effectiveness Report	Departmental/Divisional
6/1	Strategic Plans	Departmental/Divisional
6/1	Alumnae Opinion Survey	Alumnae Affairs
7/1	Strategic Directives	President
7/1	Institutional Effectiveness Report	President

Appendix B: Highlights of Business and English 2013-2014 Institutional Effectiveness Reports

BUSINESS DEPARTMENT

The mission of the Department of Business of Judson College seeks to provide students with a strong foundation in the primary areas of business curriculum including accounting, business law, economics, finance, management, marketing, and statistics. Upon graduation, students with a degree in business will demonstrate competency in each of these subject areas, be effective in both oral and written communication, and be financially literate. Additionally, these students will be able to use this foundation in critical analysis. Graduates of Judson College Business program will be ethically aware and knowledgeable.

Educational Outcome *(Plan)*	Measure *(Do)*	Assessment Result *(Check)*	Improvement *(Act)*
Conduct critical analysis of business situations Students with a major in Business Administration will demonstrate the ability to the ability to use financial analysis in managerial decision making	70% of the student will receive a 70% or better on the financial analysis portion of the strategic case analysis administered as part of BUS 495: Capstone in Business Administration.	33% of the students (1 out of 3) scored a 70% or better on the financial analysis portion of the strategic case analysis.	Faculty will emphasize the importance of the financial analysis portion of the strategic case analysis. The project instructions will contain more detail requirements regarding what will be included within this section of the case analysis.

ENGLISH DEPARTMENT

The mission of the English Department is to bring students to improved skills in reading, writing, and speaking standard American English and to instruct them in methods and techniques of critical thinking and problem solving. Our courses focus on the history, forms, theories, and practices associated with the production and reading of written texts, especially literary ones, in order to help students compose essays that demonstrate their own informed, logically sound, and articulate evaluations and interpretations of texts. We also instruct students on how to write poems and stories and other creative expressions that embody high literary standards. The English Department prepares students for graduate programs, teaching, or other employment opportunities that require higher-level critical thinking and advanced writing proficiency.

Educational Outcome *(Plan)*	Measure *(Do)*	Assessment Result *(Check)*	Improvement *(Act)*
GOAL 1: Strengthening English Majors' Content Knowledge and Writing Skills SKILLS English students will demonstrate: 1. correct use of the grammatical principles of standard written English. 2. use of various expository writing forms and techniques (including argumentation, evaluation, analysis, interpretation, thesis development, incorporation and discussion of quotations from primary and secondary sources, and	English majors will select and submit written work to their electronic performance portfolios that they deem demonstrates successful mastery of the ten listed educational goals (skills and knowledge). Faculty will evaluate submissions using the evaluation rubric. 100% of graduating seniors will demonstrate mastery of these skills in their final performance portfolios as measured by a faculty review of each portfolio.	100% of students who submitted their best work to their electronic English Major Portfolio demonstrated at least satisfactory-level (7-8) or mastery-level (9-10) fulfillment of some of the content knowledge and writing skills measured in Goal 1. The faculty determined that not all submissions, especially best work from creative writing courses, could be measured using the current rubric. Alterations to the rubric to accommodate for the diversity of assignments for which the students are writing need to be made.	Revise Goal 1 and the English Major Portfolio assessment rubric to reflect that not all assignments submitted by students as their best work can adequately demonstrate all ten content knowledge and writing skills being assessed. Clarify that all students need to demonstrate mastery of all ten areas across their portfolio by the time they graduate, but each assignment submitted as they progress through the degree and add to their English Major Portfolio does not have to engage in all the areas being measured in Goal 1.

Appendix C: Student Survey – Quality Enhancement Plan (QEP) Ideas

Thank you for taking the time to share your ideas on how Judson can enhance your learning and/or the environment supporting your learning and accomplish the mission of Judson College. There is a space for you to submit three ideas. Please do not feel that you must have three ideas or that you are limited to three. If you have additional ideas, simply click on the link at the end of the survey and take it again.

What is your idea for the Judson College's QEP?

What is your idea for the Judson College's QEP?

What is your idea for the Judson College's QEP?

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Appendix D: Student Survey – QEP? Again?

QEP? Again?

Why do they want me to vote on a QEP Idea?

I thought the QEP was the writing test we take as seniors.

What is the QEP anyway?

The QEP, or the Quality Enhancement Plan, is a plan to improve the learning environment for you.

So, no, it's not just the writing test.

Judson's current QEP focuses on improving writing, which includes the Writing Center, English 325, and that writing test.

We need your opinion.

You are the only ones who truly knows what it is like to be a Judson student.

The QEP Committee needs you to vote on a topic for the next QEP.

1. Read the descriptions.
2. Decide which topic you think best will serve to enhance your learning environment.
3. Take your sticker and go down the hall to vote. The ballot is a big green poster hanging in your hall.
4. Place your sticker under the topic you want to vote for.

Ballots will be picked up at 4:00 PM, Thursday, November 15th.

QEP TOPICS			
Career Development/ Discovering One's Purpose	Critical Reading and Critical Thinking Skills	Health and Fitness (Wellness)	Mathematic Skills Improvement
A QEP plan to help you determine your purpose and calling. It will also help with interview skills, graduate school tests, and resume.	A QEP plan to help you evaluate, analyze, and synthesize what you read. We are talking about crazy smart, high-level reading and thinking skills.	A QEP plan to help you not gain the freshman fifteen. Well, that and learn how to make good choices in your diet and exercise. No more snack cakes.	12*7…wait, what is that? How do I factor? What am I supposed to do with P(x+2)? This plan will help you with this.

Thank you for your opinion,

Sincerely,

The QEP Committee: Dr. Arnold, Mrs. Fowler, Dr. Price, Ms. Dennison, Dr. Hokanson, Dr. Joann Williams, Ms. Andrea Abernathy, and Ms. Mary Amelia Taylor

Appendix E: Faculty Survey – Quality Enhancement Plan (QEP) Ideas

Quality Enhancement Plan (QEP) Ideas

Submit your ideas for overall directions or specific topics which you deem important to fulfilling our mission and improving learning outcomes for Judson students that could be developed, implemented, and evaluated as a QEP. You can respond multiple times, so feel free to submit all your ideas.

What is your idea for Judson College's QEP?

(Please submit one idea per form. You will have the opportunity to respond additional times after you click "submit")

Please choose EVERY topic area which corresponds to your idea.

- o Curriculum changes
- o Instructional changes
- o Faculty improvements
- o Technology-related ideas
- o Program ideas
- o Course administration ideas
- o Academic student support ideas
- o Student-life ideas
- o Campus and facility ideas
- o General administrative ideas
- o Experimental learning ideas
- o Spiritual climate ideas
- o Curricula area (mathematics, English, art, etc.)
- o Other

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Appendix F: Faculty Survey – We Want to Know Your View of Critical Thinking?

Email to Faculty from QEP Committee Chair sent on May 22, 2014

Dear colleagues,

As voted by faculty and students, the Quality Enhancement Plan will focus on critical thinking. The committee charged with developing this plan recognizes that critical thinking is already being taught at Judson College. At this time, we would like to show the preliminary learning goals for the new QEP and ask you to respond to several questions regarding your discipline/classes.

Section 01: QEP Goals.

As stated in Judson College's Mission, the College is committed to maturing its students into graduates who think critically. The Core Values of the College presents a framework for maturing critical thinkers. The following principles of the Core Values specifically inform the goals of the QEP:

- *The lifelong pursuit of knowledge and understanding;*
- *Openness, truthfulness, justice, and fairness to all people regardless of gender, ethnic origin, age, and level of ability; and respect for persons who embrace opinions, beliefs, convictions and religions different from our own;*
- *a work ethic characterized by diligence, honesty, stewardship, and a sincere effort to do one's best;*
- *The making of ethical choices based on the life of Christ, the teachings of the Bible, the well-being of others, and an informed conscience.*

QEP Goals:

1. *The College will enrich its environment in order for Judson students to mature as critical thinkers by*
    - *Clearly communicating the definition of critical thinking*
    - *Emphasizing the importance of critical thinking*
    - *Modeling critical thinking*
    - *Integrating pedagogical best practices concerning critical thinking*

2. *The College will foster students' intellectual curiosity so that students*
    - *Identify and ask pertinent questions*
    - *Are self-directed learners*
    - *Are open-minded and consider diverse and alternative points of view*

3. *The College will enhance students' skills to think critically about an issue, problem, or idea so that Judson students*
    - *Gather and analyze relevant information,*
    - *Evaluate diverse and alternative points of view,*
    - *Develop and articulate well-reasoned and supported conclusions or actions about an issue, problem, or idea.*

Section 02: Would you please respond to the following questions

1. What comments/suggestions do you have regarding the stated QEP goals?
2. What current strategies do you use to teach critical thinking in your classes?
3. Could you provide us a list of 3 – 5 classes that focus on developing critical thinking skills within your discipline?
4. If an ideal environment for fostering critical thinking existed at Judson, what would it look like and be like?

These questions will also be sent to you in an email for your convenience. Please return your replies to Dr. Chris Hokanson, Chair of the QEP implementation committee (Jewett 225 or via email: chokanson@judson.edu) by Friday, May 30, 2014.

Your feedback is essential to the successful development of the QEP, so please take the time to respond.

Appendix G: Minutes from July 24, 2014 Board of Trustees Meeting

JUDSON COLLEGE
Board of Trustees
Executive Committee
July 24, 2014

The Executive Committee of the Board of Trustees met on the campus on July 24, 2014. The following members were present: Roy Barnett, David Byrd, Jackie Crowell, Judi Favor, Doug Halbrooks, Robin Hall, Daphne Robinson, and David Potts. Also in attendance was Mary Ellen Clements.

...

After an explanation from Dr. Potts and Dr. Bullard and discussion with the Executive Committee on each policy, the following policies were approved by the Board. A copy of each policy is recorded and included with the minutes.

- Policy on the Process of the Evaluation and Awarding of Transfer Credit
  A motion was made by Roy Barnett to approve the policy. The motion was seconded by Jackie Crowell, and the motion carried unanimously.

- Substantive Change Policy
  A motion was made by Doug Halbrooks to approve the policy. The motion was seconded by Judi Favor, and the motion carried unanimously.

- Quality Enhancement Plan – "Project Curiosity" (strengthening critical thinking)
  A motion was made by Doug Halbrooks to approve the policy. The motion was seconded by Daphne Robinson, and the motion carried unanimously.

...

There being no further business, the meeting was adjourned.

Jackie B. Crowell
Jackie B. Crowell
Recording Secretary, Board of Trustees

David Byrd
David Byrd
Chairman, Board of Trustees

Appendix H: Global Critical Thinking Scoring Template

Overview: This rubric will be used by faculty teaching critical thinking courses to develop rubrics that fit within their specific assignment requirements and discipline. This rubric addresses levels 4, 5, & 6 of Bloom's Taxonomy. (*Adapted from St. Petersburg College's Assessment of Critical Thinking (ARC) Scoring Template)*

Performance Element	*Exemplary (4)*	*Proficient (3)*	*Developing (2)*	*Emerging (1)*	*Not Present (0)*
SLO #1: Students will be inquisitive and ask pertinent questions.	Identifies the main idea or problem with numerous supporting details and examples which are organized logically and coherently.	Identifies the main idea or problem with some supporting details and examples in an organized manner.	Identifies the main idea or problem with few details or examples in a somewhat organized manner.	Identifies the main idea or problem poorly with few or no details or states the main idea or problem verbatim from the text.	Does not identify the main idea or problem.
SLO #2: Students will be self-directed and intrinsically motivated learners.	Anticipates and addresses multiple possible outcomes; engages in direct and timely action(s); takes initiative; seeks appropriate assistance; owns and leads by managing the learning process.	Anticipates some outcomes, plans some actions, seeks assistance, and actively participates in the learning process.	Considers outcomes suggested by advisors, reflects on possible actions, accepts assistance, and moderately participates in the learning process.	Perseverates on a single outcome to the exclusion of others, ignores assistance, and minimally participates in the learning process.	Does not consider outcomes, seek assistance, or meaningfully participate in the learning process.
SLO #3: Students will be open-minded and consider diverse and alternative points of view. .	Insightfully relates concepts and ideas from multiple sources; uses new information to enhance chosen solution; recognizes missing information; correctly identifies potential effects of new information.	Accurately relates concepts and ideas from multiple sources; uses new information to enhance chosen solution; correctly identifies potential effects of new information.	Inaccurately or incompletely relates concepts and ideas from multiple sources; shallow determination of effect of new information on chosen solution.	Poorly integrates information from more than one source to support chosen solution; incorrectly predicts the effect of new information on chosen solution.	Does not identify new information for chosen solution.

SLO #4: Students will gather and analyze relevant information.	Thoroughly identifies and addresses key aspects of the problem and insightfully uses facts and relevant evidence from analysis to support and defend potentially valid solutions.	Identifies and addresses key aspects of the problem and uses facts and relevant evidence from analysis to develop potentially valid conclusions or solutions.	Identifies and addresses some aspects of the problem; develops possible conclusions or solutions using some inappropriate opinions and irrelevant information from analysis.	Identifies and addresses only one aspect of the problem but develops untestable hypothesis; or develops invalid conclusions or solutions based on opinion or irrelevant information.	Does not select and defend a solution.
SLO #5: Students will evaluate diverse and alternative points of view.	Insightfully interprets data or information; identifies obvious as well as hidden assumptions, establishes credibility of sources on points other than authority alone, avoids fallacies in reasoning; distinguishes appropriate arguments from extraneous elements; provides sufficient logical support.	Accurately interprets data or information; identifies obvious assumptions, establishes credibility of sources on points other than authority alone, avoids fallacies in reasoning; distinguishes appropriate arguments from extraneous elements; provides sufficient logical support.	Makes some errors in data or information interpretation; makes arguments using weak evidence; provides superficial support for conclusions or solutions.	Interprets data or information incorrectly; supports conclusions or solutions without evidence or logic; uses data, information, or evidence skewed by invalid assumptions; uses poor sources of information; uses fallacious arguments.	Does not evaluate data, information, or evidence related to chosen solution.
SLO #6: Students will develop and articulate well-reasoned and supported conclusions or actions about the issue, problem, or idea.	Uses specific inductive or deductive reasoning to make inferences; addresses implications and consequences; identifies facts and relevant information.	Uses logical reasoning to make inferences; addresses implications and consequences; identifies facts and relevant information.	Uses superficial reasoning to make inferences; shows some confusion regarding facts, opinions, and relevant information.	Makes unexplained, unsupported, or unreasonable inferences; makes multiple errors distinguishing fact from fiction.	Does not analyze multiple solutions.

Appendix I: Curiosity and Exploration Inventory (CEI-II)

Instructions: Rate the statements below for how accurately they reflect the way you generally feel and behave. Do not rate what you think you should do, or wish you do, or thinks you no longer do. Please be as honest as possible.		*Very Slightly or Not at All*	*A little*	*Moderately*	*Quite a Bit*	*Extremely*
1.	I actively seek as much information as I can in new situations.	1	2	3	4	5
2.	I am the type of person who really enjoys the uncertainty of everyday life.	1	2	3	4	5
3.	I am at my best when doing something that is complex or challenging.	1	2	3	4	5
4.	Everywhere I go, I am out looking for new things or experiences.	1	2	3	4	5
5.	I view challenging situation as an opportunity to grow and learn.	1	2	3	4	5
6.	I like to do things that are a little frightening.	1	2	3	4	5
7.	I am always looking for experiences that challenge how I think about myself and the world.	1	2	3	4	5
8.	I prefer jobs that are excitingly unpredictable.	1	2	3	4	5
9.	I frequently seek out opportunities to challenge myself and grow as a person.	1	2	3	4	5
10.	I am the kind of person who embraces unfamiliar people, events, and places.	1	2	3	4	5

Appendix J: JUD 101 Unit on Introduction to Critical Thinking and Intellectual Curiosity

The Judson College definition of critical thinking is:

> Critical thinking is both the dispositions that make one receptive to engage in higher-order thinking (inquisitiveness, self-directedness, and open-mindedness) and the continual and mindful process of improving one's higher-order thinking by asking pertinent questions, gathering and analyzing relevant information, evaluating diverse and alternative points of view, and developing and articulating well-reasoned and supported conclusions.

In this unit, you will be learning why developing your critical thinking is important for success in college and life, practicing a variety of critical thinking skills and strategies, and identifying which attitudes you can develop to help you to be more receptive to engaging in critical thinking.
Did you know intellectual curiosity is something you can cultivate? Exploring answers to questions that you are intellectually curious about helps you to become more self-motivated and more self-directed about pursuing your studies and developing well-thought-out stances on issues and answers to complex questions.

In college, you are given the gift of time to explore areas of learning that excite you. In this unit of study, you will identify questions that intrigue you and begin to engage with the complex answers to these questions. You will be tested on your knowledge of critical thinking and the importance of becoming a strong critical thinker.

Graded Assignments:

Intellectual Curiosity Journal: Keep a notebook in which you will record intriguing ideas and concepts that you hear in class, in the media, in discussion with your friends, etc. Also, compose questions you have about these topics that spark your intellectual curiosity. Write down your reflections about these questions. Explore your ideas and engage with your research on these topics in your journal.

Exam: Exam on critical thinking terms and learning objectives. You will need to define critical thinking, explain the value and importance of critical thinking, and identify key dispositions that can help one improve one's critical thinking.

Research Proposal: You will choose one of the topics about which you are intellectual curious and write a three to five page research proposal identifying your inquiry questions, summarizing diverse perspectives about the topic from your research, explaining your current answer to the question, and outlining where you would go next if you were to continue your research project.

Appendix K: Guidelines for Submitting Critical Thinking Courses for Review

Overview: As part of the QEP implementation plan on critical thinking, each academic discipline has been asked to submit courses that can be listed as critical thinking classes within the academic catalog. Students at Judson College will be required to complete three of these classes prior to graduation. To submit a critical thinking classes for consideration, course instructors and the Department Head need to submit the following information to be reviewed by the appropriate Critical Thinking Course Coordinator and then the QEP Advisory Committee.

1. A discussion regarding a clear link between critical thinking and the course.
2. A review of the critical thinking learning outcomes that will be covered within the course.
3. A plan that outlines how the instructor will implement critical thinking within the course.
4. An overview of the critical thinking assignments that will be required within the course.
5. An overview of how the instructor plans to evaluate the critical thinking assignments.

Documentation: This information needs to be presented to the committee through the following documentation:

1. A memo to the committee that addresses the link between critical thinking and the course.
2. If necessary, a revised course description to be included in the academic catalog. The QEP Advisory Committee will submit in connection with the Department Head the new description to the Academic Council as part of the QEP submission process.
3. A syllabus that provides:
    a. a course outline with emphasis on learning modules/lectures that address critical thinking within the discipline.
    b. critical thinking student learning outcomes.
4. Handouts for each critical thinking assignment that will be utilized within the class that articulates:
    a. the requirements of the assignment.
    b. how the assignment is linked to the critical thinking student learning outcomes.
    c. the grading criteria for the assignment.
5. A rubric that will be used to grade the assignment that is based on the Judson College Global Critical Thinking Scoring Template.

Submission Process: The documentation should be submitted as a pdf e-mail attachment to the Chair of QEP Advisory Committee by the 1st of the month to be reviewed by the QEP Advisory Committee. If approved by the QEP Advisory Committee, the committee will submit a critical thinking course request to the Academic Council prior to being sent to the faculty for a final vote for inclusion within the Academic Catalog. If not approved by the QEP committee, feedback about recommended changes will be provided to the instructor and Department Head.

Review of Critical Thinking Course Proposal

The QEP Advisory Committee has been charged with assisting faculty in reviewing classes that can be designated as Critical Thinking Courses within the Academic Catalog. This form will be used to review each proposal prior to discussion at the committee meeting.

Standards (Adapted from Parker University)

Component	*Needs to be Developed*	*Meets the Standards*
Section 1: The class is clearly linked to the student learning outcomes of critical thinking.	The document provides little to no evidence of how the course is aligned with the CT student learning outcomes. It is also difficult to determine how the course would support the student's ability to improve critical thinking skills.	The documentation provided effectively aligns the course with CT student learning outcomes and supports the student's ability to improve critical thinking skills.
Section 2: The course provides an overview of the lectures/learning modules as they relate to critical thinking.	The instructional strategies provided are not in alignment with the specified learning outcomes which support student's ability to improve critical thinking skills or have not been fully developed in order to support student's ability to improve critical thinking skills.	The instructional strategies provided are in alignment with the specified learning outcomes which supports student's ability to improve critical thinking skills.
Section 3: The assignments to be used in this class are clearly linked to critical thinking.	The assignments provided are not in alignment with the specified learning outcomes which supports student's ability to improve critical thinking skills or have not been fully developed in order to support student's ability to improve critical thinking skills.	The assignments to be used in this class are in alignment with the specified learning outcomes and support student's ability to improve critical thinking skills.
Section 4: The rubric used to grade the assignment is based on the Global Critical Thinking Scoring Template.	The rubric used is not in alignment or partially in alignment with the specified learning outcomes in the Global Critical Thinking Scoring Template. The feedback provided will not be adequate to support student's ability to improve critical thinking skills.	The rubric used is in alignment with the specified learning outcomes in the Global Critical Thinking Scoring Template. It will provide effective feedback to support student's ability to improve critical thinking skills.

Proposal Review Form:

The QEP Advisory Committee has been charged with assisting faculty in reviewing classes that can be designated as Critical Thinking Courses within the Academic Catalog. This form will be used to review each proposal prior to discussion at the committee meeting.

Section 1: The class is clearly linked to the student learning outcomes of critical thinking.		
	Please list the student learning outcomes provided in the document.	
	Strengths of this section are …….	
	Suggestions for improving this section are ……	
This section needs to be developed.		This section meets the standards.
Section 2: The course provides an overview of the lectures/learning modules as they relate to critical thinking.		
	Please list the student learning outcomes that are linked to each learning module.	
	Strengths of this section are …….	
	Suggestions for improving this section are ……	
This section needs to be developed.		This section meets the standards.
Section 3: The assignments to be used in this class are clearly linked to critical thinking.		
	Please list the student learning outcomes that are linked to each assignment.	
	The instructions for the assignment and grading criteria are provided.	
	Strengths of this section are …….	
	Suggestions for improving this section are ……	
This section needs to be developed.		This section meets the standards.
Section 4: The rubric used to grade the assignment is based on the Global Critical Thinking Scoring Template.		
	List the areas of the global template that are covered in the assignment rubric.	
	Strengths of this section are……	
	Suggestions for improving this section are……..	
This section needs to be developed		This section meets the standards

Decision (Please circle one)

Recommend this course be listed as a critical thinking class.

DO NOT Recommend this course be listed as a critical thinking class.

Appendix L: e-Portfolio – Overview and Instructions

Overview: All students participating in Project Curiosity will be required to keep an electronic portfolio of work demonstrating their engagement in critical thinking on Project Curiosity's electronic management platform. Prior to graduation, all seniors will need to write a comprehensive self-assessment of their growth as critical thinkers by reviewing and commenting upon all the work they have submitted across the years to their portfolios. Teams of faculty who teach critical thinking classes will anonymously evaluate the portfolio regarding the growth of the student as a critical thinker. To be eligible for graduation, students will need to complete all aspects of the portfolio.

*Procedure***:** Instructions as well as an overview of the e-Portfolio will be distributed and conducted in JUD 101 during Critical Thinking and Intellectual Curiosity Unit. The instructions and overview will also be repeated in CRT 325: Research Methods for Critical Thinking. Finally, the instructions will be distributed in all courses labeled critical thinking, will be included in the Project Curiosity Student Guide, and will be made available through the Project Curiosity website. Faculty teaching critical thinking courses will remind students to submit their respective work to their e-Portfolios at the end of each term. Key dates regarding the e-Portfolio will be posted on the Judson College calendar.

Students will be responsible to submit all listed documentation to their e-Portfolios as directed. Once the final item is submitted, the student will also be responsible to contact the Chair of the QEP Advisory Committee that the e-Portfolio is complete and ready for review. The QEP Advisory Committee will verify that the e-Portfolio is complete and notify the Registrar's Office that the student has completed the requirement for graduation. At least twice a year, the QEP Advisory Committee will assigned a team of faculty who teach critical thinking classes to review the completed portfolios. The purpose of the review is to provide information regarding the strengths and weaknesses of students regarding critical thinking development and to provide feedback to be used to improve Project Curiosity.

Instructions to student: The e-Portfolio is a collection of your work illustrating the development of your critical thinking skills. To be eligible for graduation, you must submit all sections of the e-Portfolio at least three weeks prior to the end of your last semester at Judson College. These dates will be posted on the Judson College Calendar. You will not be eligible for graduation if you do NOT meet this deadline and complete all sections of the e-Portfolio.

The following documentation needs to be included within the e-Portfolio:

1. Paper from CRT 325 with reflective piece and a copy of the rubric used to grade the paper.
2. Three other pieces of work completed during three different semesters. NOTE: Except for the semester in which you completed CRT 325, you cannot submit more than one piece of evidence per semester. The semester that you take CRT 325, you may submit the CRT 325 paper and another piece of evidence. The following can be submitted as evidence to fulfill this requirement.
    a. Works from three separate CRT classes with reflective pieces and a copy of the rubric used to grade each work.

   b. Work (essays, artwork, experiment designs, etc.) from other classes (or from independent endeavors) that demonstrate growth in critical thinking with reflective piece of each work and a copy of any rubric used to grade work (if graded).
3. You will also submit evidence of engagement during the development of a CT Event. This evidence will be submitted in the form of the reflective essay required in CRT 325.
4. After you have submitted all the work listed above, you will submit a comprehensive self-assessment of your growth as a critical thinker.

Once you have submitted the portfolio, you will e-mail the Chair of the QEP Advisory Committee that the portfolio is complete and ready for review. The Chair of the QEP Advisory Committee will inform you via e-mail that your portfolio is complete or that you are missing documentation. The portfolio must be completed at least three weeks prior to the end of your last semester at Judson College.

Please remember, the e-Portfolio is a graduation requirement.

Instructions for Reflective Piece per Each Work Submitted:

- In what ways were you a self-directed learner while working on this submission?
- If you had had more time to work on this submission, what more would you have done? What changes would you have made?
- In what ways did you pursue your intellectual curiosity in choosing and developing this submission?
- How do you consider and evaluate diverse and alternative points of view in this submission?
- In what ways did you develop and articulate well-reasoned, supported conclusions/actions for the issue, problem, or idea you focused on in this submission?
- Using the grading rubric provided by the instructor for this assignment or the Global Critical Thinking Scoring Template, how would you rate yourself? Why?
- What areas of your critical thinking did you develop? Could you still improve? Explain.
- What resources did you utilize to develop this submission?
- What plan of action will you take to further develop your critical thinking skills?

Reflective Questions for Graduating Students' Critical Thinking e-Portfolios

Compose a self-evaluative essay with detailed information about your experiences participating in Project Curiosity. More specifically, consider your answers to the following questions:

- In what ways were you a self-directed learner while working on your submissions to your critical thinking e-portfolio?
- What are your assessments of each of the submissions you uploaded to your critical thinking e-portfolio and their representation of your critical thinking skills.
- If you had had more time to work on the work you submitted to your e-portfolio, what more would you have done? What changes would you have made?
- In what ways did you pursue your intellectual curiosity in choosing and developing the work submitted to your critical thinking e-portfolio?
- How do you consider and evaluate diverse and alternative points of view in the work submitted to your critical thinking e-portfolio?
- Did you develop the essential skills of critical thinking through academic writing? How?

- What does your portfolio reveal to be your greatest strengths as a reader, thinker, and writer?
- What areas of your critical thinking could you still improve?
- In what ways did you develop and articulate well-reasoned, supported conclusions/actions for the issue, problem, or idea you focused on in the work submitted for your critical thinking e-portfolio?
- What do you think are your greatest strengths in critical thinking?
- When examining all the work submitted to your critical thinking e-portfolio, what are the biggest improvements you made in your critical thinking?

Checklist for Completion of e-Portfolio

This checklist will be used to verify that the student has successfully completed the e-Portfolio.

Name of Submission	*Date Submitted*
CRT 325	
Manuscript	
Rubric	
Reflective Piece	
Example 1	
Evidence of Work	
Rubric if applicable	
Reflective Piece	
Example 2	
Evidence of Work	
Rubric if applicable	
Reflective Piece	
Example 3	
Evidence of Work	
Rubric if applicable	
Reflective Piece	
Critical Event Reflective Piece	
Comprehensive Self-Assessment	

Questions for Faculty Evaluation of e-Portfolio

- When examining all the work submitted to a critical thinking e-portfolio, what are the biggest improvements the student made
    - In gathering and analyzing relevant information.
    - In evaluating diverse and alternative points of view.
    - In developing and articulating a well-reasoned and supported conclusions or actions about the issue, problem, or idea.
- When examining the reflective pieces written by the student, what areas did the student express that she improved on in her writing? Do you agree or disagree with the student's assessment?
- In what ways could we as a college have better assisted the student in developing her critical thinking skills? Explain.

Appendix M: Information Literacy Training Rubric

1. The information literate student determines the nature and extent of the information needed.				
Performance Indicator	*Outcomes*	*Emerging*	*Applying*	*Integrating*
1.1. The information literate student defines and articulates the need for information.	1.1.e. Identifies key concepts and terms that describe the information need	The student has a general idea of the information need but struggles to identify terms that express the information need.	The student uses the information need to formulate a list of key concepts and terms; however, the list does not encompass synonyms nor broader or narrower terms.	The student uses the information need to formulate a robust list of key concepts and terms that encompass synonyms and broader and narrower terms.
1.3. The information literate student considers the costs and benefits of acquiring the needed information.	1.3.a. Determines the availability of needed information and makes decisions on broadening the information seeking process beyond local resources (e.g., interlibrary loan; using resources at other locations; obtaining images, videos, text, or sound).	The student identifies the needed information but does not seek or acquire sufficient resources from the local library and beyond. Information acquisition is incomplete.	The student identifies the needed information and makes an effort to acquire sufficient resources that are beneficial. Quality resources from the local library are acquired; however, resources available beyond the library's domain are not utilized.	The student identifies the needed information and acquires sufficient resources from the local library, and if needed, resources beyond the local library's domain.

2. The information literate student accesses needed information effectively and efficiently.				
Performance Indicator	*Outcomes*	*Emerging*	*Applying*	*Integrating*
2.2. The information literate student constructs and implements effectively designed search strategies.	2.2. b. Identifies keywords, synonyms, and related terms for the information needed. 2.2.c. Selects controlled vocabulary specific to the discipline or information retrieval source 2.2.d. Constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books).	The student uses terminology that is imprecise. The student may search in questions or phrases instead of employing appropriate commands such as: Boolean operators, truncation, controlled vocabulary, proximity, and indexes.	The student uses some keywords, synonyms, and controlled vocabulary. The student attempts to use Boolean operators, truncation, proximity, and indexes but does not use these tools to their full potential.	The student adeptly constructs her search using controlled vocabulary, Boolean operators, truncation, proximity, and indexes. She precisely describes her information need, successfully accessing the information needed.

Appendix N: Student Critical Thinking Course Evaluation Rubric

Overview: The course evaluation survey will consist of three parts. Part one focuses on student engagement. Part two focuses on quality of critical thinking assignments. Part three addresses teaching methods and instructor engagement.

This document aligns each question within the course evaluation survey with the Student Learning Outcomes (SLO) and the Environmental Learning Outcomes (ELO).

Procedure: The course evaluation survey for designated critical thinking classes will be a paper and pencil survey administered during the last two weeks of the course. The instructors will provide the survey to a student within the class and leave the classroom. The student will distribute and collect the survey. The student will take the survey directly to the Academic Dean's Office. The Academic Dean's Office will be responsible for providing a summary report of the survey to the Chair of the QEP Advisory Committee and the instructor of the course. The Chair of the QEP Advisory Committee and the instructor will discuss the results and develop action plans for improvement.

I. About the Student					*Student/Environmental Outcomes*
SCALE	*Never*	*Rarely*	*Sometimes*	*Very Often*	*Always*
1. I completed required readings and assignments prior to coming to class.					*SLO #2:* Students will be self-directed and intrinsically motivated learners.
2. I was prepared for class discussion.					*SLO #2:* Students will be self-directed and intrinsically motivated learners.
3. I engaged in class discussion.					*SLO #2:* Students will be self-directed and intrinsically motivated learners.
4. I asked the instructor for help when needed.					*SLO #2:* Students will be self-directed and intrinsically motivated learners. *SLO #1:* Students will be inquisitive and ask pertinent questions.
5. I asked the Judson College librarian for help when needed.					*SLO #2:* Students will be self-directed and intrinsically motivated learners. *SLO #1:* Students will be inquisitive and ask pertinent questions.
6. I spent a minimum of 3 to 5 hours per week preparing for this class.					*SLO #2:* Students will be self-directed and intrinsically motivated learners.
II. About the Assignment					*Student/Environmental Outcomes*
SCALE	*Strongly disagree*	*Disagree*	*Undecided*	*Agree*	*Strongly Agree*
7. The required readings and assignments prepared me for class discussion.					*ELO #4:* Faculty will utilize best pedagogical practices for critical thinking.
8. The critical thinking assignments required within this class encouraged me to ask pertinent questions regarding the topics within the respective discipline.					*ELO #4:* Faculty will utilize best pedagogical practices for critical thinking. *SLO #1:* Students will be inquisitive and ask pertinent questions.

9. The critical thinking assignments required within this class encouraged me to challenge my current biases and assumptions.	*ELO #4:* Faculty will utilize best pedagogical practices for critical thinking. *SLO #3:* Students will be open-minded and consider diverse and alternative points of view.
10. The critical thinking assignments required within this class encouraged me to use multiple sources to develop questions and to broaden my perspective on the topic.	*ELO #4:* Faculty will utilize best pedagogical practices for critical thinking. *SLO #3:* Students will be open-minded and consider diverse and alternative points of view. *SLO #4:* Students will gather and analyze relevant information. *SLO #5:* Students will evaluate diverse and alternative points of view.
11. The critical thinking assignments required within this class improved my ability to develop and articulate well-reasoned and supported conclusions or actions about issues, problems, or ideas.	*ELO #4:* Faculty will utilize best pedagogical practices for critical thinking. *SLO #6:* Students will develop and articulate well-reasoned and supported conclusions or actions about the issue, problem, or idea.

III. About the Instructor					*Student/Environmental Outcomes*
SCALE	*Strongly disagree*	*Disagree*	*Undecided*	*Agree*	*Strongly Agree*

12. The instructor clearly defined what critical thinking is within the discipline.	*ELO #1:* Faculty will clearly communicate the definition of critical thinking.
13. The instructor clearly communicated the importance and purpose of critical thinking skills to college and career success.	*ELO #1:* Faculty will clearly communicate the definition of critical thinking. *ELO #2:* Faculty will emphasize the importance of critical thinking.
14. The instructor made it clear how each critical thinking assignment assisted the student in developing critical thinking skills.	*ELO #4:* Faculty will utilize best pedagogical practices for critical thinking.
15. The instructor modeled and practice critical thinking behaviors.	*ELO #3:* Faculty will model critical thinking behaviors.
16. The teaching methods the instructor used within the classroom promoted critical thinking.	*ELO #4:* Faculty will utilize best pedagogical practices for critical thinking.

Appendix O: Peer-to-Peer Critical Thinking Course Evaluation Rubric

Overview: This evaluation is to be used during a lesson/class that is focused on presenting a unit on critical thinking or an exercise/assignment to develop critical thinking skills. This evaluation is only to be used for developmental purposes. This rubric was adapted from rubrics developed by Pfeiffer University and Parker University.

Process: All faculty members who teach critical thinking classes will evaluate another faculty member who teaches a critical thinking class. The QEP Director will assigned faculty to evaluations. The evaluator will provide the instructor with written comments regarding the strengths of the class period as well as suggestions for improvement. The evaluator will also submit the form to the QEP Director. The QEP Director will summarizes all comments from all evaluations. The summary report will be shared during a critical thinking workshop to encourage open discussion regarding best practices used within the classroom. The summary report will also be used to develop critical thinking workshops to address common suggestions of improvement.

	Exceeds expectations	*Meets expectations*	*Needs Development*	*ELO/SLO*
1. Students actively participated in class activity.	All students were actively engaged.	The majority of students were actively engaged.	Few students were actively engaged.	*SLO #2:* Students will be self-directed and intrinsically motivated learners.
2. Students asked relevant and pertinent questions.	Multiple questions were asked by many students.	Multiple questions were asked by few students.	Some questions were asked by few students.	*SLO #1:* Students will be inquisitive and ask pertinent questions.
3. Students applied critical thinking skills during the class period.	Lesson requires students to evaluate and synthesize, stretching students' abilities.	Lesson requires students to analyze and critique.	Lesson requires students to recall and describe.	*SLO #5:* Students will evaluate diverse and alternative points of view.
4. Students are encouraged to challenge their biases and assumptions.	Lesson causes students to reflect on their thought processes and to question their biases and assumptions.	Lesson causes students to reflect or comment regarding stated assumptions and biases.	Lesson does not cause students to consider their own assumptions, thought processes, and practices.	*SLO #3:* Students will be open-minded and consider diverse and alternative points of view.

5. Students are encouraged to evaluate information.	Lesson requires students to analyze confounding data, identify and attack fallacies, evaluate conclusions of others, and/or synthesize information into a coherent argument.	Lesson requires students to distinguish between facts and inferences, interpret numerical relationship in graphs, and identify appropriate and inappropriate conclusions.	Lesson merely presents information to students; the students are not provided the opportunity to explore the information and reach a conclusion.	*SLO #4:* Students will gather and analyze relevant information. *SLO #5:* Students will evaluate diverse and alternative points of view.
6. Instructor models critical thinking behavior.	Instructor effectively demonstrates multiple instructional strategy that assist students in developing critical thinking skills.	Instructor effectively demonstrates an instructional strategy that assist students in developing critical thinking skills.	Instructor demonstrates an instructional strategy that does not align with the specific learning goal which assist students in developing critical thinking skills.	*ELO #3:* Faculty will model critical thinking behaviors. *ELO #4:* Faculty will utilize best pedagogical practices for critical thinking.
7. Instructor links class to critical thinking outcomes.	The instructor clearly and logically links critical thinking learning outcomes either in lesson plan or during the course session.	The instructor lists learning outcomes but does not link the outcomes to the class activities.	Instructor does not provide a link between critical thinking learning outcomes and class activities.	*ELO #1:* Faculty will clearly communicate the definition of critical thinking. *ELO #2:* Faculty will emphasize the importance of critical thinking.

Briefly describe the critical thinking activity.

List the critical thinking outcomes.

List all instructional strategies used in this class.

I wish you had done more….

I wish you had done less….

Additional comments and suggestions.