5th Annual Clemson Thinks^2 Faculty Institute June 2017

CT^2 Faculty Institute Outcomes

- Design and develop a communication-intensive *CT^2* Seminar on the topic or subject the faculty member chooses and that integrates targeted student learning outcomes related to critical thinking.

- Redesign and redevelop existing faculty members' course(s) to integrate the targeted student learning outcomes related to *Clemson Thinks^2.*

- Develop and integrate activities and assignments into faculty members' courses that will develop the targeted *CT^2* skills in their students and enhance academic and engagement experiences.

- Develop strategies for engaging students and ensuring they comprehend assignments and are achieving *CT^2* learning outcomes.

- Identify alternatives for assessing student *CT^2* skills.

- Monitor and assess students' competency in *CT^2* skills using multiple assessment instruments.

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CT^2: Development of the Program

Development of the Quality Enhancement Plan (QEP) that would become CT^2 began in September 2011.

President Barker charged the Steering Committee with responsibility to select, plan, and implement the QEP on behalf of Clemson University. In his instructions to the Steering Committee, President Barker outlined six requirements for the QEP:

1. It must align with Clemson's 2020 Road Map.
2. It must be campus wide.
3. It must be open to all.
4. It must involve engagement.
5. It must be transformative.
6. It must be sustainable.

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CT^2: Development of the Program

The Steering Committee began its deliberations by soliciting QEP proposals from across Clemson University. Students, faculty, and staff were invited to submit five-page pre-proposals.

Groups from across campus submitted 21 proposals. Steering Committee members read all 21 proposals and scored them based upon alignment with the Clemson 2020 plan and potential to encourage broad-based university involvement as well as identification of specific and measurable student learning outcomes. Team members also scored each proposal on six qualitative attributes: innovation, degree of daring, transformative potential, uniqueness, relevance, and focus.

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CT^2: Development of the Program

As the result of this process, six of the 21 proposals were selected as "finalists." Each of these is summarized briefly below:

- **Clemson Grand Challenges**
- **CU in the World**
- **Enduring Questions Seminars**
- **Reinventing General Education**
- **Research Skills and Critical Thinking**
- **Stewards of Place**

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CT^2: Development of the Program

Linking Finalist Proposals to Assessment Data:

Once the six finalist proposals were identified, the team turned to evidence from assessment data in order to identify areas of student achievement that would most likely benefit from a quality enhancement plan. Three types of data were central to this evaluation: Graduate Record Examination (GRE) scores, Educational Testing Service (ETS) Proficiency Profile data, and artifacts from the ePortfolios required of all graduating seniors at Clemson.

After evaluating the assessment data, the Steering Committee concluded that critical thinking was the area of intellectual development most conducive to broad-based university participation and most likely to benefit from the kind of sustained focus available through the QEP process.

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CT^2: Development of the Program

Faculty Development

An important component of the QEP will be the development of a formal faculty development program focused on critical thinking to complement the opportunities for professional development through Clemson's Office of Teaching Effectiveness and Instruction (OTEI). This program will pursue multiple, related goals:

- provide thought-provoking discussions of critical thinking
- learn best practices in critical thinking pedagogy
- build and nurture a community of "CT^2 Scholars" committed to improving the teaching of critical thinking skills
- deliver necessary resources to assess students' mastery of critical thinking skills.

The Faculty Development Program has a primary goal to develop the "community of faculty scholars committed to and prepared for instruction in critical thinking." This community will form around a shared interest in critical thinking and will encompass instructional faculty, co-curricular activities, and mentoring relationships. **Clemson Thinks^2 seeks the engagement of the entire university.**

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CT^2: Development of the Program

Engaged Faculty = Engaged Students

If our students are to value critical thinking skills, they must sense the same values in our faculty.

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CT^2: Where We Are Today

Progress

- 126 Faculty members have participated in the Clemson Thinks^2 Faculty Institute since 2013
- 315 CT^2 classes in 38 disciplines since Fall 2012
- Over 6000 students enrolled in CT^2 classes since Fall 2013
- 116 CT^2 sections 2016-17
- CT^2 and the Faculty Institute serve as models for the Clemson Forward Plan and the revision of general education

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CT^2: Where We Are Today

Spring 2017 CT^2 Courses Conducted

Faculty First Name:	Faculty Last Name:	Course Prefix:	Course Number:	Section Number:
Kirby	Player	AGED	4160	001
Melissa	Vogel	ANTH	H2010	001
Lisa	Rapaport	ANTH	4660	001
David	Kwartowitz	BIOE	4310	001
David	Kwartowitz	BIOE	6310	001
Christine	Minor	BIOL	2000	002
John	Hains	BIOL	2040	001
John	Hains	BIOL	2040	002
Lisa	Rapaport	BIOL	4660	001
Christie	Sampson	BIOL	4940	009
Lindsey	Dixon	COMM	3610	001
Jason	Lucas	CSM	1500	001
Jason	Lucas	CSM	1500	002
Jason	Lucas	CSM	1500	003
Jennifer	Goree	CU	2010	001
Angela	Rogers	ED	3970	006
Jacquelynn	Malloy	EDEL	4050	001
Gabriel	Hankins	ENGL	2120	001
Karen	Kettnich	ENGL	2150	008
Karen	Kettnich	ENGL	2150	009

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CT^2: Where We Are Today

Spring 2016 CT^2 Courses Conducted

Faculty First Name:	Faculty Last Name:	Course Prefix:	Course Number:	Section Number:
Sarah	Cooper	ENGL	3040	015
Sarah	Cooper	ENGL	3040	019
Kathleen	Nalley	ENGL	3140	018
Kathleen	Nalley	ENGL	3140	019
Sarah	Grigg	ENGR	2200	001
Tom	Owino	ENSP	2000	001
Erica	Walker	GC	2400	001
Lance	Howard	GEOG	1030	001
Scott	Brame	GEOL	1120	001
Arelis	Moore de Peralta	HEHD	3990	001
Ralph	Welsh	HLTH	2020	002
Marilyn	Reba	MATH	1010	001
Bruce	Whisler	MUSC	3180	001
Mary	Steck	NURS	3330	401
Jennifer	Ingle	PHIL	1030	012
Daniel	Frost	POSC	4500	001
Lauren	Duffy	PRTM	3450	002
Garrett	Stone	PRTM	3450	001
Ben	Stephens	PSYC	3100	500
Mashal	Saif	REL	3000	001
Brenda	Vander Mey	SOC	4600	001
Shannon	Robert	THEA	2100	005

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CT^2: Where We Are Today
2016 Faculty Institute Participants' Departments

Department:
Agricultural Education
Architecture
Bioengineering
Biological Sciences
Chemistry
Civil Engineering
Communication
Education and Human Development*
Educational and Organizational Leadership*
English
Genetics and Biochemistry*
Graphic Communications
Philosophy & Religion
Physics and Astronomy
STS (and English)
Youth, Family and Community Studies

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* = new departments represented in Faculty Institute 2016

CT^2: Where We Are Today

Faculty Institute Participants' Departments: 2013-17

Department	First Year Attended
Accounting	2015
Animal and Veterinary Science	2015
Architecture	2015
Art	2014
Bioengineering	2014
Biological Sciences	2013
Biological Sciences & Materials Science and Engineering	2014
Chemical and Biomolecular Engineering	2014
Chemistry	2015
Civil Engineering	2013
Communication Studies	2014
Construction Science & Management	2013
Electrical and Computer Engineering	2015
Education and Human Development	2016
Educational and Organizational Leadership	2016
English	2013
Environmental Engineering and Earth Sciences	2013
Finance*	2017
Food, Nutrition and Packaging Science	2014
General Engineering	2014
Genetics and Biochemistry	2016
Graphic Communications	2013
History & Geography	2015
Institute of Environmental Toxicology	2013
Institute on Family and Neighborhood Life/Youth, Family, and Community Studies	2014
Languages	2015
Libraries	2015
Mathematical Sciences	2013
Nursing	2014
Parks, Recreation and Tourism Management	2014
Performing Arts	2013
Philosophy	2013
Physics and Astronomy	2015
Plant and Environmental Sciences*	2017
Political Science	2014
Psychology	2013
Public Health Sciences	2013
SAFES/Environmental Horticulture	2013
School of Computing*	2017
Sociology & Anthropology	2013
STS (Dean, Arch, Art, & Humanities)	2013
Student Affairs (CU)	2013
Teacher Education	2013
Undergraduate Studies	2013

* = first time attended 2017

44 Departments!

CT^2: Where We Are Today

Faculty Institute Participants' Testimonials:

***The Clemson Thinks^2 Faculty Institute* is an effective faculty development program. Below are some testimonials from those who attended the Faculty Institute.**

- I would like to acknowledge that this workshop was organized in a very professional way. There was a lot of attention to detail in materials to be used and resources. It is obvious that organizers worked very hard to provide a very rich learning experiences for us. All instructors were very well-prepared and engaging. Moreover, the teaching dynamics used gave us the opportunity to share ideas and opinions in a very respectful environment. I am sure that this learning experience will generate positive results for my development as a faculty, as well as a human being. Thanks so much for this wonderful opportunity. Great job!

- I really enjoyed all the presentations. We had an excellent variety of perspectives, and I feel more grounded in the critical thinking approach. I know that to really understand this pedagogy, I need to teach using the approach myself, but I feel prepared to try it. I also enjoyed the fine group of people who were part of the conference. I made several new contacts, and I am really excited about ways that we might network in the future.

- I think that you guys did a great job this year, and I really enjoyed the institute. I felt challenged and inspired throughout the week.

- I really enjoyed the Institute and I received a lot of extremely useful information.

- I learned much about critical thinking, including its conceptualization and operationalization. The institute was interactive, informative, and well-done overall. I'm much more excited and informed about deliberately emphasizing critical thinking in my classes.

- I really enjoyed all the presentations. We had an excellent variety of perspectives, and I feel more grounded in the critical thinking approach. I know that to really understand this pedagogy, I need to teach using the approach myself, but I feel prepared to try it. I also enjoyed the fine group of people who were part of the conference. I made several new contacts, and I am really excited about ways that we might network in the future.

- I found almost all of the Institute to be very helpful and I came out of it even more enthusiastic (maybe even "evangelical") about the creation and dissemination of CT courses at CU.

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CT^2: Where We Are Today

Faculty Institute Participants' Testimonials:

***The Clemson Thinks^2 Faculty Institute* is an effective faculty development program. Below are some testimonials from those who attended the Faculty Institute.**

- I think this is the most that I've had a space to think about course development since graduate school. And it was GREAT to be paid for that. I think you also did a great job of making things relevant across disciplines. I was skeptical about that but it was good. Many of the presentations included practical elements that I could incorporate into my class. The timing of things in terms of attending class turning things in etc. worked out.

- The information was presented in a way we can easily use to integrate into our course design/syllabus/etc. to enhance the students' overall understanding. It is immediately applicable. Also, I really enjoyed interacting with other faculty and graduate students.

- The space to reflect critically about my own teaching methodology. I learned many teaching techniques that I look forward to incorporating in the classroom.

- I think that idea of the institute is wonderful. This is definitely something that all universities/colleges need.

- The opportunity to examine my own thinking in a structured way, the chance to meet colleagues from other units and hear about their teaching, and the wealth of resources that I can take with me to keep working in my own teaching.

- The presentations by faculty members for both the syllabi and the successes and failures were inspiring, engaging, informative, and impressive. I wish I had more opportunities at Clemson to hear about what faculty in other departments are doing. The presentations were all excellent in unique ways. Please tell all of the faculty who presented that I was impressed and inspired by what they have done!

- I appreciate the content and the ideas and the support that CT2 is providing to all of us. I have also enjoyed being able to connect with people from across disciplines as it challenged me to think about teaching in different ways.

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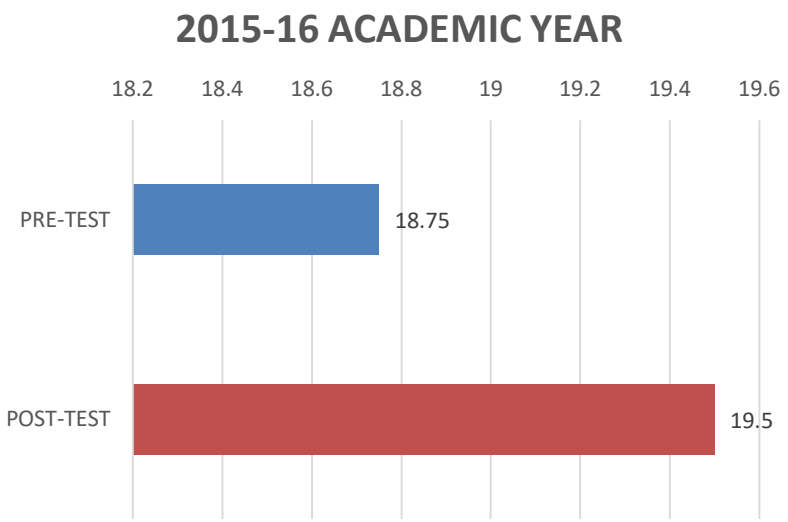
CT^2: Where We Are Today - Findings

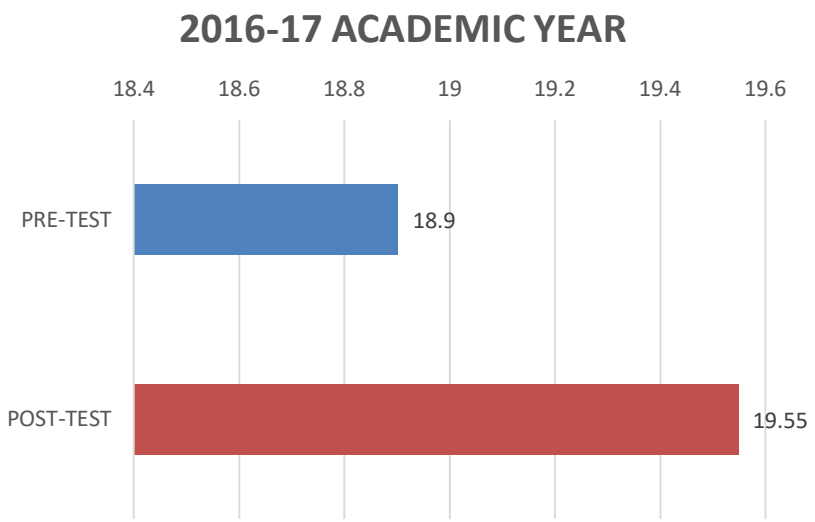
Year Three

70% of the students in CT^2 courses increased critical thinking scores on the pre/post assessment

Year Four

78% of the students in CT^2 courses increased critical thinking scores on the pre/post assessment





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Student Evaluations

TERM	QUESTION	AvgOfSCORE
Fall 2014		
1408	I have gained skills in interpreting data and information from one source and applying it to make informed decisions.	4.34
1408	I had the opportunity to develop creative solutions to complex issues presented during the course.	4.34
1408	I received feedback on my written and verbal communication assignments throughout the course.	4.22
1408	This course provided me with the opportunity to analyze multi-dimensional problems.	4.43
1408	This course helped me expand my knowledge and application of critical thinking skills.	4.39
Spring 2015		
1501	This course provided me with the opportunity to explore possible solutions and outcomes to specific problems or issues.	4.27
1501	I have gained skills in interpreting data and information from one source and applying it to make informed decisions.	4.38
1501	I had the opportunity to develop creative solutions to complex issues presented during the course.	4.32
1501	I received feedback on my written and verbal communication assignments throughout the course.	4.63
1501	This course provided me with the opportunity to analyze multi-dimensional problems.	4.32
1501	This course helped me expand my knowledge and application of critical thinking skills.	4.47

Attitude + Knowledge + Thinking Skills = Critical Thinking

CT^2: Where Do We Want to Go in 2017-18?

- Increase the diversity of disciplines participating in CT^2 *(currently 38)*
- Increase the number of students participating in CT^2
- Increase the number of CT^2 sections taught *(140 sections 2017-18)*
- Build CT^2 Faculty Scholars community *(20 Faculty Scholars appointed 2014-17, increase to 25+)*
- Increase involvement of wider University community *(speakers, events etc.)*
- Increase development and diffusion of pedagogical techniques
- Create mini-Faculty Institutes

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CT^2: Where Do We Want to Go in 2017-18?

Pre-Test		Post-Test	
OVERALL	23	OVERALL	30
Percentile	85	Percentile	98
Analysis	5	Analysis	7
Inference	12	Inference	13
Evaluation	6	Evaluation	10
Induction	13	Induction	15
Deduction	10	Deduction	15
Minutes on test	38	Minutes on test	42

More pre and post-test results like this!

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Welcome to the 2017 CT^2 Faculty Institute!

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