University-wide critical thinking initiative: Two-year narrative of vision and implementation

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Overview

- The QEP Process
- Our First Two Years
- Applied Critical Thinking (ACT) activities in the School of Science and Engineering
- Empowering Students, Enabling Faculty
The QEP Process

LARRY KAJS
PROFESSOR AND INTERIM ASSOCIATE DEAN,
SCHOOL OF EDUCATION
CO-CHAIR, QUALITY LEADERSHIP TEAM
University of Houston-Clear Lake was established in 1974 as an upper level university. In 2013, UHCL was approved to offer freshmen and sophomore classes.

UHCL of is one of four universities that make up the University of Houston System.

UHCL is a comprehensive university with four schools including Business, Education, Human Sciences and Humanities, and Science and Computer Engineering.

UHCL enrolls over 8,000 students in 41 bachelor and 45 master level and 2 doctoral degree programs, with over 220 full, associate, and assistant professors, and over 530 staff.

UHCL has distinctive reputation as a community-minded, partnership-oriented university.
## Selection Process and Timeline

<table>
<thead>
<tr>
<th>Step</th>
<th>Details</th>
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<tbody>
<tr>
<td><strong>Mandate</strong></td>
<td>Southern Association of Colleges and Schools (SACS) to Developmental topic to improve student learning.</td>
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<tr>
<td><strong>The Plan</strong></td>
<td>Must include institutional processes. Identify key issues from assessment. Focus on learning outcomes.</td>
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<tr>
<td><strong>The Process</strong></td>
<td>Steering committee (2010-2011). Subcommittees – Needs assessment; Promotion; Implementation; Assessment.</td>
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<tr>
<td><strong>The Choice</strong></td>
<td>Critical Thinking – the 4C Model. Selection of the Foundation.</td>
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<tr>
<td><strong>Professional Development</strong></td>
<td>Professional Development (training) by cohort. The syllabus endorsement process.</td>
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In keeping with its mission and strategic plan, UHCL selected the topic of *Applied Critical Thinking (ACT) for Lifelong Learning and Adaptability* for its Quality Enhancement Plan.

Applied Critical Thinking (ACT) means that students not only know how to think critically, but they also have the disposition to do so; apply critical thinking skills on a daily basis.

The development of ACT skills has also been identified as an important academic and professional need in national reports (e.g., The Association of American Colleges and Universities, the College Board, the National Association of Colleges and Employers).
<table>
<thead>
<tr>
<th>The 4C’s</th>
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<tbody>
<tr>
<td><strong>Curiosity</strong></td>
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<tr>
<td><strong>Connections</strong></td>
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<tr>
<td><strong>Creativity</strong></td>
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<td><strong>Communication</strong></td>
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In early 2013, the University of Houston-Clear Lake (UHCL) Quality Enhancement Plan (QEP) entitled **Applied Critical Thinking (ACT) for Lifelong Learning and Adaptability** was approved by the Southern Association of Colleges and Schools (SACS).

Foundation of Critical Thinking Model serves as the basis for ACT for the professional development of faculty/staff at UHCL, and in the design of university syllabi—the hallmark of the UHCL QEP process.

**Supporting the Plan**
The university recognizes the importance of a team approach (QEP Leadership Team) and professional development for ongoing support of its faculty and staff with professional development opportunities.
The QEP Leadership Team acts in an advisory capacity to faculty and the QEP Director to ensure successful implementation of the QEP. Service on the QLT provides members with additional professional development and greater insight to the UHCL ACT processes.

Membership of the QLT includes the following:
- Co-Chair (Faculty)
- Co-Chair (Administrator) – OPA/QEP Director—ex officio
- Faculty Members (Lead Faculty) - two from each school
- Faculty Senate Representative
- Library Representative
- Student Services Representative
- Professional and Administrative Staff Association (PASA) Representative
- Support Staff Association (SSA) Representative
- Student Representative
- The Associate Vice President of Academic Affairs—ex officio
QEP Leadership Team (QLT) Responsibilities

- Provide oversight of implementation/evaluation/revision of QEP
- Act as liaisons between the QLT and their respective schools
- Review and approve annual SACS QEP
- Review and approve courses submitted for ACT status
- Assist faculty with assessing ACT where needed
- Plan, design, and implement ACT workshops
- Provide oversight of the ACT website
- Perform other assignments as needed for success of QEP process
Lead Faculty/Faculty Senate Representative

- Each school has Lead Faculty for the QLT.

- A Faculty Senate Representative also serves on the QLT.

- Responsibilities of the Lead Faculty:
  - Serve as School Representatives on QLT
  - Act as Liaisons between QLT and respective schools
  - Lead critical thinking activities in respective schools
  - Serve as mentors for new faculty
  - Perform other assignments as needed for QEP success
Professional development is crucial to the success of the UHCL QEP.

Professional development plan has been implemented by the QEP Leadership Team with the heart of the plan being a two-day session based on The Foundation of Critical Thinking Model.

Faculty members who have implemented an ACT-approved syllabus are asked to mentor other faculty members to prepare ACT-approved syllabi (and collect assessment data).

Even though each school has different characteristics—we have elected to focus on common vocabulary, common language, and common assessments of critical thinking skills.
Our First Two Years

TROY VOELKER
ASSOCIATE PROFESSOR, SCHOOL OF BUSINESS
PROGRAM COORDINATOR, MANAGEMENT
QLT REPRESENTATIVE FOR BUS

1. The Endorsement Process
2. Data: Faculty, Staff, Courses, and Students
3. Mentoring a Successful Course Endorsement
An ACT-endorsed syllabus contains:

1. A standardized ACT statement
2. A description of how critical thinking manifests within the course or profession
3. A plan which enables a three-level assessment of each student’s individual performance relative to the ACT-SLO’s.
4. At least three student learning outcomes, each grounded in a unique element of thought (ACT-SLO).
5. Course assignments and activities that clearly link to the ACT-SLO’s.
Professional Development Outcomes

Participating Faculty

Participating Staff

BUS | HSH | SCE | SOE | BUS | HSH | SCE | SOE | Other
Syllabi for all courses available in the QEP section at www.uhcl.edu/OIE
Program Requirements
Accounting principles
Economics principles
Written Communication
Statistics
Quantitative Methods
Management Theory
Marketing Principles
Money and Banking
Business Finance
Information Systems
Strategic Management

Specializations and Electives
Intermediate Finance
Organizational Communication
Marketing Research
Organizational Behavior (2)
Mentoring a Successful Endorsement

Professional Development
- Workshops
- Syllabus boot camps
- Practice activities (SEEI)

Reverse Engineering
- Start with a project or assignment the faculty member created or significantly adopted

Finding the SLO’s
- Ask how an “okay” submission differs from an “excellent” submission
- Ask how a “poor” submission differs from an “okay” submission

Describing critical thinking
- Profession or general course
- Opens door for central questions and fundamental concepts

Plan for assessment
Applied Critical Thinking (ACT) Activities in the School of Science and Computing Engineering (SCE)

1. SCE involvement in ACT courses
2. Adapting elements and standards for SCE
3. SEE-I and other activities
4. Results
5. Findings and implications
ACT Participation in SCE

• SCE participation in ACT activities is high.
  ○ 41% of approved ACT syllabi from SCE.
  ○ 47% of faculty members with an ACT syllabi from SCE.

• One reason: SCE feels that ACT is a natural for Science, Technology, Engineering and Mathematics (STEM).
## Broad-Based Participation

<table>
<thead>
<tr>
<th>Subject</th>
<th>ACT Syllabi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>1</td>
</tr>
<tr>
<td>Chemistry</td>
<td>2</td>
</tr>
<tr>
<td>Computer Information Systems</td>
<td>3</td>
</tr>
<tr>
<td>Computer Science</td>
<td>6</td>
</tr>
<tr>
<td>Engineering Management</td>
<td>1</td>
</tr>
<tr>
<td>Industrial Hygiene</td>
<td>1</td>
</tr>
<tr>
<td>Mathematics</td>
<td>1</td>
</tr>
<tr>
<td>Physics</td>
<td>1</td>
</tr>
<tr>
<td>Statistics</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>
Incorporating ACT

- ACT syllabi are used to incorporate critical thinking into:
  - Syllabi
  - Lecture notes and examples
  - Examinations and quizzes
  - Assessment
  - Teaching approach
Incorporating ACT

- Instructors go beyond ACT syllabi requirements to utilize CT as a lens for course improvement.
Framing Questions

- Use Critical Thinking elements to frame questions in exercises and examinations.
- Example: EMGT 5230 Negotiation Strategies
Elements of Thought: These are the type of questions students need to think about (and answer) during each negotiation exercise, the critique of examples for the Mid-Term project, and the analysis of the case for the final project:

1. Purpose:
   a. What am I trying to accomplish?
   b. What is my central aim? My purpose?

2. Questions:
   a. What question am I raising?
   b. What question am I addressing?
   c. Am I considering the complexities in the question?

3. Information:
   a. What information am I using in coming to that conclusion?
   b. What experience have I had to support this claim?
   c. What information do I need to settle the question?

4. Inferences/Conclusions:
   a. How did I reach this conclusion?
   b. Is there another way to interpret the information?
5. Concepts:
   a. What is the main idea here?
   b. Can I explain this idea?
6. Assumptions:
   a. What am I taking for granted?
   b. What assumption has led me to that conclusion?
7. Implications/Consequences:
   a. If someone accepted my position, what would be the implications?

Can ACT be effectively used for laboratory courses for science?

- Too early to tell, but
- 3 out of 4 approved ACT syllabi for Science courses are for laboratory courses.
- Faculty seem to think that CT may help minimize mistakes,
- which are especially important to avoid in laboratories.
Example: CHEM 4737

- CHEM 4737 Quantitative Chemical Analysis
- CT brings focus on its capstone laboratory project.
# CHEM 4737 Syllabus

## Tentative Lab Schedule
Spring 2015 (Jan.20–May 04)

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Date</th>
<th>Lectures / Experiments</th>
<th>Quizzes</th>
<th>Report Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 20</td>
<td>Lab Check In and preparation&lt;br&gt;Class Note 1: Intro topics and Gravimetric Analysis</td>
<td>--------</td>
<td>------------</td>
</tr>
<tr>
<td>2</td>
<td>Jan 27</td>
<td>Lab 1: Calibration of Glassware</td>
<td>--------</td>
<td>Feb 03</td>
</tr>
<tr>
<td>3</td>
<td>Feb 03</td>
<td>Lab 2: Gravimetric Cl</td>
<td>Quiz 1</td>
<td>Feb 17</td>
</tr>
<tr>
<td>4</td>
<td>Feb 10</td>
<td>Class Note 2: Volumetric Analysis and Precipitation Titrations&lt;br&gt;Lab 3: Volumetric Cl (Fajans Method)</td>
<td>Quiz 2</td>
<td>Feb 17</td>
</tr>
<tr>
<td>5</td>
<td>Feb 17</td>
<td>Lab 4: Volumetric Cl (Volhard Method)</td>
<td>Quiz 3</td>
<td>Feb 24</td>
</tr>
<tr>
<td>6</td>
<td>Feb 24</td>
<td>Class Note 3: Acid-Base Titrations&lt;br&gt;Lab 5: Acid-Base Titration (Soda Ash Unknown)</td>
<td>Quiz 4</td>
<td>Mar 03</td>
</tr>
<tr>
<td>7</td>
<td>March 03</td>
<td>Exam 1</td>
<td></td>
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<tr>
<td>8</td>
<td>March 10</td>
<td>Spring Break</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>March 17</td>
<td>Lab 6: KHP Determination (Acid-Base titration)</td>
<td>Quiz 5</td>
<td>Mar 31</td>
</tr>
<tr>
<td>10</td>
<td>March 24</td>
<td>Class Note 4: Complex ion and EDTA titrations&lt;br&gt;Lab 7: EDTA Titration (Mg Unknown)</td>
<td>Quiz 6</td>
<td>Apr 07</td>
</tr>
<tr>
<td>11</td>
<td>March 31</td>
<td>Lab 8: EDTA Titration (Ca and Mg in tap water)</td>
<td>Quiz 7</td>
<td>Apr 14</td>
</tr>
<tr>
<td>12</td>
<td>Apr 07</td>
<td>Class Note 5: Oxidation-Reduction Titrations&lt;br&gt;Lab 9: KMnO₄ Determination of Ca</td>
<td>Quiz 8</td>
<td>Apr 21</td>
</tr>
<tr>
<td>13</td>
<td>Apr 14</td>
<td>End of Semester Project: unknown sample analysis</td>
<td></td>
<td>Apr 28</td>
</tr>
<tr>
<td>14</td>
<td>Apr 21</td>
<td>Exams 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Apr 28</td>
<td>Exams 2</td>
<td></td>
<td></td>
</tr>
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</table>
Student Learning Outcomes (SLOs)

Upon completion of this course, students will be able to:

1. Gain *in-depth* understanding of the basic *concepts* of quantitative chemical analysis *clearly* and *precisely*, and master basic principles underlying all the types of quantitative chemical analysis.

2. *Clearly* identify the *purpose* of the major task of quantitative chemical analysis. Not only know what, how but also why.

3. *Clearly* understand how important the accuracy and precision are in a specific quantitative chemical analysis, and know *in depth* how to achieve a reliable analysis.

4. Develop *accurate* methods for data evaluation for the *information* collected from a specific quantitative chemical analysis, and *logic and fair* error analysis for experimental *inference*.

5. Acquire *relevant* laboratory skills via hands-on practices of quantitative chemical analysis, aimed at accuracy and precision of the data.

6. Develop *significant* collaborating skills with the awareness of *implication* and *consequences* by engaging in various lab analysis tasks with lab partners.

7. *Logically* design a *relevant* practical quantitative analysis method for an unknown sample based on the *concepts* learned in the course.
Critical Thinking Activities and Assessment

A semester-end project on the quantitative determination of an unknown sample will be assigned to the students in an earlier time of the semester. The students are encouraged to work in groups (freedom on combination, but no more than 4 students per group). The evaluation of the activities is used to assess how well critical thinking is incorporated into the course. These assessments will be used as input to the UHCL Critical Thinking database for internal assessment of Critical Thinking, and will not affect your grade of the course.

1. With the given information, student is required to *logically* design a relevant analysis procedure for an unknown sample based on the concepts learned in the course, and conduct the experiments on their own which will be due right before the final exam. (SLO #2, 7)

2. Student will perform *accurate* data evaluation for the *information* collected by developing *logic and fair* error analysis for experimental *inference*. Student will also develop *significant* collaborating skills with the awareness of *implication* and *consequences* by engaging in independent lab analysis tasks with lab partners. (SLO #4, 6)
CT Elements as logic of thinking

- Instructors experimented with using CT elements to construct logic for thinking for disciplines and courses.
- **Examples:** Logic of thinking for
  - Information Systems: discipline level
  - Relational Database Systems: course level
  - Mapping from the Object-Oriented Model to the Relational Model: topic level
- Provide a lens and chances for instructors to rethink about their courses in a high level.
Why the Analysis of Thinking is Important
Everyone thinks; it is our nature to do so. But much of our thinking, left to itself, is biased, distorted, partial, uninformed, or downright prejudiced. If we want to think well, we must understand at least the rudiments of thought, the most basic structures out of which all thinking is made. We must learn how to take thinking apart.

All Thinking Is Defined by the Eight Elements That Make It Up. Eight basic structures are present in all thinking. Whenever we think, we think for a purpose within a point of view based on assumptions leading to implications and consequences. We use concepts, ideas and theories to interpret data, facts, and experiences in order to answer questions, solve problems, and resolve issues.

Thinking, then:

- generates purposes
- raises questions
- uses information
- utilizes concepts
- makes inferences
- makes assumptions
- generates implications
- embodies a point of view

Simply "Mouse Over" any object on the page to learn more about it.
The logic of Information Systems in Business in ACT Elements

[a] Purpose: To effectively use information systems to support and expand business performance of an organization.

[b] Question: How do we identify the needs, challenges and opportunities of an organization, and use information systems to effectively satisfy the needs and challenges, and exploit the opportunities?

[c] Information: Relevant information about the organization, industry and the economy that can effectively be collected. Relevant information, concepts and theories of information systems and information technologies.

Note: This includes an understanding of the context of the collected information and the uncertainty and partiality of the information.
[d] Interpretations and inferences: Design, develop, evolve, and manage information systems, policies, guidelines, and cultures that support business functions and decision making.

[e] Essential concepts: IS, IT, management, business and other relevant concepts and theories that guides the design, management, use, and assessment of information systems.

[f] Assumptions: It is possible to devise cost effective information systems to support various needs of an organization.
Logic of Thinking in IS

[g] Implications and consequences: Well-designed IS solution to well-defined problems can be effective. Poorly designed IS solutions can be detrimental.

[h] Point of view: Numerous possible considerations within an organized need to be considered and balanced to capture and model the problems, and design and evolve effective IS solutions.
Applying CT Techniques: SEE-I

- Experimenting with using CT technique, such as SEE-I and FPC in class.
- SEE-I:
  - State
  - Elaborate
  - Exemplify
  - Illustrate
- Iteratively use SEE-I to refine understanding.
Iterative refinement of modeling a concept using SEE-I in CSCI 5333 Database Management System (DBMS) in classroom

- **Topic:** composition and aggregation in UML Class diagram
- **Two classroom exercises (in two sections)**
  - From scratch
  - Using Wikipedia as a starting point
Classroom exercise goal: Use SEE-I and Fundamental and Powerful Concept (FPC) to apply critical thinking to learn aggregation and composition in Unified Modeling Language (UML) class diagram.

Aggregation is an association between two objects modeling “a part of” relationship. Example: an engine is a part of a car.
Example: Aggregation

From Wikipedia: additional annotations or comments made are in red and enclosed by parenthesis.

Aggregation[edit]

Class diagram showing Aggregation between two classes

**Aggregation** is a variant of the "has a" association relationship; aggregation is more specific than association. It is an association that represents a part-whole or part-of relationship. As a type of association, an aggregation can be named and have the same adornments that an association can. (Thus, an aggregation is a type of associations and share many properties of an association, such as having an association class.) However, an aggregation may not involve more than two classes; it must be a binary association. (This is because a part-of relationship always has two objects: the part and the whole.)

**Aggregation** can occur when a class is a collection or container of other classes, but the contained objects are not owned by the containing class.
Example: Aggregation

(1) Aggregation:

- **State:**
  - V1: An aggregation is a *relationship* between two classes that indicates a part-of or a part-whole relationship.
  - V2: An aggregation is an *association* between two classes that indicates a part-whole relationship.

- Elaborate: note that the portions of the following points that are not included directly in Wikipedia are italicized.
Example: Aggregation

- Elaborate: note that the portions of the following points that are not included directly in Wikipedia are italicized.
  1. Strictly speaking, it models a **part-of** or a **part-whole** relationship between two objects of the two classes. The parts are aggregated into the whole.
  2. The contained object may exist on its own. There is no strong **life-cycle dependency** on the container object.
  3. In UML, it is **represented by a hollow diamond** on the container class.
  4. It **must be a binary association** as a part-of relationship is always between two objects.
  5. An aggregation is a special case of an association of UML and it inherits properties of an association.
Example: Aggregation

- Exemplify: the relationship between an engine and a car may be modeled as an aggregation.
  1. An engine X may be a part of car A. Thus there is an aggregation relationship between the object engine X and the object car A. There is no such aggregation relationship between engine X and another car B.
  2. We assume that the engine in this application may exist on its own. For example, we may remove engine X from car A before destroying A. If no such assumption can be made, the relationship may not be aggregation.
- FPC: An aggregation models a part-of relationship in which the contained object may exist on its own.
Aggregation: Exemplify

From Wikipedia: additional annotations or comments made are in red and enclosed by parenthesis.

Aggregation[edit]

Class diagram showing Aggregation between two classes

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Aggregation can occur when a class is a collection or container of other classes, but the contained classes are relatively autonomous and the outside world has no access to the individual contained objects.
CT Survey

- Pilot survey on CT in courses
- Example: CSCI 5333: 26 respondents.

[1] In the past, how often did you think about how you think? Average: 3.92

(1) Nearly never.
(2) Once about every several years.
(3) Once about every several months.
(4) Once about every several weeks.
(5) Once about every several days or even more frequently.
CT Survey

[2] In the past, how often did you think about ways to improve your thinking?
   Average: 3.65
   
   (1) Nearly never
   (2) Once about every several years
   (3) Once about every several months
   (4) Once about every several weeks
   (5) Once about every several days or even more frequently

[3] Comparing to the average skills or subjects, how important do you think critical thinking is for CS and CIS? 1.81

   (1) Much more important
   (2) More important
   (3) About the same
   (4) Less important
   (5) Much less important
[4] How useful and important was the iterative SEE-I and annotation classroom exercise (aggregation and composition with Wikipedia material as the source of information)? 1.85

(1) very useful and important
(2) useful and important
(3) neutral
(4) useless and unimportant
(5) very useless and unimportant

[5] How interesting was the iterative SEE-I and annotation classroom exercise (aggregation and composition with Wikipedia material as the source of information)? 2.08

(1) very interesting
(2) interesting
(3) neutral
(4) uninteresting
(5) very uninteresting
CT Research

- Two faculty members have just started a quantitative research project on applying CT in their disciplines:
  - Using CT in their courses
  - Using conceptual mapping together with CT in their disciplines
Some Lessons Learned

- ACT has a good potential in improving the quality of teaching and learning.
- ACT provides a lens for instructors to frame and improve their courses.
- Significant instructor efforts are required.
- Faculty needs incentives and encouragement to participate.
- There are dedicated faculty members.
Some Lessons Learned

- A school-wise ACT effort has potential.
  - Repeating CT throughout the entire degree study has a better chance to impact students more permanently.
- Issues need to be resolved with other school requirements, such as accreditation.
Empowering Students, Enabling Faculty

SHREEEKENHA SUBRAMANIAN
ASSOCIATE PROFESSOR OF HUMANITIES
CHAIR, DEPARTMENT OF LIBERAL ARTS
QLT REPRESENTATIVE FOR HSH

1. Critical Thinking and Education
2. UHCL First Year Experience (FYE)
3. Humanities and ACT
4. Empowerment through Education
Civilization and the University

- Shangyang, China, 2nd millennia BCE
- Takshashila, Pakistan, 7th BCE
- Nalanda, India, 5th BCE
- Plato, Athens, 2nd BCE
- Magnaura, Constantinople, 9th CE
- Al-Azhar, Cairo, 9th CE
- Bologna, Italy, 1088 CE
Epistemology and Critical Thinking: Seeing past the Monolith

“Never again shall a single story be told as though it were the only one.”


“Water is the softest thing, yet it can penetrate mountains and earth. This shows clearly the principle of softness overcoming hardness.”

*Lao Tzu*
“Engaged pedagogy produces self-directed learners, teachers, and students who are able to participate fully in the production of ideas” (43).

Democratic education
Decolonizing the classroom
Liberation pedagogy
Choosing a Course

- Which course is ideal to institute critical thinking as a central practice for the course?

- In what ways does bringing CT skills to the front of the table change your course?

- Is this new for you? Or are you an old hand at it? Either way, many syllabi probably do not define learning outcomes around CT or conceptualize CT in an open way for students.
First Year Seminar

- Brand-new first year course instituted in Fall 14
- New program with new faculty for incoming students
- University-wide course that is implemented simultaneously with QEP-endorsement process
- Gateway course is CT-centered and implements CT as a strategy toward intellectual progress at the university
In the Humanities Classroom

- At the first year introductory level
- At the capstone level – graduating class
- Critical Practices
  - Reading
  - Writing
  - Dialoguing
- Choosing and defining a project
“Our strategy should be not only to confront empire, but to lay siege to it.

To deprive it of oxygen.

To shame it.

To mock it.

With our art, our music, our literature, our stubbornness, our joy, our brilliance, our sheer relentlessness – and our ability to tell our own stories.

Stories that are different from the ones we’re being brainwashed to believe.

The corporate revolution will collapse if we refuse to buy what they are selling – their ideas, their version of history, their wars, their weapons, their notion of inevitability.

Remember this: We be many and they be few. They need us more than we need them. Another world is not only possible, she is on her way. On a quiet day, I can hear her breathing.”

~ Arundhati Roy
Outside/Inside: Prison/University

- What assumptions do we bring to the table?
- What point of view do we privilege?
- What is the purpose of a humanities education?
- What are the questions at issue?
I laugh when I hear that the fish in the water is thirsty

You don't grasp the fact that what is most alive of all is inside your own house. and so you walk from one holy city to the next with a confused look!

Kabir will tell you the truth: go wherever you like, to Calcutta or Tibet; if you can't find where your soul is hidden, for you the world will never be real!

There is a basket of fresh bread on your head, yet you go door to door asking for crusts.

Rumi

fb.com/hollieholdenlove
Knowledge

- On the nature of knowledge
- Construct
- Subjectivity

“Privilege blinds, because it’s in its nature to blind. Don’t let it blind you too often. Sometimes you will need to push it aside in order to see clearly.”

- Chimamanda Ngozi Adichie, Wellesley College Commencement Speech, 2015
Questions?
## Can you do this online?

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Students can (and do) stop and repeat video lecture sections</td>
<td>• It’s harder to administer direct questions to the instructor</td>
</tr>
<tr>
<td>• SAFE ASSIGN and instructor commenting tools in Blackboard allow for detailed feedback</td>
<td>• This does not scale well (do it well or do it large, pick one)</td>
</tr>
<tr>
<td>• Easy to create a 100% active learning environment</td>
<td>• Loses the benefits of symmetric dialog</td>
</tr>
</tbody>
</table>
“Also, I appreciate your communication and input. Though this class has not been ‘easy,’ it has been enjoyable because of the amount of effort you put into it.”
MGMT 3301 SU15

“I know, I had no idea this course would help me at work the very next day. I tried to quit because no one would listen to my ideas and I am still finishing school. But they asked me to...”
MGMT 3301 SU15

“I found this on r/DataisBeautiful today. I remember you telling us about that subreddit...and showing us some pretty cool data visualizations. Thanks for two semesters of learning!”
MGMT 3313 SP15

“Great discussions! I didn’t enjoy the writing assignments in the beginning but found value in them after a few weeks.”
MGMT 4354 SP14
“but I already do critical thinking!”

- Grading (diagnostic) vs. Facilitating (developmental)
- Critical thinking as a skill (FRID)
  - Less developed thinkers often lack a structure to their thought
  - (Slightly) more developed thinkers often lack the ability to self-visualize a more complex or nuanced answer
- The benefit of common language
  - Reinforces the generalizability of critical thinking
  - Aids in transmission from course to course
  - Facilitates application outside of education
- Leveraging the University-wide system