



Infusing Critical Thinking throughout General Education

James L. Ratcliff, Ph.D.

President and Senior Consultant

Performance Associates Postsecondary Consulting

1678 North Gill Drive, Pueblo West, CO 81007

JRatcliff@HigherEdConsultants.com

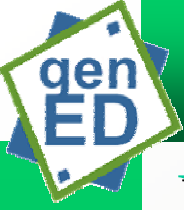
Telephone: 719-406-8350



Why Critical Thinking is Important to Quality Liberal Learning

- "Quality education" is proportional to the depth of analysis that students have at their disposal.
- Liberal learning, constructed to promote critical thinking, broadens students' horizon of possibility, expands their sense of a larger humanity, and liberates them from the confines of their common sense.
- In quality education, critical inquiry functions to cultivate students' ability to question, deconstruct, and then reconstruct knowledge in the interest of emancipation.

Zeus Leonardo, "Critical Social Theory and Transformative Knowledge: The Functions of Criticism in Quality Education," Educational Researcher, Vol. 33, No. 6, pp. 11-18.



Diversity courses and workshops are linked to student gains in Critical Thinking

- ❖ Openness to diversity and growth in intellectual inquisitiveness and critical thinking are linked.
- ❖ Participation in a cultural awareness workshop increases students openness to diversity.





Critical Thinking in General Education: Goals and Assessment

General Education Component	Institutions a Stated General Education Goal		Percent with a Goal that also Assess that Goal
	Number	Percent	Percent
Computing	92	51.9%	64.1%
Critical Thinking	119	67.2%	64.7%
Cultural Diversity	113	63.8%	44.2%
Reading/Writing	156	88.1%	77.6%
Speaking/Listening	98	55.4%	68.4%

Ratcliff, J.L., Johnson, D.K., La Nasa, S.M., and Gaff, G.J (2001). The Status of General Education in the Year 2000: Summary of A National Survey. Washington, D.C.: Association of American Colleges and Universities.

Curricular Organization

- I. Critical thinking intense courses
(California Community Colleges)
- II. Stand alone critical thinking course
(California State University campuses)
 - Reading
 - Philosophy
 - Psychology
- III. Critical thinking throughout the
curriculum (University of California
campuses)





Embedding Critical Thinking Assessment into the Curriculum

- Purposefully integrates critical thinking into evaluation activities of courses.
- Assessment criteria are based on program critical thinking goals, not just course goals.
- Assessment is by tests, projects, papers and activities.
- Evaluation of performance is often done by groups of faculty rather than single instructors.



Are entering first year students at the University of Delaware able to:

- Recognize contradictions or inconsistencies in written or verbal language?*
-

Are graduating U.D. seniors able to do this?



Integrating critical thinking across courses in the curriculum

- Increases student learning, and
- Helps student to:
 - Pose questions
 - Propose hypotheses
 - Gather and analyze data
 - Make arguments
 - Portray perspective





Integrating critical thinking into courses across the curriculum

- ❖ Increases teaching pleasure for faculty,
- ❖ Class discussions are richer,
- ❖ Students are more fully engaged,
- ❖ The quality of student performance improves.





Integrated critical thinking

- ❖ Does not happen through serendipity;
- ❖ Requires planning:
 - ✓ In each individual course,
 - ✓ In the program (gen ed or major) as a whole.
- ❖ Requires fostering through pedagogical practices.
- ❖ Requires explicit and ongoing assessment.



The Challenge of Critical Thinking

- ❖ Is to awaken students to the existence of problems and issues around them;
- ❖ Every class begins with “Something that is a problem or a cause of wonder.”²
- ❖ Critical thinking is a productive activity. “Critical thinkers are engaged with life.”¹

1. Stephen D. Brookfield, [Developing Critical Thinkers](#). San Francisco, 1987.

2. G. Meyers, “Reality, consensus and reform in rhetorical composition teaching,” [College English](#), 1986.



Planning for Critical Thinking

1. Critical Thinking is a learnable skill.
2. Problems, questions and issues are:
 - a) the entry point to critical thinking;
 - b) The source of sustained motivation.
3. Successful courses balance challenges to think critically with student needs.
4. Courses are student assignment center rather than content and lecture centered.

John C. Bean, Engaging Ideas. San Francisco: Jossey-Bass, 1996.



Planning for Critical Thinking

5. Students are required to formulate and justify ideas in writing or other appropriate means.
6. Critical thinking is not a solitary activity; Students benefit from dialogue, critique and feedback.
7. Critical thinking courses nurture metacognitive abilities.
8. Students' developmental needs are used in the design of the courses.

John C. Bean, [Engaging Ideas](#). San Francisco: Jossey-Bass, 1996.

Selecting Assessment Criteria

- ❖ “Critical Thinking” means different things to different people.
- ❖ Achieving some consensus on the dimensions of critical thinking to be assessed is an important first step.
- ❖ Some critical thinking skills are generic, while others are more germane to specific majors and fields of study.





● Do You Agree or Disagree?

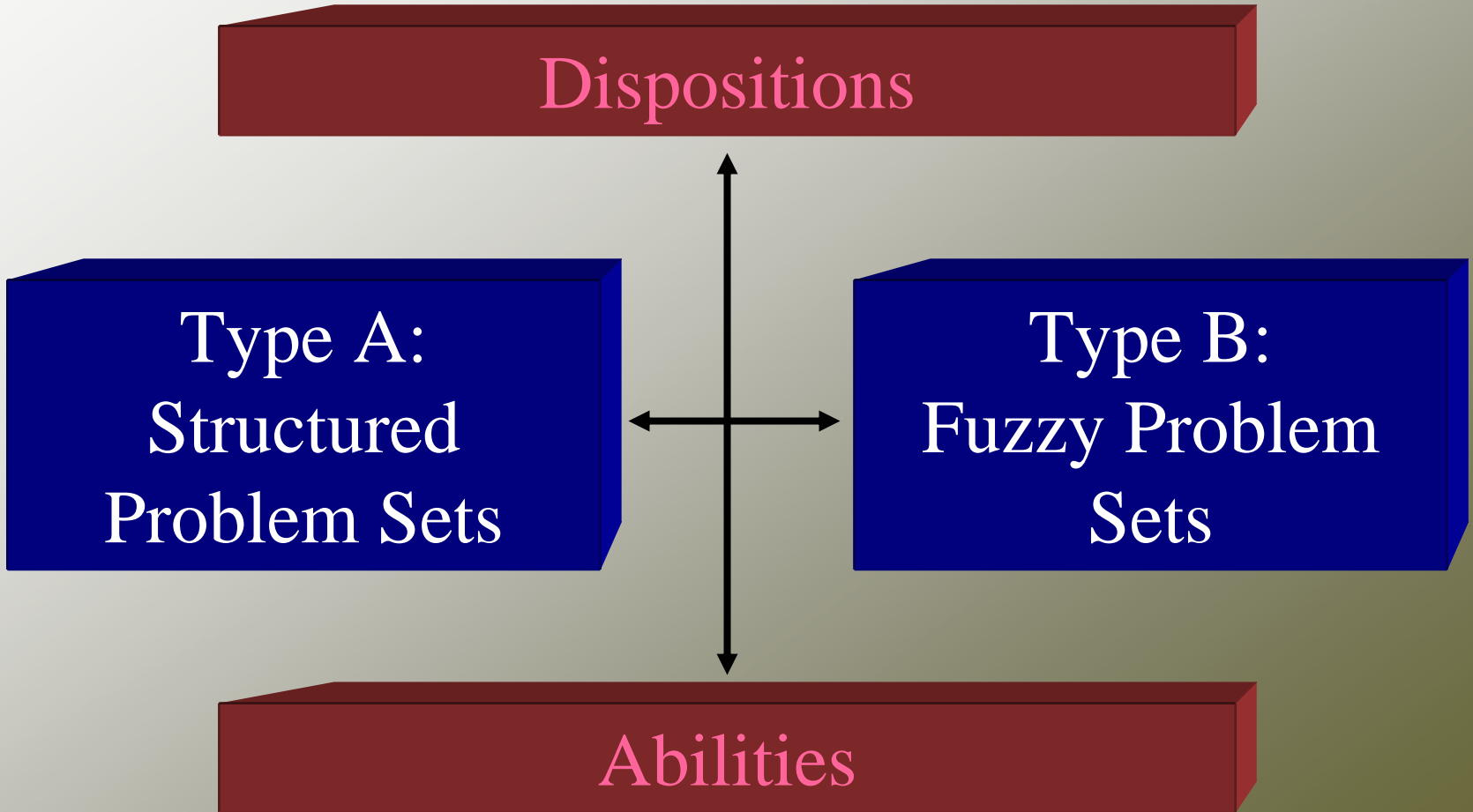
All U.D. graduates should be able to:

- *Recognize the relationship between the purposes(s) of a communication and the problems or issues that must be resolved in achieving that purpose?*

Are U.D. graduates able to do this?



Dimensions of Critical Thinking





Dimensions of Critical Thinking

Critical Thinking is Related to Certain Other
“Basic” and “Higher Order” Skills

Writing

Reading

Quantitative skills

Analytic Reasoning

Logical Reasoning

Problem Solving

Decision-Making



Dimensions of Critical Thinking

General Education and
Generic Critical Thinking Skills



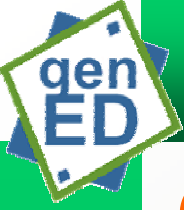
Contextually-Mediated Skills
(Major or Specialized Field)



Critical Thinking at Kings College

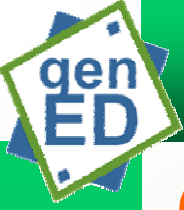
- Thoroughly integrated into the curriculum
 - ✓ Foundational Course (Critical Thinking 101)
 - ✓ Core Courses
 - ✓ The Major
- Critical Thinking expectations increase at each level:
 - ✓ Freshman
 - ✓ Sophomore
 - ✓ Junior
 - ✓ Senior





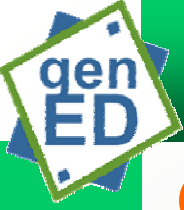
Critical Thinking 100 (required) at Kings College

- The central tool of education is clear thinking. Whatever the discipline,...in the presentation of any viewpoint or idea, it is essential to have good reasons for one's beliefs and to support one's views with sound arguments....
- This course focuses on the process by which one develops and supports one's beliefs with clear, unambiguous arguments and evaluates the strength of the arguments of others in real-life situations.
- It includes practice in inductive and deductive reasoning, presentation of arguments in oral and written form, and analysis of the use of language to influence thought.
- It applies the reasoning process in fields such as business, law, science, and the arts.



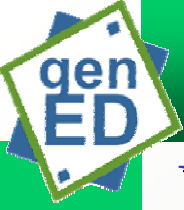
Critical Thinking 100 at Kings College: Course Purposes are to develop:

- The habit of making reasonable, rationally defensible choices;
- the habit of assessing and defending the reasonableness of one's beliefs and values;
- an appreciation of the vital role critical thinking plays in decision-making, both private and public;
- an appreciation of the importance of looking at an issue from a variety of points of view and of recognizing the complexity that surrounds most controversial issues;
- an understanding that policy decisions are based on both logical reasoning and explicit value judgments;
- appreciation of the power of human reason and a recognition of its limitations.



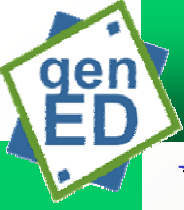
Critical Thinking 100 at Kings College: Course Objectives

1. to distinguish an argument from a set of claims which are not inferentially related;
2. to distinguish the functions of language to express and influence meaning;
3. to distinguish the kinds and purposes of definitions;
4. to distinguish between validity and soundness, as they are related to deductive argument, and to evaluate inductive and rhetorical arguments;
5. to recognize common fallacies in everyday reasoning;
6. to recognize and assess reasoning in various fields: business, law, science, the arts, etc.;
7. to present arguments effectively in oral and written form.



Infusing Critical Thinking across the Curriculum: Some Final Thoughts

- **Discuss, define and select what critical thinking means as part of the U.D. general education program.**
- **Use tools, such as the NCTLA Goals Inventories, to select critical thinking skills and criteria for determining their attainment.**
- **Map the General Education Curriculum for critical thinking skills, highlighting multiple pathways to student success.**



Infusing Critical Thinking in General Education: Some Final Thoughts

- **Make Critical Thinking courses intensive, engaging, student assignment centered courses.**
- **Monitor time spent on the development of Critical Thinking Skills through course evaluations.**
- **Renew faculty commitment to critical thinking through faculty development, course development, and program development.**



Thank you!

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