
# Assessment of Critical Inquiry: A New Model for Transitional Education

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# Presentation Overview

- Critical Inquiry at IUPUI (the Context)
- Critical Inquiry Theoretical Framework
- Why Assess
- How Assess
- Examples of Assessment Results and Improvements
- Discussion and Next Steps



# IUPUI Context

- Large Urban, Public University
- Many incoming students possess characteristics that place them at a greater risk for academic failure and attrition.
- Many students have not completed a rigorous high school college-preparatory curriculum.
- Attend classes part-time.
- Majority live off-campus.
- Significant off-campus work commitments.
- It difficult for them to make the necessary connections with other students and faculty.
- 56% of Fall 2003 beginning freshmen reported they are first-generation college students (neither parent completed a 4-year college degree).
- 42% of Fall 2003 beginning freshman reported that they plan to work more than 20 hours per week while attending school.

# University College

- Academic Unit Formed in 1997 To Provide Gateway to Academic Programs for Entering Students
- Houses Numerous First-Year Programs and Services Including Advising, Orientation, Math Assistance Center, Writing Center.
- Develops and Implements Academic Support Courses Including First-Year Seminars, Critical Inquiry, Structured Learning Assistance
- Serves Over 8000 students

# Essential Elements Of Critical Inquiry

- Supports ALL first year students
- Provides collegiate-level and meaningful academic work
- Develops transferable academic skills
- Uses text-based strategies of critical analysis
- Creates community around learning

# For ALL first year students

- Not “remedial” in traditional sense – only for students with narrowly defined risk factors in reading and/or writing
- Institutional responsibility to all admitted students
- Most entering students can benefit from transitional academic support
- All reading and analytic assignments similar to actual first year general education courses
- Avoid the stigma attached to remediation

# Collegiate-level and MEANINGFUL academic work

- Students rightly expect to do collegiate-level work
- “Place to learn” approach rather than the “learn and then place” model
- Discipline faculty closely involved in curriculum design and implementation

# TRANSFERABLE academic skills

- Understanding distinctive expectations and requirements for successful college learning
- More than tutoring or “homework helper”
- General strategies of **active learning, critical reading, appropriate communication** which support learning and academic achievement

# TEXT-based strategies of critical analysis

- Informed by the scholarship of John Bean (1996)
- Use actual discipline-based reading assignments
- Critical **reading is key** to enhancing in critical thinking, writing, information literacy, and active learning study strategies

# COMMUNITY around learning

- Use the powerful elements of learning communities
- Build strong peer connections centered on learning activities
- Provide opportunities for active and collaborative learning
- Emphasize understanding of multi-disciplinary perspectives
- Include positive interactions with faculty

# UC U112: Critical Inquiry

- A variable (1-2) credit hour course linked to an introductory discipline-based course
- Meets twice weekly
- Two and one-half hours of instruction time

# Introductory Courses Linked to UC 112

- Afro-American Studies
- Anthropology
- Biology
- Communication Studies
- Composition
- History
- Political Science
- Psychology
- Sociology
- Women's Studies
- Religion
- Philosophy

# Relationship to the Discipline Course

- Active learning techniques, in the context of the linked discipline course
- Distinct activities and course requirements for Critical Inquiry
- Coordination of assignments in the class with the discipline course

# ONE SIZE FITS NONE

- Encourage disciplinary, course and instructor uniqueness
- Consistency across sections is attained by a COURSE HANDBOOK

# Common Learning Outcomes

- Acquire collegiate-level reading abilities and vocabulary
- Understand and practice components and strategies for critical thinking
- Practice written and oral communication skills
- Understand and embrace college-level expectations
- Engage in active learning in the linked discipline

# Course Placement

- Introduced at orientation to family members and entering students
- Discussed and encouraged in individual advising sessions during orientation
- Recommended as one option to fulfill second-semester academic support requirement for conditionally admitted freshmen
- Offered each semester to all IUPUI students (open enrollment)

# Number of Sections

- Fall 2001 = 12
- Spring 2002 = 12
- Fall 2002 = 7
- Spring 2003 = 12
- Fall 2003 = 7
- Spring 2004 = 18

# Why Assess Critical Inquiry Courses

- Demonstrate Worth and Value
- Learn about Impacts and Goal Achievement
- Course Development and Improvement
- Obtain Student Feedback


# How Assess Critical Inquiry Courses

- In-Class Focus Groups
- Course Evaluation Forms administered at the end of semester to understand students' perceptions of course benefits and self-reported learning gains (include open-ended questions)
- Questionnaires with Open-Ended Questions
- Examine participants verses non-participants with regard to academic performance and retention while controlling for background differences
- Assess perceptions of instructional teams
- Hold regular faculty retreats

# Assessment Processes

- Seek involvement of instructional teams in planning, implementation, and deployment.
- Select outcome measures that are valid, reliable, aligned with course goals and learning outcomes.
- Understand what course processes lead to particular outcomes: the why and the what.
- Employ qualitative and quantitative methods.
- Employ multiple measures from different sources.
- Employ summative and formative approaches.
- Take steps to ensure results are linked to planning and decisions.

# Spring 2003 End of Course Questionnaire Results

Total n = 126; Scale Ranged from 0=Not at all to 4=A Great Deal

| | N | Mean | SD |
|---|---|---|---|
| Prepare for class tests and examinations | 124 | 3.26 | .94 |
| How much did the Critical Inquiry class help you to do well in the linked course? | 125 | 3.15 | .94 |
| Use class discussions to help my learning | 124 | 3.15 | .92 |
| Small-group discussions | 123 | 3.07 | .96 |
| Whole-class discussions | 124 | 3.05 | 1.01 |
| Use college texts effectively | 122 | 3.03 | .92 |
| Think critically about what I read | 124 | 2.98 | .96 |
| Get the most out of instructors' lectures | 125 | 2.96 | 1.00 |
| Complete assignments on time | 120 | 2.93 | 1.11 |
| Understand difficult reading material | 121 | 2.93 | 1.06 |
| Guidance about doing assignments | 122 | 2.90 | 1.06 |

# Spring 2003 End of Course Questionnaire Results Cont..

| | N | Mean | SD |
|---|---|---|---|
| Asking questions about readings | 125 | 2.90 | 1.01 |
| Do well on writing assignments | 116 | 2.84 | 1.12 |
| Learn from other students | 125 | 2.80 | 1.04 |
| Writing assignments | 118 | 2.78 | 1.14 |
| Increase my college-level vocabulary | 122 | 2.77 | 1.04 |
| Take good notes in class | 125 | 2.75 | 1.12 |
| Writing comments about readings | 123 | 2.70 | 1.06 |
| Complete heavy reading assignments | 119 | 2.64 | 1.15 |
| How much do you expect the Critical Inquiry class to help you do well in other classes? | 121 | 2.63 | 1.09 |
| Memorization techniques | 117 | 2.62 | 1.06 |
| Manage my time for studying | 121 | 2.60 | 1.05 |
| Diagrams of course content | 115 | 2.57 | 1.06 |

# Please describe what you found <u>most</u> valuable about this:

- "Learning how to read scholarly text and actually understand it."
- "I learned a lot on the CI method because it helped me go beyond the text."
- "Everything.  I would recommend this class for everyone."
- "Discussion of lectures from linked course."
- "The instructor.  The extra help—those are hard concepts and texts to understand."

# Recommendations for Improvement

- “Staying ahead of the lecture class by one class, not an entire week.”
- “Explanation of lecture notes before going to the actual class.”
- “We always stayed one step ahead of the main course which made a huge difference in understanding the lecture.”
- “More interaction with and between students.”
- “Doing more activities in the class. We went over all the materials, but it was boring sometimes.”

# Students Would be Willing to Take Another CI

- Liberal Arts sections = 75%
- Science sections = 64%
- Overall = 71%

# Students Would Recommend CI to Other Students

- Liberal Arts sections = 90%
- Science sections = 80%
- Overall = 86%

# Most Helpful Aspects of CI Sections Linked to Liberal Arts Course n= 79 (based on mean ratings)

- Prepare for class tests and examinations
- Use class discussions to help my learning
- Think critically about what I read
- Guidance about doing assignments
- Do well on writing assignments

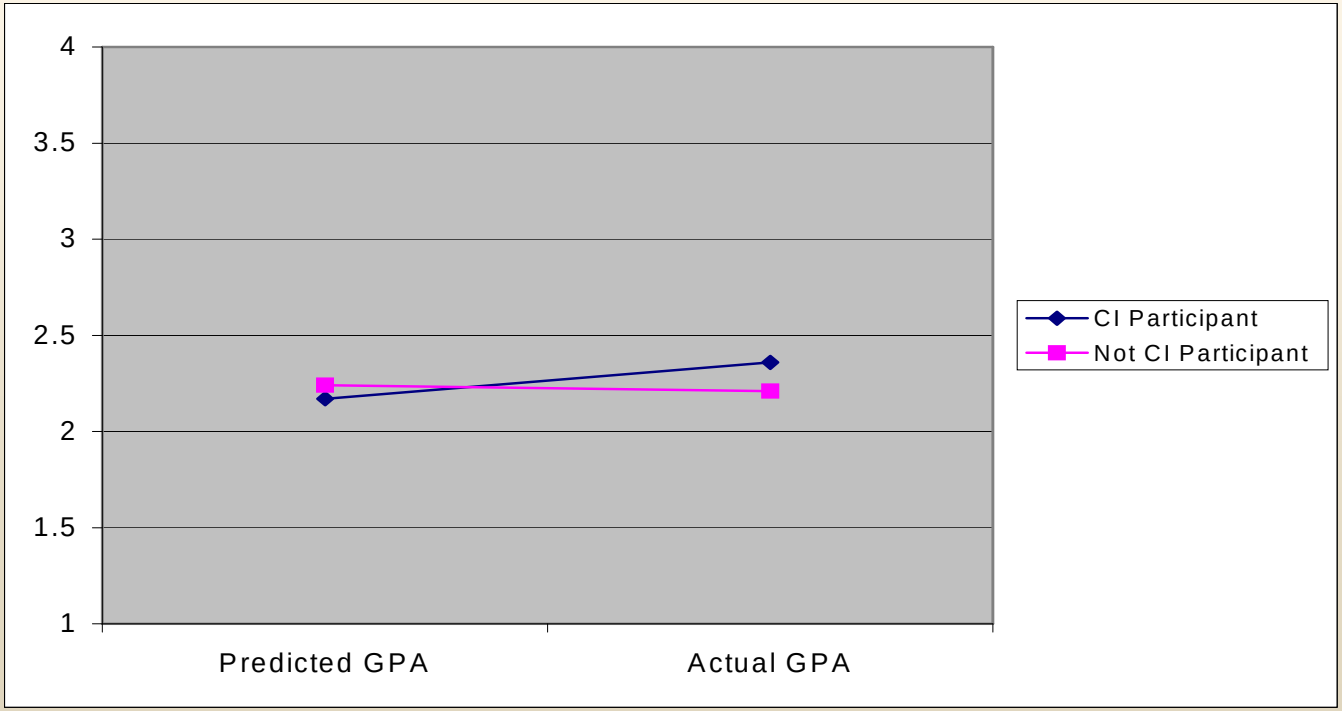
# Most Helpful Aspects of CI Sections Linked to Science Course n= 47 (based on mean ratings)

- Prepare for class tests and examinations
- Helped do well in the linked course
- Whole-class discussions
- Use class discussions to help learning
- Small-group discussions

# Expected vs. Actual GPA's

**Figure 1**. Fall 2001 Expected verses Actual Fall GPAs (excluding CI grade) for Conditional Beginning Freshman

| | N | Predicted GPA | Actual GPA |
|---|---|---|---|
| CI Participant | 115 | 2.17 | 2.36 |
| Not CI Participant | 907 | 2.24 | 2.21 |



# Fall 2002 Impact of Participation in a Critical Inquiry Course for Beginning Freshmen

| Critical Inquiry | N | Average Fall GPA | Adjusted Fall GPA |
|---|---|---|---|
| Participants | 87 | 2.83 | 2.95 |
| Non-Participants | 1621 | 2.59 | 2.57 |
| Overall | 1708 | 2.59 | |

University College

# CI Outcome Assessment Spring 2003

**Table 1**. Spring 2003 Impact of Critical Inquiry Courses on Student Performance

| Course | Critical Inquiry Participant | N | Average Grade in CI Course | Average Grade in Discipline Course* | Sem. GPA Exc. CI Grade | ACT Reading Score | Avg. H.S. Pctile Rank | Avg. SAT Score | Avg Grade Beg Spring Sem. | Avg Beg. Credit hrs. | Avg Age | % Female | % Afrn Amer |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ANTH A104 (all students in concurrent section) | Yes | 23 | 2.91 | 2.82 | 2.47 | 84 | 50 | 928 | 2.72 | 21 | 20 | 61% | 22% |
| | No | 24 | na | 3.49 | 3.00 | 87 | 63 | 977 | 3.02 | 43 | 21 | 71% | 13% |
| ANTH A104 (beg. Fr. in concurrent section) | Yes | 21 | 2.97 | 2.84 | 2.53 | 84 | 53 | 891 | 2.92 | 12 | 19 | 67% | 19% |
| | No | 11 | na | 2.44 | 2.51 | 81 | 52 | 925 | 2.86 | 15 | 18 | 72% | 18% |
| BIOL N100 (all students in concurrent section) | Yes | 20 | 3.36 | 2.66 | 2.61 | 81 | 63 | 928 | 2.92 | 13 | 18 | 85% | 5% |
| | No | 147 | n/a | 2.41 | 2.51 | 85 | 53 | 956 | 2.62 | 28 | 22 | 60% | 3% |
| BIOL N100 (beg. fr. in concurrent section) | Yes | 19 | 3.33 | 2.59 | 2.58 | 81 | 64 | 928 | 2.92 | 14 | 18 | 72% | 5% |
| | No | 35 | na | 2.37 | 2.41 | 82 | 57 | 9 | 2.82 | 12 | 18 | 57% | 3% |
| COMM C180 (All students in concurrent section) | Yes | 13 | 2.92 | 3.26 | 2.53 | 81 | 53 | 863 | 2.66 | 11 | 23 | 46% | 31% |
| | No | 12 | na | 3.22 | 2.74 | 86 | 61 | 968 | 2.88 | 34 | 20 | 83% | 25% |
| ENG W131 (matched sample) | Yes | 25 | 2.10 | 2.25 | 1.84 | 85 | 48 | 965 | 2.19 | 10 | 20 | 40% | 8% |
| | No | 27 | na | 2.81 | 2.49 | 85 | 52 | 969 | 2.19 | 10 | 19 | 37% | 7% |
| ENG W132 (all students in sections C018 and C019 - same dc instructor) | Yes | 9 | 2.70 | 2.19 | 2.06 | 79 | 58 | 928 | 2.85 | 14 | 19 | 78% | 0% |
| | No | 38 | na | 2.32 | 2.28 | 88 | 55 | 1007 | 2.70 | 25 | 21 | 68% | 8% |
| ENG W132 (all beg fr in sections C018 and C019 - same dc instructor) | Yes | 8 | 2.75 | 2.09 | 1.92 | 79 | 62 | 935 | 2.90 | 14 | 18 | 88% | 0% |
| | No | 12 | na | 2.37 | 2.40 | 85 | 53 | 1032 | 2.81 | 13 | 20 | 58% | 17% |
| ENG W132 (all students in concurrent section C121) | Yes | 5 | 2.34 | 2.48 | 2.33 | 91 | 64 | 998 | 2.89 | 14 | 27 | 73% | 20% |
| | No | 19 | na | 2.83 | 2.52 | 84 | 51 | 952 | 2.46 | 33 | 22 | 56% | 70% |
| HIST H105 (all students in concurrent section) | Yes | 14 | 2.15 | 1.60 | 2.09 | 82 | 67 | 904 | 2.81 | 18 | 22 | 29% | 14% |
| | No | 110 | na | 1.78 | 2.23 | 85 | 52 | 947 | 2.24 | 24 | 21 | 46% | 8% |
| HIST H105 (beg. fr. in concurrent section ) | Yes | 10 | 2.21 | 1.60 | 2.04 | 81 | 74 | 904 | 2.75 | 13 | 21 | 20% | 40% |
| | No | 16 | na | 1.41 | 2.09 | 83 | 55 | 955 | 2.36 | 12 | 19 | 6% | 56% |
| HIST H106 (all students in concurrent section) | Yes | 18 | 2.76 | 2.56 | 2.20 | 89 | 49 | 995 | 2.49 | 13 | 19 | 22% | 6% |
| | No | 81 | na | 2.65 | 2.56 | 86 | 56 | 987 | 2.68 | 33 | 22 | 59% | 4% |
| HIST H106 (beg. fr. in concurrent section) | Yes | 11 | 3.03 | 2.49 | 2.16 | 89 | 44 | 932 | 2.72 | 11 | 18 | 2% | 9% |
| | No | 19 | na | 2.47 | 2.52 | 88 | 62 | 1021 | 2.97 | 13 | 19 | 12% | 5% |



# CI Outcome Assessment Spring 2003

**Table 2**. Spring 2003 Impact of Critical Inquiry Courses on Student Performance (Continued)

| Course | Critical Inquiry Participant | N | Average Grade in CI Course | Average Grade in Discipline Course* | Sem. GPA Exc. CI Grade | ACT Reading Score | Avg. H.S. Pctile Rank | Avg. SAT Score | Avg Grade Beg Spring Sem. | Avg Beg. Credit hrs. | Avg Age | % Female | % Afrn Amer |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PSY B104 1 (all students in concurrent section) | Yes | 22 | 3.27 | 2.20 | 1.90 | 82 | 54 | 958 | 2.52 | 12 | 19 | 27% | 55% |
| | No | 43 | na | 2.98 | 2.66 | 85 | 63 | 997 | 2.72 | 27 | 21 | 9% | 51% |
| PSY B104 1 (beg. fr. matched sample in concurrent section) | Yes | 15 | 3.47 | 1.75 | 1.71 | 81 | 56 | 934 | 2.47 | 12 | 18 | 47% | 33% |
| | No | 15 | na | 2.52 | 2.24 | 86 | 64 | 1012 | 2.57 | 12 | 18 | 47% | 13% |
| PSY B104 2 (all students in concurrent section) | Yes | 19 | 2.84 | 3.13 | 2.52 | 85 | 51 | 1004 | 2.60 | 12 | 19 | 37% | 11% |
| | No | 20 | na | 3.02 | 2.82 | 83 | 60 | 924 | 2.86 | 32 | 21 | 65% | 5% |
| PSY B104 2 (beg. fr. in concurrent section) | Yes | 16 | 2.79 | 3.02 | 2.45 | 84 | 51 | 997 | 2.55 | 12 | 18 | 31% | 13% |
| | No | 9 | na | 3.03 | 2.79 | 83 | 64 | 953 | 2.98 | 13 | 18 | 56% | 0% |
| PSY B104 3 (all students in concurrent section) | Yes | 18 | 3.42 | 3.19 | 2.62 | 84 | 62 | 946 | 2.62 | 9 | 21 | 33% | 17% |
| | No | 18 | na | 1.94 | 2.27 | 85 | 61 | 968 | 2.61 | 20 | 22 | 56% | 17% |
| PSY B104 3 (beg. fr. in concurrent section ) | Yes | 10 | 3.33 | 3.14 | 2.22 | 86 | 61 | 928 | 2.46 | 13 | 19 | 40% | 20% |
| | No | 7 | na | 2.57 | 2.20 | 86 | 61 | 930 | 2.49 | 11 | 22 | 71% | 0% |
| REL R133 (all students in concurrent section ) | Yes | 9 | 3.33 | 2.73 | 2.32 | 84 | 51 | 938 | 2.46 | 11 | 20 | 67% | 33% |
| | No | 37 | na | 2.33 | 2.38 | 86 | 58 | 988 | 2.68 | 38 | 22 | 73% | 8% |
| REL (beg. fr. matched sample in concurrent section ) | Yes | 11 | 3.03 | 2.49 | 2.16 | 89 | 44 | 932 | 2.72 | 11 | 18 | 2% | 9% |
| | No | 19 | na | 2.47 | 2.52 | 88 | 62 | 1021 | 2.97 | 13 | 19 | 12% | 5% |
| SOC R100 (all students in concurrent section) | Yes | 21 | 3.35 | 2.62 | 2.41 | 81 | 44 | 891 | 2.74 | 13 | 19 | 67% | 14% |
| | No | 167 | na | 2.60 | 2.61 | 83 | 56 | 967 | 2.66 | 28 | 20 | 69% | 7% |
| SOC R100 (beg. fr. matched sample in concurrent section) | Yes | 20 | 3.37 | 2.57 | 2.37 | 80 | 44 | 891 | 2.70 | 13 | 19 | 65% | 15% |
| | No | 20 | na | 2.15 | 2.52 | 83 | 50 | 932 | 2.74 | 13 | 19 | 75% | 10% |

# Improvements Implemented Based on Assessment Results

- Expanded number of sections
- Continued to adapt and expand CI Method to different disciplines
- Clarified linkages to discipline courses
- Clarified learning objectives
- Developed comprehensive CI Handbook
- Increased training and support for all faculty

# Next Steps And Discussion

- Continue employing qualitative and quantitative research as complimentary techniques.
- Conduct comprehensive qualitative investigations of Spring 2005 sections.
- Conduct retrospective interviews with participants to examine academic skill transfer and perceptions of course benefits over time.

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