General Outcomes ~ During the past year we have continued on the strong positive trajectory established in the first year of our project. We have again put our grant from the Teagle Foundation to good use (please see Budget Report – Appendix One), primarily to support meetings of our collaborative, to administer the CLA at Colorado and Kalamazoo Colleges, and to carry on with our Targeted Assessment Projects. Through our collective efforts, we are beginning to attain the “cognizance” sought at the outset of our project (and that appears in its title) and we are beginning to apply our new-found knowledge toward effecting the “change” needed on all of our campuses to improve student learning.

Accomplishments in 2006-2007 Academic Year ~ We accomplished quite a bit this past year. Instead of writing a detailed narrative about what we did, which would repeat much of what appears in the appendices, we will simply list, in chronological order, what was done through our collaborative and refer to appendices where appropriate.

1. We received, and immediately began analyzing/interpreting, our CLA results in late July. Details of these results and analyses appear throughout this report.

2. After receiving a copy of Derek Bok’s *Our Underachieving Colleges*…” from Bob Connor, in preparation for the Teagle Leadership Summit in September, we obtained permission to reallocate grant funds to purchase copies of the book for colleagues at our colleges. Many folks at CC and KC then read and discussed the book. Doing this helped broaden the local conversations about student learning and its assessment.

3. Paul S. attended the Teagle Leadership Summit (on the Blue Ridge) in early September. Among the many positive outcomes from that meeting was further growth of the Teagle Assessment Scholars (TAS) and Charlie Blaich inviting Paul to join that project. This led to Paul attending a meeting of the TAS in mid-October at The Center of Inquiry in the Liberal Arts (CILA) and, eventually, to the idea of holding the spring meeting of our collaborative at CILA instead of at Earlham College. A pre-Summit breakfast meeting (back on the Blue Ridge) led to a small meeting (attended by Paul S.) at the Teagle Foundation in NYC to explore Communities of Practice (CoP) and how they might be employed in work done by Teagle collaboratives. (Both of these ideas – holding our spring meeting at CILA and thinking of our collaborative as a CoP – turned out to be good ones; please see Appendix Seven.)

4. We had a very productive data-sharing meeting at Kalamazoo College on 29-30 September (please see Appendix Two for meeting minutes). The group of our usual participants was augmented by the presence of two presidents (Doug Bennett and Eileen Wilson-Oyelaran), a provost (Greg Mahler), and by an external reviewer (Jillian Kinzie). We continued to grapple with having candid conversations about similarities and differences among our institutions, but all four “augmenters” commented on how healthy our collaboration seemed. Jillian’s recommendations to dissect the NSSE data and correlate them with our CLA results led to post-meeting data analyses (please see Appendix Three) and to further analyses that produced two manuscripts. Our “to-do” list, generated at the meeting (please see end of Appendix Two), included developing a post-CLA survey and interview guide; we accomplished these tasks and then used the information to enhance our interpretation of our CLA results (please see Appendix Four). When considered together, all of this information (CLA, NSSE, and surveys) begins to intimate that the “types” of students, and what they accomplish, at the three institutions might differ more than their somewhat similar SAT scores might otherwise suggest.
5. Folks at Kalamazoo College then turned their attention to preparing their “Big Picture Results, Fine Grained Analysis: Understanding CLA Performance at Kalamazoo College” manuscript, which was ultimately submitted for the North Central Association/Higher Learning Commission annual meeting (please see Appendix Five). Pre-publication copies of this paper garnered notable attention and was posted on websites of the Teagle Foundation and the Council for Aid to Education (CAE). In addition to fostering conversations about what was done to analyze CLA results and then “triangulate” them with other measures of student performance, the paper also led to further consideration of a possible “ceiling” in the CLA results, which could, potentially, affect the value-added of institutions at the upper end of the SAT distribution. After several lengthy (telephone and email) conversations with Paul S., folks at CAE decided to remove the “cap” on CLA scores in the future (as noted on page ten in the “Collegiate Learning Assessment: Facts and Fantasies” white paper at http://www.cae.org/content/pdf/CLA.Facts.n.Fantasies.pdf). The “Big Picture” manuscript led to an invitation from the editor of Peer Review to prepare a similar manuscript for publication in the Spring 2007 edition of that journal. (Appendix Six contains the “Multiple Drafts of a College’s Narrative” manuscript, which, curiously, appeared recently as a white paper http://www.cae.org/content/pdf/WhitePaper_MultipleDrafts_Web.pdf on the CAE website.)

6. Paul S. attended a “Teagle Alliance Meeting” at the Teagle Foundation in NYC on 26 January 2007. Much of the focus of this meeting was on Communities of Practice (CoP), introduced and described by Brook Manville (United Way), and how they might be fostered through Teagle initiatives to enhance assessment of student learning. [Notes from this meeting include a reference to The Tipping Point and the importance of “connectors and mavens,” a “sticky message” that is “infectious,” and the importance of “context” for an idea to take hold. Notes also include the following musing: “Assessment of student learning is a screw; progress is made by going in circles. And, a driver is needed to provide the energy for progress to occur.”] Insights gained at this meeting led to many conversations about potential CoPs – including our collaborative, the Teagle Assessment Scholars, and a future CLA workshop in the summer of 2007 at CILA.

7. Several representatives from our collaborative attended the AAC&U General Education and Assessment meeting in Miami on 1-3 March. Paul K. (CC), Bob S. (EC), and Paul S. (KC) presented a paper, “Advancing Liberal Education through Collaboration and Assessment,” in which they described the many benefits realized in a collaborative like ours. We also held a smaller, and more informal, meeting of project representatives, while we were gathered in Miami, to plan for our larger meeting at CILA in April.

8. CC and KC administered the CLA to 2007 seniors in an attempt to find out how much year-to-year variation there might be in CLA scores at an institution. We also had each student complete Charlie Blaich’s National Study of Liberal Arts Education survey, which contains several NSSE-like questions that might help us interpret the CLA scores obtained.

9. Paul S., Charlie Blaich, and Deborah Butler (at CILA) planned a CLA workshop, “Exploring and Examining Uses of the CLA: A Workshop for Selected Teagle Consortia,” for July 2007 that will build on the successes of our collaborative’s attempts to interpret our CLA results. Representatives from colleges in several Teagle consortia will gather at CILA this summer, after analyzing CLA and NSSE data in ways similar to those used in our collaborative, to explore and discuss similarities and differences in the data among institutions. If all goes as planned, this workshop will serve to broaden the CLA comparison group to at least a dozen institutions.

10. The spring meeting of our collaborative at CILA was at least as productive and enjoyable as our fall meeting at KC (please see Appendix Seven for notes from this meeting). Of the many useful insights gained at this meeting, probably the most important arrived during Charlie Blaich’s closing remarks. The title of our proposal to the Teagle Foundation was “Catalyst for Cognizance
and Change.” We’re certainly accomplishing the first half – becoming more aware and better informed – through our grant-funded work. We now need to apply what we are learning to effect changes where necessary. We’re making good progress, and might even be serving as a “proof-of-principle” every now and then; but, we need to put more “action” into our research.

11. On 22 April, Kiran Cunningham and Paul S. presented a paper, “Big Picture Results, Fine-Grained Analysis: Understanding CLA Performance,” at the 2007 Annual Meeting of the NCA/Higher Learning Commission. The paper was well received by a sizeable audience.

12. Representatives from CC, EC, and KC participated in CLA Standards studies in California and New York in June. Through these studies we helped develop expected standards of performance on the CLA for first-year and senior students.

Challenges we faced ~ We encountered most challenges on our own campuses when trying to engage our colleagues in conversations about our project and the data it is generating. But, as noted in the summary notes from our spring meeting (Appendix Seven), trying to interpret our CLA results reliably, and with little assistance from the CAE/CLA team, was also difficult (but rewarding). Nevertheless, we celebrated the small victories when they arose and used them to sustain momentum as we moved ahead.

Successes we enjoyed ~ In addition to the accomplishments already listed and described, we continue to enjoy our collaborative effort, which we now envision as a nascent Community of Practice focused on assessment of student learning. Support from the Teagle Foundation continues to catalyze a vibrant collaboration among three intellectually voracious and positively restless colleges. And, with the summer CLA workshop on the horizon, the “expanding circles of inclusiveness,” mentioned toward the end of our proposal narrative, seem to be close at hand.

Plans for Year Three ~ We arrived at these anticipated tasks during our spring meeting, and include them here for the sake of clarity and completeness.

1. We need to examine our CIRP data, from the past five to ten years, thoroughly to find out if each of the three institutions attracts different “kinds” of students. This grew out of a vague sense of apparent differences among students at our three institutions and how they seemed to have approached taking the CLA.

2. We want to broaden the CLA comparison group beyond our three institutions to get a better sense of patterns in the data and of how those patterns can be interpreted. A good start will be the upcoming CLA Workshop (22-24 July) at the CLA.

3. We need to continue with our Focused Inquiries (formerly known as Targeted Assessment projects – please see Appendix Seven for an explanation), especially in light of the new (2007) set of CLA data from seniors at CC and KC. Making plans to do this will be a primary topic of conversation at our fall (25-28 October) meeting at Colorado College.

We close with a simple thank you to the Teagle Foundation. Thank you for the many opportunities – to collaborate, learn through that collaboration, and improve through that learning – that we have enjoyed as a result of your generous support. We are better (individuals and institutions) as a result of our collaborative endeavors.
APPENDIX ONE

BUDGET REPORT
BUDGET NARRATIVE FOR 2006-2007

Project Meetings ~ We spent a total of $16,646.09 on project meetings, including the Fall Data-Sharing Meeting at Kalamazoo College, an organizational meeting during the AAC&U General Education Assessment Meeting in Miami, and a Spring Project Meeting at the Center for Inquiry in the Liberal Arts at Wabash College. Our original budget allowed for a total of $22,500 to be spent on project meetings during year 2. We saved money mainly by having one of our project meetings (smaller and more informal) at the AAC&U Meeting in Miami. Our institutions covered most of the costs of attending the meeting. Paul Sotherland and Anne Dueweke attended from Kalamazoo, Paul Kuerbis and Larry Stimpert attended from Colorado, and Bob Southard, Kari Kalve, and Bonita Washington-Lacey attended from Earlham. Paul Sotherland, Paul Kuerbis, and Bob Southard gave a presentation on the work of our collaborative. More details on the Fall Data-Sharing and Spring project Meeting at Wabash are provided in the report narrative and meeting minutes are included in the appendices.

CLA ~ Although not in our original plans, both Colorado and Kalamazoo decided to administer the CLA to our seniors again in year 2, this time to the class of 2007. Both institutions wanted to “test” the CLA results from year 1 to see if they remained more or less the same or if they changed significantly. Because the CLA is still so new, the year-to-year reliability has not been established. Kalamazoo was also interested in increasing the size of our data set for running various analyses on our CLA results (see report narrative). We began to see some interesting patterns in the analysis of our 2006 CLA data, but are curious as to whether the patterns will “hold” with a larger data set.

Targeted Assessment Projects ~ Several departments at Colorado are using Teagle funds to assess their senior capstone projects (see report narrative). Earlham wrapped up its initial assessment of writing in first-year courses. The director of the writing assessment project was on sabbatical this year. Most of Kalamazoo’s targeted assessment funds were spent early in year two on qualitative analysis software, digital recorders for interviews (also used for post-CLA phone interviews), and on student stipends for research with the qualitative data set generated in year 1. At Kalamazoo, we became immersed in analyzing our CLA data and have not revisited our targeted assessment project recently.

Carry-over of Funds from Year One ~ We continue to carry over about $40,000 from year one, and we would like to consider allocating, at least part of, these funds to two un-budgeted activities in the fall of 2008 and 2009. In addition to administering the CLA to seniors in the spring of 2009, we would like to give the CLA to first-year students in the fall of 2008 so as to obtain another cross-sectional view of our value-added. We have also decided to have one, final, data-sharing, in the fall of 2009 (after receiving our final round of CLA results), to wrap up our project. Neither of these additional, yet important, activities were in our original proposal, so we request that the carry-over of funds from year one be extended to the end of our project.

Respectfully submitted by Anne Dueweke
## Teagle Project Budget - Year 2

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### Funds rec'd from the Teagle Foundation:

- **Year 1**: 125,500.00
- **Year 2**: 62,500.00
- **Total rec'd through Year 2**: **188,000.00**

### Funds expended by the collaborative

- **Year 1**: 84,632.83
- **Year 2**: 62,571.50
- **Total expended through Year 2**: **147,204.33**

### Balance to carry over:

- **40,795.67**
Appendix Two

Fall Data-Sharing Meeting at Kalamazoo College
Catalyst for Cognizance and Change
A Collaborative Value-Added Assessment Project Supported by The Teagle Foundation

Data Sharing Meeting
Schedule of Events and Notes from Meeting
Kalamazoo College
29-30 September 2006

(Unless noted otherwise, all events are in the Olmsted Room, Mandelle Hall)

FRIDAY
Morning Optional – visit classes, colleagues, etc at K.
Noon Informal conversations and getting reacquainted over LUNCH and Welcome to Kalamazoo College by President Eileen Wilson-Oyelaran
1:15 Campus tour for Colorado and Earlham folks
2:30 Presentations of NSSE and CLA data by each college and Discussion
4:00 Break
4:15 Discussion - Where do we go from here? Comments by Jillian Kinzie
7:00 pm--- Dinner and discussion at Epic Bistro

SATURDAY
7:30 am Breakfast at the Radisson or other (suggested) restaurants downtown.
9:00 Campus targeted assessments: presentations and discussions
10:15 Break
10:30 Resume presentations and discussions
11:30 Wrap-up meeting
12:00 Lunch – box lunches provided for those who need to hit the road, lunch at Oakwood Bistro for those who can stay.
2:00 pm Meeting of Paul, Larry, Bob, Anne, and Paul (and others, if interested) to plan for the year

Notes from Meeting
29 September 2006


- Paul Sotherland reminded the group that what is discussed stays within the group, especially now that we’re sharing data. We should discuss appropriate ways to share data with others (e.g., talking to Teagle on the benefits of collaboration? Producing a white paper?) Paul also reminded the group that this takes guts – what we find out can, and will, affect our institutions. Just sharing data with each other takes guts; doing so is built on our strong, open, and affirming relationships
NSSE

**Earham College** (Bob Southard)
- Response Rate 63%, which is higher than comparison groups (CTCL, Carnegie)
- Level of Academic Challenge (LAC) – Earham above comparison groups at 62.2
  - Earham stands out on – number of written papers, number of assigned texts, preparing for class
- Active and Collaborative Learning (ACL) – Earham above comparison groups at 57.6
  - Earham stands out on – discussing ideas from readings outside of class (especially stands out for first-years)
- Student-Faculty Interaction (SFI) – Earham a bit below comparison groups at 58.7
  - SFI lower score is surprising and in previous surveys has been more on target with peers
- Enriching Educational Experiences (EEE) – Earham above comparison groups at 62.5, considerably above national benchmark
  - Earham stands out on – practicum, internship, field experience, etc.; foreign language coursework & study abroad; independent study or self-designed major; culminating senior experience, serious conversations with students of different religious, political, personal beliefs.
  - A very high number of first-years report having serious conversations with students of a different race (higher than for seniors).
- Supportive Campus Environment (SCE) – Earham on target with comparison groups at 62.5

Jillian Kinzie and Anne Dueweke discussed the definition of the Carnegie classification as a peer group, which appears to not be completely consistent across different schools.

Lynne Calhoun asked if Earham has used the FSSE and mentioned when Colorado administered it, faculty and students had very different perceptions.

Jillian Kinzie encouraged the group to not just look at their benchmark score, but individual items within the benchmarks to look for trends, higher vs. lower performing items, etc. It is also important to remember that questions are sometimes worded as “did you do this or did you not do this?” as opposed to “how satisfied are you with…?” Also, students simply knowing that things exist (e.g., International Programs, Senior Experience, internships), whether or not they actually use it can be important to overall performance. How ingrained (or marketed) certain things are in the culture can be seen in the results.

Bob Southard pointed out that questions within certain benchmarks do conceptually involve other benchmarks (e.g., ACL overlaps with SFI), so it is important to look at everything globally. Jillian Kinzie provided an example about looking at your first-year writing-focused program – you would need to look at LAC, but also question about prompt and feedback on papers within SFI.

Jillian Kinzie cautioned that some questions on NSSE survey do not appear in any benchmarks (e.g., quantitative skills).
• Earlham is “in the mix” on all benchmarks and stands out on EEE (above top 10%), ACL and LAC (close to top 10% on both); SFI is farthest away from top 10%

David Gardiner mentioned that a good place to start looking for where to improve is where college perceptions don’t match the data. David warned that when an institution attempts to make changes based on NSSE data, that you must have faculty buy-in on validity of the survey.

**Colorado College** (Lynne Calhoun)

• Response Rate 48%
• LAC – Colorado on target (a bit above) with comparison groups at 63.3
  - Colorado stands out on – preparing for class (very high), number of assigned texts, coursework emphasizing analysis, coursework emphasizing synthesis (very high)
  - Block could cause students to think they are doing more (preparations, synthesis) because of intensity
• ACL – Colorado above comparison groups at 56.9
  - Colorado stands out on – asked questions in class, made class presentations, discussing ideas from readings outside of class
• SFI – Colorado a bit above others at 53.7 (close to mean)
  - Has improved since three years ago
  - Colorado stands out on - discussed ideas with faculty, worked with faculty outside course requirements
• EEE – Colorado is close to comparison groups at 55.2
  - Colorado stands out on – study abroad; independent study or self-designed major; culminating senior experience
  - There is a negative effect for “Campus environment encouraging contact among students from different economic, social, and racial or ethnic backgrounds” – students don’t perceive they are being encouraged
• SCE – Colorado on target with comparison groups at 61.9

David Gardiner and Re Evitt brought up that Colorado has hired new faculty at a rate of 10-12/year and there is more emphasis on collaborative faculty research and that the intensive FYE program could be improving some scores. David also mentioned that Colorado has become more selective in their admissions process, so perhaps they are now seeing students that are more engaged.

• Colorado stands out against top 50% on SFI, LAC, SCE
• Overall, Colorado’s results are quite similar with Earlham (EEE for Earlham is higher, but SFI for Colorado is higher)

Paul Kuerbis mentioned that some of the diversity questions could have been negatively impacted by a Colorado College racial incident when the seniors were first-years. It has had huge carryover effects on campus.
**Kalamazoo College** (Anne Dueweke)

- **Very high Response Rate at 79%**
- **LAC** – Kalamazoo above comparison groups at 66.4
  - Kalamazoo stands out on – preparing for class, number of assigned texts, number of written papers (20+, 5-19), coursework emphasizing application of theories, environment emphasizing time for academic work
- **ACL** – Kalamazoo above Carnegie, close to CTCL at 56.9
  - Kalamazoo stands out on – working with classmates outside of class, tutored or taught other students, participating in community based projects as part of course, discussing readings outside of class
- **SFI** – Kalamazoo above comparison groups (not significantly) at 56.5
  - Kalamazoo stands out on – receiving prompt feedback from faculty
    - This is a problem area for Earlham
      - David Gardiner mentioned teaching two courses (as faculty at K does) allows you to be quicker and that there is a very different timeline with blocks
- **EEE** – Kalamazoo above others at 62.6
  - Kalamazoo stands out on - practicum, internship, field experience, etc.; foreign language coursework & study abroad; culminating senior experience
  - Having serious conversations with students of different race is positive for first-years, negative for seniors
    - Could this be an effect of study abroad (being surrounded by diversity changes your view upon returning) or living off campus in small groups?
  - 86% of Kalamazoo seniors do volunteer/community service, but not necessarily in the classroom
- **SCE** – Kalamazoo is below comparison groups at 54.3
  - Kalamazoo stands out (negatively) on – environment helps you to cope with non-academic responsibilities, environment provides support you need to thrive socially, relationships with administrative offices

- Overall, Kalamazoo stands out on EEE (above top 10%) and is on target with top 10% for LAC, ACL, SFI

- Kalamazoo is higher than Colorado on EEE, but below on SCE. Kalamazoo is very similar to Earlham for EEE, ACL, LAC but above on SFI, and below on SCE

- Kalamazoo College, Colorado College, and Earlham College all “see themselves” in the data

- Kalamazoo was, at first, surprised about SCE score, but students were not. Re Evitt asked if K focuses on faculty-student events/issues (as opposed to student-student) since that is where K is not doing as well.
CLA

*Earlham College* (Bob Southard)
- First-years scored below expected
- Seniors scored as expected
  - It is showing that students are learning to make and break argument, becoming better writers

Bob Southard questioned if we know that this truly value added, or a matter of Darwinian-type retention (the strongest students remain).

- Scatter plot is mostly clustered towards center, some outliers
- There is a significant difference between First-years and Seniors – more scatter around Seniors than First-Years
- Entering class with better SAT scores performed lower than expected
  - Look at NSSE or other surveys to figure out why

Doug Bennett mentioned the reliance on SAT scores can present problems as it is not a perfect instrument
- A recent article says CLA is too reliant on SAT – input is basically output
- We don’t truly know psychometric properties of CLA yet (it is a new instrument)
- The SAT is only thing we have to try to explain variations in CLA scores
- Bob Southard questioned what would happen if you took away SAT scores and looked at the data as “first-year students scored here and seniors scored here”

Deb Jackson questioned the basis of expected improvement (space between regression lines)
- Do we know if this could just be a developmental difference? No.

Doug Bennett said that CAE has started a study with the CLA and 18-22 year olds in the army as another comparison group to try to get at gains through maturation.

Paul Sotherland mentioned longitudinal studies need to be done in conjunction with snapshot surveys to better understand the data.

*Kalamazoo College* (Paul Sotherland)
- First-years scored below regression line but “at expected”
- Seniors scored “above expected”
- Value-added was “well above expected”

Paul showed scatter plots of K first-year and senior CLA scores plotted against SAT (or converted ACT) scores. There’s a fair amount of scatter in the data but a clear move upward from first-years to seniors. There are parallel regression lines (though not very steep). There is a
ceiling effect with the seniors with several bumping up against the top CLA score. There is no ceiling effect with first-years.

**Colorado College** (Lynne Calhoun)

- First-years scored slightly below the regression line, but “at expected”
- Seniors scored “below expected”
- Value added was “below expected”

The scatter plot first-year CLA v. SAT scores has a regression line similar to K and EC. Some slope but not much. The scatter plot for seniors has a horizontal regression line showing absolutely no correlation between senior SAT and CLA scores.

Several first-years scored 1600 (highest possible) on the CLA. Fewer seniors got perfect scores.

How to explain these results?

At K, seniors were mostly done with their SIPs (i.e., most had recently completed a major writing project); at CC most seniors were in the midst of their capstone project.

Re Evitt wondered about K’s NSSE results… being strong on amount of writing and ability to apply theory to practice; EC was high on writing; CC didn’t exceed the mean on either. CC doesn’t have a writing requirement and senior capstones aren’t required.

Kiran: Our NSSE benchmark scores look similar, but we got them in different ways … different areas of strength.

Anne: We can color-code the NSSE questions showing who’s strong where

Larry: In other ways CC’s NSSE data (showing high level of academic challenge, for example) and CC’s CLA scores don’t match.

Discussion about how seniors were recruited. How motivated were the students?

NOTE: Ask CAE about data on level of effort.

By this time it was close to 6:00pm.

Jillian Kinzie from NSSE wrapped up with her observations. There is clearly a lot of value in inter-institutional discussion. At this point in trying to make sense of the CLA scores, qualitative data are important. She encouraged us to look beyond the benchmarks to individual questions, including questions that don’t feed into benchmarks. Jillian also suggested taking high and low scorers on the CLA and looking at their individual engagement scores on the NSSE.

Adjourn for dinner at Epic Bistro.
Notes from Meeting
30 September 2006

Present: Colorado College – Lynne Calhoun, Re Evitt, David Gardiner, Paul Kuerbis, Jeff Noblett, Larry Stimpert; Earlham College – Bill Buskirk, Deb Jackson, Bob Southard; Kalamazoo College – Joe Brockington, Kiran Cunningham, Anne Dueweke, Paul Sotherland

Paul began with a CLA recap, a graph comparing the three colleges’ NSSE benchmark scores, and a suggested to-do list.

To-Do List

Dissect NSSE benchmarks (Paul & Anne)
Campus conversations re: CLA results – We discussed sharing and not sharing other college’s data on our campuses
Contact CAE re: global and local studies; Paul Kuerbis: Let’s keep in touch about what we’re learning through transcript analyses
Conversations with seniors who took the CLA – we’ll tell them their score if they ask, but first we want to have the conversation about their experience with the test

Re Evitt: Look at transcripts in terms of no study abroad/study abroad; writing courses/no or few writing courses

Paul K: Ask seniors about capstone experience

Bob S: We should have some common questions that we ask seniors in phone interviews

Attempt to use attributes of the 2009 seniors to predict their CLA scores

CC: How to challenge more high-achieving students?

CC: What about first-years with perfect CLA scores? No way for them to show improvement.

Generate useful hypotheses through campus discussions and other conversations

Show faculty sample CLA questions when having conversations so that they don’t dismiss the test as just another multiple-choice instrument.
**TARGETED ASSESSMENT PROJECTS**

*Earlham* (Deb Jackson)

Focus on first-year writing courses. There has been an effort to make courses uniform in terms of learning goals, even though course content varies; there’s a uniform pedagogy.

Pilot project: direct writing assessment of embedded assignments

More seminar courses participated than IP (interpretive practice) courses; a disappointment b/c Deb thinks there’s more emphasis on writing in IP courses.

Seminars attend to writing but it’s not the main focus.

Got full participation from students in courses that volunteered.

For each student, the instructor chose one early paper and one late paper.

Six evaluators (two from each institution) met at K to reach consensus on the grading rubric and to reach inter-rater reliability while using it. The evaluators re-worked the rubric quite a bit, and came to consensus on the rubric and process of evaluation. Raters also achieved good inter-rater reliability. The raters then went their separate ways with their papers to evaluate.

Every paper was evaluated by one outside rater and one Earlham rater. Deb now has all the ratings. She will work with Mary Ann Weaver and Bill Buskirk to evaluate results.

Paul K: Suggested correlating EC CLA scores and writing sample evaluations

*Colorado*

Paul K: Last February CC gathered a large group of faculty to choose a focus for targeted assessment; they decided to focus on the **senior capstone**. Capstones are not uniform – some are a course, others include a written thesis?

Lynne Calhoun: Conducting a transcript analysis over five years of student who went on study abroad; looking for connections between study abroad and senior capstone projects. Also looking at how well coursework prepared students for the capstone. CC paid students retrieve data from transcripts for this analysis. (Question: Are there problems with students seeing confidential information? Lynne: Students sign a confidentiality agreement. Joe B: K’s Center for International Programs does the same thing.)

CC also plans to interview students and/or do focus groups to gather information on the senior capstone. (Perhaps K students interviewing CC students and/or training CC students to interview other students would be helpful.)
Larry: Taking a decentralized approach to targeted assessment, with departments shaping their own projects with encouragement from Paul and Larry, might be a very effective way to proceed. (PS note while editing – the K assessment committee is talking about taking a similar approach to assessment within majors and programs.)

Larry: Looking at process issues … in the long run we will need to collaborate. We’ll probably begin by focusing on departments with recent external reviews and those that are coming up for review. Offering funds (through Teagle) to do more assessment work focused on the capstone will help (grease the gears). In Economics, for example, how do courses build on each other? What do students perceive as happening to them? How do students approach coursework? Etc…

Kalamazoo (Kiran Cunningham)

Research question: What are the catalysts for intercultural/international learning in a K education?

Identifying the WHAT and HOW of this learning.

Rachel Udow’s (student from Kiran’s spring Qualitative Methods course) report on catalysts for GAINS from encounters (Please see report summary at end of these minutes)

Targeted assessment carried out thru Kiran’s Spring 2006 Qualitative Methods course.

27 students; each conducted three hour-long interviews with other K students about their education.

Have of the interviewees were juniors; the other half seniors. 38 of the 40 seniors interviewed had taken the CLA. Of the juniors, 31 had gone on study abroad and 10 had not gone.

Students transcribed and coded the interview.

Kiran went over the (extensive) code list

Discussion of value of interviews to both interviewers and interviewees.

Paul K: Sometimes the experiment becomes the treatment.

Paul S – quick presentation on results from first-years and seniors on the Learning Environment Preferences (LEP) questionnaire, which measures growth along the Perry scale of intellectual development. A clear change from first-years to seniors.

Break for lunch at Oakwood Bistro.
AFTER-LUNCH BUSINESS MEETING

Tentative Spring meeting at Earlham: Best dates April 13-14 (Friday-Saturday).

Data sharing at Colorado in Fall 2007

Possibility of a quick meeting (one day) this Fall in Chicago with representatives from each campus and CAE folks about global/local CLA studies and transcript analyses.

Fall Data-Sharing Meeting adjourned at 2:30pm, Saturday, September 30th, 2006.
The Teagle Guide

A Guide to Intercultural Understanding at Kalamazoo College

By: Rachel Udow

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Introduction

Greetings! Thanks for checking out the Teagle Project. I hope that this guide will be useful to you, whatever your relation to the study. Below is a description of the guide’s contents, how it came into existence, and how it can be used.

This guide is a tool that will allow people to easily access the heart of this study: direct quotes from Kalamazoo College students. They are grouped based on the “K College experiences” that we studied: LandSea, Co-Curricular Involvement, Classes, Service Learning, Career Development, and Study Abroad. These sections are further organized based on the content of the quotes. Additionally, some quotes are labeled to indicate that they may address catalysts that transcend specific “experience categories.” My hope is that this guide will make this data accessible to anyone who is interested in the Teagle Project, regardless of their familiarity with it or proximity to the issues it studies. A person who simply wants to get a general sense of what students gain during their time at K can browse through the quotes, section by section. A faculty or staff member who wants to gauge the impact of her class/department/program on students can go straight to that section and examine the quotes closely. A student researcher who wants to analyze some aspect of the data can use this guide like a detailed map for the entire study. I especially hope that it will be used in this last way, as a sort of crash course in intercultural understanding at K College for students who want to find thorough, relevant data to analyze without reading and coding eighty interview transcripts.

As a person who did read and code eighty interview transcripts, it is needless to say that my head is filled with hundreds of unanswered questions and as many hypotheses. While I didn’t make it to the level of formal analysis this summer, I don’t want to lose the insights that I had along the way. I included the “Questions Topics for Further Research” and “Effective Questions” sections with the hope that I or someone else will pick up where I left off.

So, why did I read and code all those transcripts? I decided to go with this approach after re-reading the main objectives of our class’s section of the Teagle Project. I (along with many people in the class, I think) had forgotten that we were dealing with a specific list of indicators of intercultural understanding. As I was reading some of the already-coded interviews, I found that the coding for sections in which interviewees discussed intercultural encounters almost always suggested that these encounters resulted in intercultural understanding—regardless of whether or not the interviewees actually linked these experiences to specific gains in knowledge, skills, and attitudes on the list. This discrepancy actually clarified the key question of the study for me: What has to occur in order for an intercultural encounter or experience to result in gains in intercultural understanding? Catalysts, I realized, aren’t necessarily the encounters or themselves, but rather the factors that make these experiences meaningful. With this in mind, I went back to the interviews. I used a new set of codes to isolate quotes that specifically addressed intercultural encounters through which interviewees gained knowledge, skills, and/or attitudes of intercultural understanding. Further, I coded all instances in which interviewees described having transferred knowledge, skills, or attitudes from one experience to another.
This process was more challenging and time-consuming than I expected. At first, I only coded quotes in which interviewees explicitly discussed gains in intercultural understanding that exactly matched the knowledge, skills, and attitudes on the list. I forced myself to disregard quotes that, while seemingly relevant, didn’t conform to the way I had decided to do things (fortunately I came up with a handy code for those meaningful-but-unclassifiable-quotes: “Don’t Lose It”). At one point, I was about to discard a particularly intriguing quote when I suddenly remembered that I was supposed to be listening to and learning from the data, not telling it what to do. My second epiphany was that the list of indicators of intercultural understanding, while incredibly precise and thorough, is not the product of some divine revelation. It is useful as a guide, but it is not all-encompassing, nor is it infallible. At that point of realization, I changed my approach to coding. I decided to include any quotes that were relevant to the topic of gains or transfers related to intercultural understanding—in other words, I decided that it was better to have a thorough, less-focused guide than a focused guide that excluded valuable data. It is up to the person(s) who continue this study and take it to the level of analysis—hopefully with the aid of this guide!—to narrow the focus as they see fit.

Again, thank you for your interest in the Teagle Project, and I hope that this guide will lead you to fruitful research.

Please direct questions or comments about the guide to:

Rachel Udow
K04ru01@kzoo.edu
To Do List from 2006 Data Sharing

- Dissect NSSE Benchmarks to look for causes of similarities and differences. (Anne and Paul - early October)
- Have campus conversations about CLA results; disseminate institutional data and invite others to join the conversation about what the data mean.
- Obtain representative CLA tasks, and new sets of passwords, from James Padilla to facilitate having those conversations. (Paul)
- Call CAE (James Padilla) for guidance on questions to ask seniors who took the CLA in phone interviews (Anne - early October); develop a common set of three or four questions for all three colleges to use.
- Have telephone conversations with 2006 seniors who took the CLA; ask questions like “On what college experiences were you drawing while taking the CLA?” and “How motivated do you remember being to perform to the best of your ability on the CLA?” and others...
- Contact CAE about “global” (and local) studies of CLA (Paul); find out more about what CAE is doing and enlist their help with generating foci for analyses of transcripts at each college.
- Generate useful hypotheses for probing data found in transcripts.
- Analyze transcripts of 2006 seniors who took the CLA.
- Examine/analyze CIRP data carefully at each college to arrive at useful descriptors of matriculating students. Be prepared to share results of these analyses at an upcoming collaborative meeting. (Anne and Lynne will talk with Mary Ann about sharing and comparing CIRP data so as to tease out differences among our students.)
- Match up CIRP, NSSE, and CLA data for individual students to look for possible patterns.
- Make a concerted effort to do the above analyses between now and the spring of 2008 so that we can try to use “attributes” of seniors (i.e. class of 2009) to “predict” CLA scores, when the ’09 graduates take the CLA in their senior spring. Then, compare these predicted CLA scores with the observed scores as a means of testing our hypotheses about attributes that might affect scores on the CLA.
- Others?
Appendix Three

Post-meeting Data Analyses
Greetings - I hope (for your sake as well as mine) that this will be the last of these messages (for a while) bugging you with data from our meeting. I made a couple more graphs (please see attached) of 16 "miscellaneous" NSSE questions that caught my eye - because they fit into an emerging story for me and because, in most cases, one of our colleges stood out in relation to the Carnegie Peers. (These graphs do not contain standard errors - I had not calculated them and I'm temporarily running out of steam on this- but the patterns still show up reasonably well. Making inter-college comparisons will be more difficult with these graphs, but that's ok as far as I'm concerned.) Anyhow...here are some thoughts to go along with the data.

First - here's a VERY useful insight made by Bob Grossman last Friday as he, Kiran, and I were preparing for our Faculty Study Group at which we shared our CLA, NSSE, and targeted assessment data. Like many observations, this one will be obvious once you read it, but, if you're like me, you might not have thought about it in the past. Bob noted that students have to be able to write well to get a high score on the CLA. Simply being a good critical thinker and a good analytical reasoner won't do you any good on the CLA if you can't express yourself well in writing. Hearing those sage words caused some lights to start flickering on for me, and I kept his observation in mind as I re-examined the NSSE data. I'm thinking "out loud" here...these are musings, not conclusions, as I continue chew on what we know.

The graph of SAT and CLA scores that I sent out last week (second document attached here again for your convenience) show differences among our colleges, but don't show reasons for those differences. The NSSE data shown in the other batch of graphs I sent out last week (third document attached), along with a few bits in the two new graphs (first document attached), point, I think toward the start of an explanation (especially in light of Bob's comment). That is, students at K spend a lot of time writing (and getting feedback on their writing) as noted in LAC4, LAC5, (LAC7? and ACL3?), SFI2, EEE8, and MIS10; K has a writing requirement (fulfilled in our First-Year Seminars) and K has a required Senior Project, frequently culminating in a senior thesis and presentation to subsets of the college community. Students at K know from the get-go (and many before they even show up) that they will in all likelihood have to produce a thesis before they graduate. Those features - especially focused attention to writing - combined with the usual rigor in the classroom should, one could imagine, augur well for growth toward a high performance on the CLA after four years. Students at CC read a lot of books (for class LAC3 and on their own MIS1) and give presentations in class (ACL2). This pattern makes sense to me in the context of the Block Plan, with its fast, seemingly consuming, pace that seems to allow less time for writing, reviewing/grading (by faculty), feedback, revision, and more writing. Instead (...and I know this might be a stretch...so please correct me - publicly through group emails - if I'm way off base) more attention is given to reading, thinking, analyzing, and discussing. Could it be that the Block Plan gets in the way of effectively developing writing skills while still helping students become better thinkers and reasoners? What do you think? Is this a potential cost of the Block Plan?
Kalamazoo College clearly has a problem with its campus environment. (Is this a cost of working the students to the point of performing as they did on the CLA, or is there something else going on? Sorting this out will help decide how, and how much, to address the campus climate issue.) Granted, the environment is rich (all the EEE parts and the performances and events noted in MIS2 and MIS7 support this notion), but the K students seem less pleased than students at CC (SCE1-SCE3, MIS3, MIS15, and MIS16) and they seem to have fewer of the interactions that make humans human than students at Earlham (MIS4, and MIS12-MIS14).

And, Earlham seems to be striking a happy optimum(?) while staying true to the its mission. The students are growing, in terms of the value-added measured by the CLA, in a rich environment of interactions among humans and between humans and their environment.

What roles do becoming fluent in another language and studying abroad play in all of this? We’ve heard time and again from students after they return from study abroad that one of the most important benefits of their experiences is the increase in self-confidence they develop. Could this contribute to doing a good job solving the unscripted problems on the CLA? Your thoughts...

So...where does this leave us? Focused attention on writing, along with everything else we do during four years with each student, seems to be important (especially for doing well on the CLA). Students can (and SHOULD) enjoy themselves while in college. And, striking a healthy balance works well and can be done.

Academic rigor does not have to be equated with swallowing a bitter pill, because it’s good for you, and then moving on to more enjoyable things later.

For now...I will suggest to Roger Benjamin that the CAE folks test the hypothesis about the importance of focusing on writing. Is there a correlation between CLA value-added and amount of time and effort devoted to helping students improve their ability to write?
MIS1 Number of books read on your own (not assigned) for personal enjoyment or academic enrichment

MIS2 Attended an art exhibit, gallery, play, dance, or other theatre performance

MIS3 Exercised or participated in physical fitness activities

MIS4 Relationships with other students

MIS5 Working for pay off campus

MIS6 Providing care for dependents living with you (parents, children, spouse, etc.)

MIS7 Attending campus events and activities (special speakers, cultural performances, athletic events, etc.)

MIS8 Acquiring a broad general education

Note: Colorado College is black columns, Earlham College is light gray columns, Kalamazoo College is dark gray columns, and Carnegie Peers are the white columns. Red asterisks denote means that are significantly different from Carnegie Peers.
MIS9  Acquiring job or work-related knowledge and skills
MIS10 Writing clearly and effectively
MIS11 Thinking critically and analytically
MIS12 Understanding people of other racial and ethnic backgrounds
MIS13 Developing a personal code of values and ethics
MIS14 Developing a deepened sense of spirituality
MIS15 How would you evaluate your entire educational experience at this institution?
MIS16 If you could start over again, would you go to the same institution you are now attending?

Note: Colorado College is black columns, Earlham College is light gray columns, Kalamazoo College is dark gray columns, and Carnegie Peers are the white columns. Red asterisks denote means that are significantly different from Carnegie Peers.
SAT scores vary among colleges, within classes, but not within colleges between classes. And, CLA scores vary among colleges within classes as well as within colleges between classes. That is, SAT scores are not different between First-year students and seniors, but CLA scores of seniors are greater than those of First-year students. Bars with different letters above them are significantly different; bars with different numbers above them are significantly different. Analyses supporting some of these assertions are shown on the following pages; assertions about within-college differences, or lack thereof, are supported by results of independent samples t-tests, which are not shown here.
CC, EC, KC CLA Results 2005-2006

Note: Group 1 = Colorado College  
Group 2 = Earlham College  
Group 3 = Kalamazoo College

Data from First-year Students

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<th>Std. Error</th>
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| SATFY  | 1.00 | 445  | 1274.7640 | 122.15133  | 5.79053     | 1263.3838  | 1286.1443 | 850.00   | 1560.00 |
|        | 2.00 | 161  | 1207.5155 | 171.20540  | 13.49288    | 1180.8684  | 1234.1626 | 740.00   | 1540.00 |
|        | 3.00 | 218  | 1247.7982 | 132.08961  | 8.94624     | 1230.1655  | 1265.4308 | 870.00   | 1560.00 |
|        | Total | 824  | 1254.4903 | 137.89242  | 4.80371     | 1245.0613  | 1263.9193 | 740.00   | 1560.00 |

ANOVA

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Conclusions

- CLA and SAT scores of first-years differ significantly among colleges
- EC CLA and SAT scores are significantly lower than CC and KC scores, which are not significantly different from each other

Data from Seniors
## ANOVA

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### CLASen

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Tukey B\(^{a,b}\)

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 75.002.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

### SATSen

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Tukey B\(^{a,b}\)

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 76.685.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

## Conclusions

- CLA and SAT scores of seniors differ significantly among colleges.
- CC and EC CLA scores are significantly lower than KC scores, but are not significantly different from each other.
- CC and KC SAT scores are significantly higher than EC scores, but are not significantly different from each other.
- Differences between EC and KC CLA scores might be explained – in part- by differences between SAT scores.
NSSE scores for seniors in five benchmarks: Level of Academic Challenge (LAC), Active and Collaborative Learning (ACL), Student-Faculty Interactions (SFI), Enriching Educational Experiences (EEE), and Supportive Campus Environment (SCE). Double-x above bars indicate a significant difference between the college score and the average score for the top 10% of institutions participating in the NSSE in 2006.

In general, and on the average, then – we do not differ in our LAC or ACL and we are all within the top 10% in both categories. CC and KC do not differ in SFI, but EC is significantly lower than the top 10%. CC and EC do not differ in EEE scores, but KC is significantly higher than the top 10% (yeah...that's a small difference between EC and KC...). EC’s SCE score is not different from that for the top 10%, CC’s is different (small difference again), but KC’s is in the basement (including the dubious distinction of being significantly lower than the top 50%).
NSSE 2006 - Seniors
Level of Academic Challenge

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<td>5</td>
<td></td>
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</table>

**LAC1** Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships

**LAC2** Applying theories or concepts to practical problems or in new situations

**LAC3** Number of assigned textbooks, books, or book-length packs of course readings

**LAC4** Number of written papers or reports of 20 pages or more

**LAC5** Number of written papers or reports between 5 and 19 pages

**LAC6** Preparing for class (studying, writing, doing homework or lab work, analyzing data, rehearsing, and other academic activities)

**LAC7** Spending significant amounts of time studying and on academic work

Note: Colorado College is black columns, Earlham College is light gray columns, Kalamazoo College is dark gray columns, and Carnegie Peers are the white columns. Error bars show one standard error; red asterisks denote means that are significantly different from Carnegie Peers. And, categories listed in **bold-face** show POSSIBLE differences among three colleges.
ACL1  Asked questions in class or contributed to class discussions
ACL2  Made a class presentation
ACL3  Worked with classmates outside of class to prepare class assignments
ACL4  Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

Note: Colorado College is black columns, Earlham College is light gray columns, Kalamazoo College is dark gray columns, and Carnegie Peers are the white columns. Error bars show one standard error; red asterisks denote means that are significantly different from Carnegie Peers. And, categories listed in bold-face show POSSIBLE differences among three colleges.
NSSE 2006 - Seniors
Student-Faculty Interactions

SFI1 Discussed ideas from your readings or classes with faculty members outside of class

SFI2 Received prompt written or oral feedback from faculty on your academic performance

SFI3 Work on a research project with a faculty member outside of course or program requirements

Note: Colorado College is black columns, Earlham College is light gray columns, Kalamazoo College is dark gray columns, and Carnegie Peers are the white columns. Error bars show one standard error; red asterisks denote means that are significantly different from Carnegie Peers. And, categories listed in bold-face show POSSIBLE differences among three colleges.
EEE1 Used electronic medium (listserv, chat group, Internet, instant messaging, etc.) to discuss or complete an assignment

EEE2 Had serious conversations with students who are very different from you in terms of religious beliefs, political opinions, or personal beliefs

EEE3 Practicum, internship, field experience, co-op experience, or clinical assignment

EEE4 Community service or volunteer work

EEE5 Foreign language coursework

EEE6 Study Abroad

EEE7 Independent study or self-designed major

EEE8 Culminating senior experience (capstone course, senior project or thesis, comprehensive exam, etc.)

EEE9 Encouraging contact among students from different economic, social, and racial or ethnic backgrounds

Note: Colorado College is black columns, Earlham College is light gray columns, Kalamazoo College is dark gray columns, and Carnegie Peers are the white columns. Error bars show one standard error; red asterisks denote means that are significantly different from Carnegie Peers. And, categories listed in bold-face show POSSIBLE differences among three colleges.
SCE1 Relationships with administrative personnel and offices
SCE2 Helping you cope with your non-academic responsibilities (work, family, etc.)
SCE3 Providing the support you need to thrive socially

Note: Colorado College is black columns, Earlham College is light gray columns, Kalamazoo College is dark gray columns, and Carnegie Peers are the white columns. Error bars show one standard error; red asterisks denote means that are significantly different from Carnegie Peers. And, categories listed in **bold-face** show almost certain differences among three colleges.
Appendix Four

Post-CLA Survey Results
POSSIBLE ELECTRONIC QUESTIONS FOR POST-CLA SURVEY

1) When invited to participate in the CLA, how did you feel about being part of the study?
   A) Very reluctant  B) Somewhat reluctant  C) Indifferent  D) Willing  E) Enthusiastic

2) How motivated were you to do your best on the CLA once you began the exam?
   A) Not at all  B) Poorly  C) Somewhat  D) Highly  E) Very highly

3) How focused did you feel while taking the CLA?
   A) Not at all  B) Poorly  C) Somewhat  D) Highly  E) Very highly

4) Do you agree or disagree with the statement that "Before entering your final responses on the CLA you thought out, planned, and carefully composed your answer"?
   A) Strongly agree  B) Agree  C) Neutral  D) Disagree  E) Strongly disagree

5) How similar was the CLA to tasks in your courses - such as for homework assignments, class projects, or exams?
   A) Very similar  B) Mostly similar  C) About the same  D) Mostly different  E) Very different

6) How difficult was the CLA compared to exams in your college courses?
   A) Much more difficult  B) More difficult  C) About the same  D) Easier  E) Much easier

7) To what extent did the CLA allow you to demonstrate what you learned in college in terms of thinking and reasoning?
   A) Not at all  B) Poorly  C) Somewhat  D) Quite a bit  E) Very much

8) To what extent did the CLA allow you to demonstrate what you learned in college in terms of writing?
   A) Not at all  B) Poorly  C) Somewhat  D) Quite a bit  E) Very much

9) Do you agree or disagree with the statement that "Coursework enhanced your ability to perform well on the CLA"?
   A) Strongly agree  B) Agree  C) Neutral  D) Disagree  E) Strongly disagree

10) Do you agree or disagree with the statement that "Experiences outside of coursework enhanced your ability to perform well on the CLA"?
    A) Strongly agree  B) Agree  C) Neutral  D) Disagree  E) Strongly disagree
POSSIBLE QUESTIONS FOR TELEPHONE INTERVIEWS

1. Please tell me about the general nature of the questions you were given on the CLA. For example, were you asked to make and break arguments, or were you instead given a series of several short answer questions with an opportunity to access source documents on line to construct your answer?

2. Did your task require you to make use of data and/or graphs? That is, was there a quantitative component to your task?

3. Once you started the CLA what challenges in writing and thinking did you encounter?

4. In what courses during your undergraduate career did you face similar challenges in thinking and writing?

5. Was there anything about the format of the CLA that prevented you from demonstrating your full abilities?

6. On what experiences were you drawing from while taking the CLA? That is, what experiences (e.g. coursework, extra-curricular activities, internships, study abroad, senior project, etc) helped you address the tasks put before you on the CLA?

7. If we decide to give the CLA to seniors in the future, what should we do to ensure that they are as motivated as possible to put forth their best effort on the exam?
RESULTS FROM
2006 ELECTRONIC SURVEY QUESTIONS AT CC, EC AND KC

1) When invited to participate in the CLA, how did you feel about being part of the study?

A) Very reluctant    B) Somewhat reluctant    C) Indifferent    D) Willing    E) Enthusiastic

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<td>Willing</td>
<td>52%</td>
<td>92%</td>
<td>82%</td>
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<tr>
<td>Reluctant</td>
<td>28%</td>
<td>9%</td>
<td>18%</td>
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2) How motivated were you to do your best on the CLA once you began the exam?

A) Not at all    B) Poorly    C) Somewhat    D) Highly    E) Very highly

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<td>Somewhat</td>
<td>52%</td>
<td>38%</td>
<td>38%</td>
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<tr>
<td>Highly</td>
<td>38%</td>
<td>59%</td>
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3) How focused did you feel while taking the CLA?

A) Not at all    B) Poorly    C) Somewhat    D) Highly    E) Very highly

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<td>Highly</td>
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<td>95%</td>
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<tr>
<td>Not at all</td>
<td>5%</td>
<td>8%</td>
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4) Do you agree or disagree with the statement that "Before entering your final responses on the CLA you thought out, planned, and carefully composed your answer"?

A) Strongly disagree    B) Disagree    C) Neutral    D) Agree    E) Strongly agree

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<td>Agree-Neut</td>
<td>86%</td>
<td>77%</td>
<td>82%</td>
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<tr>
<td>Disagree-StrDis</td>
<td>14%</td>
<td>23%</td>
<td>5%</td>
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5) How similar was the CLA to tasks in your courses - such as for homework assignments, class projects, or exams?

A) Very different    B) Mostly different    C) About the same    D) Mostly similar    E) Very similar

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<tr>
<td>Most-Very Diff</td>
<td>76%</td>
<td>62%</td>
<td>68%</td>
</tr>
<tr>
<td>Most-Very Sim</td>
<td>9%</td>
<td>31%</td>
<td>32%</td>
</tr>
</tbody>
</table>
6) How difficult was the CLA compared to exams in your college courses?

A) Much more difficult  B) More difficult  C) About the same  D) Easier  E) Much easier

\[ KC \quad EC \quad CC \]
\[ 77\% \text{ EASIER-MUCH EAS} \quad 92\% \text{ EASIER} \quad 86\% \text{ EASIER-MUCH EAS} \]
\[ 23\% \text{ ABOUT SAME} \quad 8\% \text{ ABOUT SAME} \quad 14\% \text{ ABOUT SAME} \]

7) To what extent did the CLA allow you to demonstrate what you learned in college in terms of thinking and reasoning?

A) Not at all  B) Poorly  C) Somewhat  D) Quite a bit  E) Very much

\[ CC \quad EC \quad KC \]
\[ 86\% \text{ SOME} \quad 77\% \text{ SOME-QAB} \quad 82\% \text{ SOME} \]
\[ 23\% \text{ POORLY} \quad 23\% \text{ POORLY} \quad 23\% \text{ POORLY} \]

8) To what extent did the CLA allow you to demonstrate what you learned in college in terms of writing?

A) Not at all  B) Poorly  C) Somewhat  D) Quite a bit  E) Very much

\[ CC \quad EC \quad KC \]
\[ 81\% \text{ SOME} \quad 100\% \text{ QAB} \quad 86\% \text{ SOME} \]
\[ 19\% \text{ POORLY} \quad 19\% \text{ POORLY} \quad 19\% \text{ POORLY} \]

9) Do you agree or disagree with the statement that "Coursework enhanced your ability to perform well on the CLA"?

A) Strongly disagree  B) Disagree  C) Neutral  D) Agree  E) Strongly Agree

\[ CC \quad KC \quad EC \]
\[ 71\% \text{ NEUT-AGR} \quad 64\% \text{ AGR-STAGR} \quad 92\% \text{ NEUT-} \]
\[ 19\% \text{ DISAG} \quad 36\% \text{ NEUT-DISAG} \quad STAGR \]

10) Do you agree or disagree with the statement that "Experiences outside of coursework enhanced your ability to perform well on the CLA"?

A) Strongly disagree  B) Disagree  C) Neutral  D) Agree  E) Strongly Agree

\[ CC \quad EC \quad KC \]
\[ 90\% \text{ NEUT-AGR} \quad 95\% \text{ NEUT-AGR} \quad 64\% \text{ AGR-STAGR} \]
\[ 36\% \text{ NEUT-DISAG} \]

Appendix Five

“Big Picture” Manuscript
BIG PICTURE RESULTS, FINE GRAINED ANALYSIS:
UNDERSTANDING CLA PERFORMANCE AT KALAMAZOO COLLEGE

Paul Sotherland, Anne Dueweke, Kiran Cunningham, and Bob Grossman

Data and stories from assessment of student learning provide the "ground truth" that allows our heads to believe what our hearts tell us. All of us in the academic realm live, at some level, in the cerebral sphere of influence, where critical thinking, analytical reasoning, and demands for supporting evidence prevail. Living under this influence makes us somewhat skeptical of hunches born outside of our heads. And yet, we "know" in our hearts - from seeing changes in demeanor, new twinkles in eyes, and more conviction in voices - that we bring about significant growth in our students. Thoughtfully interrogating our institutions through assessment of student learning causes the spheres of the head and heart to fuse into a powerfully convincing whole. Through that union we - students and mentors - find further validation of the learning that takes place during a college education.

In this paper, we present results of an ongoing analysis being carried out at Kalamazoo College as we strive to understand factors influencing the Collegiate Learning Assessment (CLA) performance of our students. Obtaining results from the CLA, and then searching for relationships between CLA performance and attributes of student collegiate records, has provided opportunities to examine more closely various features of our curriculum that might bring about the changes we see in our students between matriculation and graduation. In so doing, we are addressing thoughts, expressed by Hersh (2006), about what how to interpret our CLA results. Through this analysis we are finding that at least some of the experiences in which our students engage seem to have a "value-added" effect, and we are gaining insight into what we might do better to have this effect on more of our students. And, we would like to suggest, features of the College’s K-Plan when considered in the aggregate might very well account for the outstanding performance of our seniors on the CLA.

Performance of Kalamazoo College Students on the Collegiate Learning Assessment

Kalamazoo College seniors performed very well on the CLA and, when compared with the performance of first-year students, revealed that Kalamazoo College provides an exceptionally high “value-added” education. Through a grant from The Teagle Foundation, and as part of an assessment collaborative with Colorado College and Earlham College, we administered the CLA to first-year students and then to seniors during the 2005-2006 academic year. First-year students took the CLA during Orientation Week in the fall and seniors took the CLA in late winter quarter or early spring quarter. We recruited as many students in the first-year class as possible, and we recruited a stratified random sample of the senior class (by major and then by GPA, as per CLA guidelines). First-year students (n = 186) had a mean performance at the 80th percentile (and at the lower end of the “at expected” range) of the CLA, even though their mean SAT scores were at the 92nd percentile when compared with other first-year students who took the CLA in 2005. Seniors (n = 67) had a mean performance at the 99th percentile (and at the upper end of the “above expected” range) of the CLA, whereas their mean SAT scores were at the 92nd percentile when compared with other seniors who took the CLA in 2006. (Note: mean SAT scores of each “sample” (of first-year students and of seniors who took the CLA) did not differ significantly from that of the entire “population” (i.e. all students in each class).) The “value-added” (mean CLA score for seniors minus mean CLA score for first-years) of a Kalamazoo College education was in the “well-above expected” range, along with two other institutions, of the 113 institutions that administered the CLA during the 2005-2006 academic year. What attributes of Kalamazoo College, and of students enrolled at the college, might account for this performance? Interrogating intra-institution variation in CLA scores, along with possible factors contributing to these scores, has provided nascent answers to this question.

1 Submitted to the 2007 collection of papers for the Higher Learning Commission, North Central Association, annual meeting.
2 Paul Sotherland is professor of biology, chair of the faculty assessment committee, and principal investigator of the Teagle-funded assessment collaborative that includes Colorado, Earlham, and Kalamazoo Colleges; Anne Dueweke is Director of Faculty Grants and Institutional Research; Kiran Cunningham is professor of anthropology; and Bob Grossman is professor of psychology. All authors are members of the Kalamazoo College community. We thank Nicholas Kelly for his help with analyzing interview transcripts.
3 The CLA measures ability to think critically, reason analytically, and write effectively. For more information please see http://www.cac.org/content/pro_collegiate.htm
4 The K-Plan is composed of on-campus coursework, emphasizing development of thinking and writing skills and proficiency in a second language, expectations that all students will engage in real-life experiences through internships/externships as well as significant study abroad, and a required senior project culminating almost invariably in a senior thesis.
5 A full description of these results can be found in our CLA Institutional Report at http://www.kzoo.edu/ir/cla.html
Indicators of Ability and CLA Scores

Our examination of CLA scores of first-years and seniors, along with attempts to find correlations between performance on the CLA and the usual indicators of students’ abilities (e.g., SAT and cumulative GPA) has yielded few useful insights. CLA scores of both first-year students and of seniors showed statistically significant positive correlations with SAT scores (Figure 1), but there was considerable variation about the regression in each group ($r = 0.37$ and $0.24$ respectively). Senior CLA scores (total score, as well as scores on the Performance Task and on all components of the Analytic Writing Task) were significantly greater than those of first-year students. Curiously, an apparent “ceiling effect” is visible in CLA scores of seniors (slightly more than $10\%$ of our seniors earned the top score of 1600), but no first-year student earned a top score. (However, Steve Klein, Director of Research at Council for Aid to Education, disagreed about the existence of a “ceiling effect” as shown in the footnote\(^6\)). Final cumulative GPA of our seniors correlated positively with CLA score (Figure 2), but, once again, we saw considerable scatter in these data ($r = 0.24$). Thus, students over a range of “abilities” performed well (and not as well) on the CLA.

\(^6\)Comments made by Steve Klein in response (via personal communication) to our claim about this apparent “ceiling effect” were as follows: “What appears to be a "ceiling" effect for a few individual students is simply a by-product of capping individual student scale scores at 1600 points. We cap at 1600 in accordance with the College Board policy of capping SAT scores at 800 on each section. Had we not capped, total scale scores would have continued to spread out above 1600.

Capping is a standard and appropriate practice that is used in most large scale testing programs, such as ACT, LSAT, and MCAT. For example, the maximum possible scale score on the Multistate Bar Examination is 200 points. However, that score can be earned without answering all of the questions correctly. A student who misses one or two items receives the same scale score as a student who missed three items. Capping is implemented by putting a "dog leg" at the top of the distribution of scale score points.

Capping has almost no effect on a college's mean scale score (because in part so few students reach the cap that it cannot have much impact on a school's mean scale score).

With respect to actual ceiling effects, it is possible for a student to earn a perfect score on each type of essay question because the answers to each question are graded on a 6-point scale. Thus, a student could earn a raw score of 6 on both questions. However, that does not necessarily mean that the student had a perfect answer, such as addressing all of the possible issues that could be discussed in a critique-an-argument task. A "6" just means that it was one of the best answers to the question (regardless of whether it was written by a freshmen or senior). We have yet to see any school (including the most selective ones) with a mean essay raw score that was close to 12.

On the Performance Tasks, we have yet to see any student let alone any school come even close to earning all of the potentially possible raw score points.

Finally and most importantly given our focus on using the school as the unit of analysis, we have yet to see any school come close to earning the maximum possible mean scale score. In short, we see no evidence whatsoever of a ceiling effect. Similarly, we see no evidence of cellar effects.”
Comparisons of student CLA performance, along with apparent ability, among academic divisions (Fine Arts, Foreign Languages, Humanities, Natural Sciences, and Social Sciences) in which students completed majors revealed interesting, but not convincing, patterns. Even though SAT and CLA scores varied among academic divisions (Figures 3 and 4), with students in natural sciences and humanities having somewhat higher SAT scores and students in natural sciences having CLA scores somewhat lower than those of students in the other divisions, there were no significant differences among divisions in these measures of student performance. The apparent negative correlation between SAT and CLA for the natural science students piqued our curiosity, but the small sample size combined with variation in the data prevented us from reading too much into this. (However, please see more discussion about inter-division comparisons in the “Different Perspective” section of this document.)
Student Perceptions of the CLA

As a means of gaining insight into possible factors affecting performance on the CLA we (along with our colleagues at Colorado and Earlham Colleges) carried out a survey and interviews of students who took the 2006 CLA during their senior winter/spring. We sent our post-CLA survey (administered on-line via SurveyMonkey) to all 64 graduates who took the CLA as seniors and received responses from about one-third of them. Responses to the survey (Please see Appendix 2 for survey results and summary of responses to follow-up telephone conversations) indicate that our students took the CLA willingly and were motivated, focused, and composed while taking the exam. They perceived the CLA questions to be similar to tasks encountered while attending Kalamazoo College, even though they found the CLA questions easier. They thought the CLA allowed them to demonstrate their abilities to think, reason, and write effectively. Both coursework and experiences outside of coursework (e.g., extracurricular activities, study abroad, internships and externships, and senior projects) contributed significantly to the students’ ability to perform well on the CLA.

Follow-up telephone conversations with (17 of 22) graduates who completed the post-CLA survey revealed more insights into student performance on the CLA. We called those who volunteered to be interviewed and talked with them for about 15-20 minutes, asking each person seven questions that we hoped would deepen our understanding of experiences with the CLA. Students noted that the College’s emphasis on writing, especially the required Senior Individualized Project (SIP; for which over 90% of our students write a senior thesis), and emphasis on critical thinking and analytical reasoning in coursework (in the major as well as outside the major, in many different disciplines) contributed significantly to their ability to do well on the CLA. Our students found that having to think, form arguments, and write quickly within the time constraints of the test were the most challenging aspects of the CLA, but they found nothing particularly challenging about the format of the test. And, when asked how we might best motivate students to do their best on the CLA in the future, our recent graduates encouraged us to stress the importance of demonstrating the value of a degree from Kalamazoo College and then assured us that our students would rise to the challenge and make good use of an opportunity to “lend a hand.”

Student Perceptions of Potential Change-inducing Catalysts

In-depth interviews of Kalamazoo College juniors and seniors, carried out by other students, provided insights into effects of experiences at Kalamazoo College and into effects of the interview process itself. Students in Kiran Cunningham’s Qualitative Research Methods course developed, administered, transcribed, coded, and then analyzed 81 semi-structured interviews, 31 of which were with seniors who took the CLA. While there is still much information to be gleaned from these interviews, examining the interview transcriptions from seven students with high CLA scores and six students with low CLA scores revealed intriguing differences between the groups. A few “patterns” that emerged were the following (in no particular order): (a) foreign language proficiency (perhaps, communication proficiency in general) seemed to correlate positively with CLA scores; (b) students who used the
phrase “personal initiative” (or something similar) during interviews generally did better on the CLA; and (c) science students can get “lost” in their discipline and never “surface,” but those who did get out and explore other disciplines tended to do well on the CLA. These findings are very preliminary, but they do suggest avenues for further analysis.

The interviews have been, and will continue to prove to be, particularly useful as we attempt to answer the question, “What is it about a Kalamazoo College education that leads to the high degree of “value-added” we see reflected in our student’s CLA performance?” Kiely (2006) suggested that transformational learning may be catalyzed by experiences of “high intensity dissonance” in which students encounter situations that essentially force them to change the parameters of their thinking. Kalamazoo College’s K-Plan affords students many chances to encounter this kind of high intensity dissonance, whether it be in classes with professors who have a reputation for pushing students, through course-based and co-curricular service-learning, or through participating in a study abroad program with a high level of immersion in the local culture. While more of an hypothesis than a finding at this point, the interviews do suggest that students who have the confidence, the personal initiative, and in the case of study abroad, the language ability, to place themselves in situations where they will experience high intensity dissonance may be more likely to perform above expected on the CLA.

Another intriguing, and initially surprising, outcome from these interviews was learning how much the interviewees and interviewers gained from the focused conversations. When reflecting on the interview process, students in both groups extolled the opportunity to have a “genuine” conversation about their K education. Interviewees found that the interview itself provided them an opportunity not only to reflect on the various pieces of their Kalamazoo College education, but also to forge links between the pieces and see their education as an integrated whole rather than a set of disconnected parts. Interviewers, who in every case were a year younger than those they interviewed, upon hearing the interviewees make those connections, began to reflect on and connect the pieces of their own education. We need to pay close attention to this important insight, and are currently thinking about ways we might more intentionally structure these kinds of genuine conversations into students’ Kalamazoo College education.

Relationship (or lack thereof) between CLA Scores and Responses to the NSSE

As part of our attempt to discover why some students scored high and some low on the CLA, we compared senior responses on the National Survey of Student Engagement (NSSE) with senior CLA scores. Our hypothesis was that high engagement during college (presumably measured by NSSE) would correlate with high CLA scores. Using data from the 48 seniors who completed both the NSSE and the CLA, we ran simple regressions on engagement scores in each of the five benchmark areas. We also ran a regression for an overall benchmark score, which combined the first four benchmarks (Level of Academic Challenge, Active and Collaborative Learning, Student-Faculty Interaction, and Enriching Educational Experiences). We found no significant correlations between any of these measures of engagement and performance on the CLA. We also ran regressions on individual NSSE questions and CLA scores. Again, we found nothing that correlated in any significant way.

A prominent limitation with these analyses is the very small sample size (48 students). We spoke with Jillian Kinzie at NSSE, who has Kalamazoo College CLA and NSSE data as well as CLA and NSSE data from Colorado College. Jillian said that their analysts had run similar analyses on the combined Kalamazoo and Colorado data sets and found that the sample size was still too small. Earlham College recently sent their CLA data to Jillian to augment the data set. We will soon see whether the addition of Earlham data will be enough to discern patterns and correlations.

Another possible limitation with an intra-institutional analysis like this is that our sample of students may be too homogeneous. That is, all the students in an institutional sample have more common experiences than disparate ones, which leaves very little variation in the data set. Having a data set made up of several different institutions may help address this issue as well.
Intellectual Development and CLA Performance

We found that our students’ intellectual development, as measured by scores on the Learning Environment Preference (LEP), increased between matriculation and graduation and correlated positively, but weakly, with CLA performance. We administered the LEP to both our first-year and senior samples in the 2005-2006 academic year, after the students had completed the CLA. As with the CLA, senior scores on the LEP (CCI = 387±39; mean ± sd) were somewhat higher than those of first-years (CCI=349±45), and seniors had higher modal responses to the LEP (Figure 5), indicating movement to “higher” Perry positions over four years of college.

![Figure 5. Modal responses of seniors on the LEP were higher than those of first-years.](image)

The correlation between LEP and SAT (or converted ACT) scores was positive, but low (r=0.37), and similar to that of CLA and SAT scores (r = 0.35). Though also positive, the correlation between the LEP and CLA scores was somewhat lower (r = 0.24). Because the LEP is an instrument designed to ascertain students’ beliefs about knowledge and critical thinking, it is not surprising that LEP scores were only weakly correlated with critical thinking skills as measured by the CLA. Bill Moore, the LEP designer, thinks this may be related more to what researchers call “critical thinking disposition” than to performance of critical thinking itself (personal communication, Moore, 2006).

Kalamazoo College’s CLA Data from a Different Perspective

Until now, close examination of Kalamazoo College’s student scores on the CLA has yielded few clear insights into characteristics of our curriculum, and of our students, that might contribute to intra-institutional variation in CLA scores. Even though recent graduates, who took the CLA as seniors, perceive that aspects of their Kalamazoo College education contributed to their performance on the CLA, our attempts to correlate potential predictors of performance on the CLA – such as indicators of engagement contained in responses to the NSSE and location on a scale of “intellectual development” (LEP), as well as SAT score and cumulative GPA in college – have revealed little useful information about what might cause some students to perform well on the CLA and others to perform less well. While analyses like these might suffer from having a small sample of relatively homogeneous students.

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7 The LEP was developed to locate students along the Perry scheme of intellectual development in the college years (Perry, 1970), in which students progress through nine positions of thinking and beliefs about knowledge that are thought to be crucial to developing critical reflective thought and judgment (King & Kitchner, 1994). According to this scheme, students move from a “black and white,” or dualistic, view of knowledge to a view that knowledge is better understood as relativistic and contextual. The LEP scale was developed from cue categories used in rating interview data from years of Perry related studies, and is based on the notion that one’s Perry position can be detected in one’s beliefs about learning (Moore, 1988). A key hypothesis guiding the use of this scale is that students who are more contextually relative in their epistemology will prefer learning environments that are more constructivist in form. The scale can be used to yield a single score, the Cognitive Complexity Index (CCI), and locations of students along the Perry continuum can be obtained from determining students’ modal responses to the survey.

8 Here we mean homogeneity in terms of characteristics at matriculation and in terms of collegiate experiences – e.g. all Kalamazoo College students complete a Senior Individualized Project, all students complete our language requirement, over 80% of our students study abroad, etc.
and from the univariate approaches to our analyses (instead of clustering potential predictors when interrogating the CLA data), we had hoped to get at least a few helpful glimpses at explanations for variation in CLA performance.

Recently, however, we developed the notion of examining performance on the CLA in an approximate “value-added” way by identifying students who “over-performed” and those who “under-performed” on the CLA. Instead of simply looking at actual CLA scores (i.e. the scores earned by students), we computed “adjusted” CLA scores (AdjCLA) by calculating each student’s “expected” CLA score, using the regression equation from the inter-institutional regression of CLA score on SAT score (CLA = 0.69(SAT) + 448), and then subtracting it from that student’s actual score (AdjCLA = Actual CLA – Expected CLA). Thus, a student with a positive AdjCLA performed better on the CLA than other college seniors (who had the same SAT score as that student) on the CLA and a student with a negative AdjCLA did not perform as well on the CLA as other college seniors (again, who had the same SAT score as that student). Interrogating these AdjCLA data is similar to examining patterns in “residuals” from regressions in that variation in CLA scores attributable to variation in SAT scores presumably has been attenuated, thereby exposing potential causes of the “value-added” in student scores.

Adjusted CLA scores seemed to reveal more about students’ performance than did actual CLA scores. CLA scores had a strong positive correlation with AdjCLA (Figure 6) and, as seen before, CLA scores appeared to show somewhat of a “ceiling effect,” suggesting that students with greater abilities to think, reason, and write might not have been able to demonstrate these abilities fully on the CLA.

![Figure 6. CLA scores are highly correlated with Adjusted CLA scores. Points enclosed in box are those in the “at expected” range, based on SAT score.](image)

The strongly positive inter-institutional correlation between CLA and SAT, along with this apparent “ceiling effect” in CLA scores earned by seniors at Kalamazoo College, could lead one to expect that students with high SAT scores might have encountered the “ceiling” of the maximum CLA score possible (1600) and, thereby, earned lower AdjCLA because of having higher expected CLA scores by virtue of their high SAT scores. To examine this phenomenon more carefully, we created three categories, similar to those used when grouping institutional scores – Below Expected (AdjCLA more than one standard error below expected CLA), At Expected (within one standard error below or above expected), and Above Expected (more than one standard error above expected) – and sorted student CLA performance into these groups. We found that the mean SAT score of students in the Below Expected group was about 5% greater than the mean SAT score of students in the Above Expected group (Figure 7), as would be anticipated if there were the “ceiling effect” described, but we found no statistically significant differences among SAT scores of the students in the three groups. However, students in the Above Expected group had CLA scores that were 24% greater than those of students in the Below Expected group, and CLA scores varied significantly among all three groups. We were pleasantly surprised by the (important) discovery of seemingly “less capable” students among those in the Above Expected group that earned high CLA scores. Thus, something other than intellectual ability, as measured by the SAT, seems to have led to high performance of some students on the CLA.
Figure 7. SAT scores did not differ significantly among three CLA performance groups, whereas CLA scores differed significantly among all three groups. Number of students in each group were as follows: Above=39, At=15, Below=13.

The academic division in which students majored seems to have had an effect on CLA performance. Adjusted CLA scores differed significantly among divisions (Figure 8), even though actual CLA scores did not (Figure 4), with students majoring in Foreign Languages having the highest AdjCLA and students in Natural Sciences having the lowest AdjCLA. This observation is corroborated by the distribution of students among the three performance categories (Figure 9). Students majoring in Natural Sciences showed a bi-modal distribution, with eight “Below Expected,” three “At Expected,” and 11 “Above Expected” scores, whereas students in all other divisions showed uni-modal distributions, with the vast majority of scores in the “At Expected” and “Above Expected” categories. The bimodal distribution of natural science students led to hypotheses about possible causes, but, at present, we have no conclusive explanations for this phenomenon.

Preliminary Inferences from Analyses of CLA Results

Clearly, a college education enhances abilities of students to think critically, reason analytically, and write effectively, and trajectories students take through that education seem to affect the degree to which those abilities are enhanced. Kalamazoo College seniors performed significantly better than our first-year students on the CLA, and the majority of our seniors (58%) had CLA scores that were “above expected” for seniors with comparable SAT scores (Figure 6). Even though considerable variation in CLA scores, along with small sample sizes, precluded our reaching definitive conclusions about factors affecting CLA performance, we surmise the following: a curriculum that creates a high “value-added” education emphasizes all three skills measured by the CLA, provides experiences (preferably real-life experiences) that induce students to take perspectives different from those with which they are most familiar, encourages students to reflect on what they’ve learned inside and beyond the classroom, and then, perhaps to be most effective, fosters an environment in which students communicate outcomes of those reflections to others.

Several questions remain. Could it be that some students majoring in the Natural Sciences become so focused on their discipline of choice that they don’t “get out” and encounter the “high intensity dissonance” that might lead to the ability to think more critically? Or, perhaps some students majoring in the Natural Sciences do not get as much practice and mentoring with written communication as students with majors in other academic divisions such that they were unable to demonstrate their abilities to think and reason as fully as possible on the CLA. We also noticed that many students who took four or more courses in a discipline from outside the academic division in which they majored performed “above expected” on the CLA, whereas relatively fewer students who performed “below expected” took four or more courses in an “unfamiliar” discipline. Could it be that in-depth development of skills in critical thinking, analytical reasoning, and written expression in two distinct disciplines provides a better general education than having a major and a few courses in a variety of different disciplines? We will continue to explore answers to these questions, and other that arise, as we continue with our fine-grained analysis of potential effectors of becoming better educated.

9 A pattern noted by Bok (2006)
Figure 8. Adjusted CLA scores differed significantly among academic divisions; the largest difference was between Foreign Languages and Natural Sciences. Number of students in each division were as follows: FA=7, FL=5, H=13, NS=22, SS=20.

Figure 9. Distribution of students among three CLA Performance categories differed among academic divisions in which students majored. Students majoring in Natural Sciences performed both “Below” and “Above” expected; students in other divisions performed mostly “At” and “Above” expected.

Last, the data and analyses presented here have led us to think not only about possible catalysts for changes in students during college but also about what it means for a college to be “selective” in its admission of potential matriculants. We infer from our findings that a college should be considered to be selective when it chooses students who are likely to thrive in the environment created by the college and not just when it chooses students with the (presumably) highest academic ability.
Literature Cited


Hersh, R.H. 2006. What now? What can we do once we have the CLA results? Please see the following: [http://www.cae.org/content/pro_collegiate_reports_publications.htm](http://www.cae.org/content/pro_collegiate_reports_publications.htm)


Appendix 1

RESULTS FROM 2006 ELECTRONIC SURVEY QUESTIONS
(Completed by 22 of 67 graduates who took CLA as seniors)

1) When invited to participate in the CLA, how did you feel about being part of the study?
   A) Very reluctant     B) Somewhat reluctant  C) Indifferent     D) Willing     E) Enthusiastic

   KC
   82% WILLING-ENTHUSIASTIC

2) How motivated were you to do your best on the CLA once you began the exam?
   A) Not at all     B) Poorly    C) Somewhat     D) Highly     E) Very highly

   KC
   59% HIGHLY
   90% SOMEWHAT-HIGHLY

3) How focused did you feel while taking the CLA?
   A) Not at all     B) Poorly    C) Somewhat     D) Highly     E) Very highly

   KC
   100% SOMEWHAT-HIGHLY

4) Do you agree or disagree with the statement that "Before entering your final responses on the
   CLA you thought out, planned, and carefully composed your answer"?
   A) Strongly disagree     B) Disagree    C) Neutral     D) Agree     E) Strongly agree

   KC
   82% AGREE
   5% DISAGREE

5) How similar was the CLA to tasks in your courses - such as for homework assignments, class
   projects, or exams?
   A) Very different     B) Mostly different  C) About the same     D) Mostly similar     E) Very similar

   KC
   68% MOSTLY SIMILAR
   32% MOSTLY-VERY DIFFERENT
6) How difficult was the CLA compared to exams in your college courses?

    A) Much more difficult    B) More difficult    C) About the same    D) Easier    E) Much easier

    KC
    77% EASIER-MUCH EASIER
    23% ABOUT SAME

7) To what extent did the CLA allow you to demonstrate what you learned in college in terms of thinking and reasoning?

    A) Not at all    B) Poorly    C) Somewhat    D) Quite a bit    E) Very much

    KC
    82% SOMEWHAT-
    QUITE A BIT

8) To what extent did the CLA allow you to demonstrate what you learned in college in terms of writing?

    A) Not at all    B) Poorly    C) Somewhat    D) Quite a bit    E) Very much

    KC
    86% SOMEWHAT-
    QUITE A BIT

9) Do you agree or disagree with the statement that "Coursework enhanced your ability to perform well on the CLA"?

    A) Strongly disagree    B) Disagree    C) Neutral    D) Agree    E) Strongly Agree

    KC
    64% AGREE-STRONGLY AGREE
    36% NEUTRAL-DISAGREE

10) Do you agree or disagree with the statement that "Experiences outside of coursework enhanced your ability to perform well on the CLA"?

    A) Strongly disagree    B) Disagree    C) Neutral    D) Agree    E) Strongly Agree

    KC
    64% AGREE-STRONGLY AGREE
    36% NEUTRAL-DISAGREE
SUMMARY OF TELEPHONE INTERVIEWS WITH (17 OF 22) STUDENTS WHO TOOK POST-CLA SURVEY

Once you started the CLA what challenges in writing and thinking did you encounter?

Thinking and formulating a logical argument quickly, within the time constraints, was challenging.

Where at various points during your undergraduate career did you face similar challenges in thinking and writing?

In many courses - science, religion, political science, philosophy, First-Year Seminar, etc. - when writing exams and when writing research papers, including the SIP, students encountered similar challenges.

Weighing arguments and options occurred through Career Development and Study Abroad.

What did you find most challenging about the CLA?

TIMED essays; pressure when writing; trying to balance time and thoroughness

Was there anything about the format of the CLA that prevented you from demonstrating your full abilities?

No

Can you identify specific courses that you think prepared you for succeeding on the CLA?

Rather than listing particular courses (and running the risk of offending some folks by omission), suffice it to say that MANY courses, in all divisions, were mentioned by students interviewed. If we had interviewed more students, more courses would have been listed. A reasonable inference is that courses at K help students, in general, complete CLA tasks admirably.

On what experiences were you drawing from while taking the CLA? That is, what experiences (e.g. coursework, extra-curricular activities, internships, study abroad, senior project, etc) helped you address the tasks put before you on the CLA?

Study Abroad, coursework, intellectual environment (intellectual discussions outside of class)... all those experiences affected each other and created a context from which students drew. The independent nature of the SIP; the capacity to "teach yourself" (i.e. learn independently) was important.

If we decide to give the CLA to seniors in the future, what should we do to ensure that they are as motivated as possible to put forth their best effort on the exam?

K students in general are motivated and happy to demonstrate the excellence of the education here; K students will rise to the challenge... I'm glad this is happening.

A degree can only say so much... demonstrating the value of a degree is important.
APPENDIX SIX

MANUSCRIPT FOR Peer Review
Multiple Drafts of a College’s Narrative

By Paul Sotherland, professor of biology and chair of the faculty assessment committee; Anne Dueweke, director of faculty grants and institutional research; Kiran Cunningham, professor of anthropology; and Bob Grossman, professor of psychology—all of Kalamazoo College

Writing a story about how well a college helps its students become better educated is an endless helix of “counting and recounting” (Shulman 2007), yielding a series of narratives that track a college’s educational trajectory. When discussed openly, both within and among institutions, these iterative accounts gleaned from measures of student learning can improve undergraduate education by making it more transparent (Bok 2006). In this spirit, we offer part of Kalamazoo College’s draft narrative as a case study, based on explorations of information from the Collegiate Learning Assessment (CLA) and the National Survey of Student Engagement (NSSE), and invite colleagues at other institutions to share insights from their own investigations.

Results from the CLA and NSSE can be enlightening, challenging, and affirming. Trying to understand our students’ CLA performance has led us to examine features of our curriculum that might bring about changes we see in students between matriculation and graduation. In so doing, we are addressing questions, expressed by Hersh (2006), about how we might learn from the CLA. A similar approach to interrogating NSSE results revealed patterns that corroborated our hunches about variation in CLA data. Through these analyses we are finding that at least some of our students’ experiences seem to have a “value-added” effect, and we are beginning to discern how this effect might be expanded to reach more students.
Performance of Kalamazoo College Students on the CLA

Through a grant from the Teagle Foundation, and as part of an assessment collaboration with Colorado College and Earlham College, we administered the CLA to first-year students and seniors during the 2005–6 academic year. First-years had a mean performance at the 80th percentile (at the lower end of the “at expected” range) of the CLA, even though their mean SAT scores were at the 92nd percentile compared with first-years who took the CLA in 2005–6. Seniors had a mean performance at the 99th percentile (at the upper end of the “above expected” range) of the CLA, whereas their mean SAT scores were at the 92nd percentile compared with other seniors who took the CLA. The “value-added” (mean senior CLA score minus mean first-year CLA score) of a Kalamazoo College education was “well above expected.”

While examining these CLA results, two questions guided our inquiry: (1) What attributes of a Kalamazoo education might account for this overall performance? (2) What variations in students’ educational pathways might account for differences in CLA performance at Kalamazoo? To explore these questions we employed several approaches, including comparing “typical” indicators of students’ academic abilities (i.e., GPA and SAT) to CLA performance, disaggregating CLA scores among academic divisions, performing similar analyses of NSSE data, and interviewing students about their college experiences.
Indicators of Academic Ability and CLA Scores

We began with the easiest comparisons by looking for correlations between CLA performance and SAT scores and cumulative GPAs. CLA scores of both first-years and seniors were positively, but weakly, correlated ($r = 0.37$ and $0.24$, respectively) with SAT scores (fig. 1). Similarly, cumulative GPAs of our seniors showed a weakly positive correlation with CLA score. Thus, students over a range of “abilities” performed unevenly on the CLA, suggesting that students selected for admission to an institution perhaps should be those most likely to thrive in the college’s environment and not just those with the (presumably) highest academic ability. However, to find out why some students seemed to thrive more than others, as measured by the CLA, we had to dig deeper.

![Figure 1](image.png)

Figure 1. CLA scores increased with SAT for first-years and seniors; mean senior CLA score was significantly greater than that for first-years even though mean SAT scores did not differ.
A Disaggregated View of Kalamazoo’s CLA Performance

In post-CLA surveys and interviews, our seniors described educational experiences that they believed contributed to their CLA performance, but our attempts to identify predictors of CLA performance through analyses of academic transcripts and comparisons of scores by academic division revealed little about what might cause some students to perform well and others to perform less well. While acknowledging that these analyses probably suffer from our small sample size, and acknowledging that the CLA was designed to yield one aggregated score for each institution, we were disappointed with our lack of insight.

Because CLA scores tend to increase with higher SAT scores (as illustrated in figure 1 and in the CLA Institutional Report; see www.kzoo.edu/ir), we needed to account for variation in SAT scores when interpreting CLA performance of our students. So, instead of using actual CLA scores (i.e., scores earned by students), we computed “adjusted” CLA scores (AdjCLA) by calculating each student’s “expected” CLA score using the equation from the interinstitutional regression of CLA score on SAT score (CLA = 0.69(SAT) + 448), and then subtracting it from that student’s actual score (AdjCLA = Actual CLA – Expected CLA). Thus, a student with a positive AdjCLA had a CLA score above the interinstitutional regression line and a student with a negative AdjCLA had a CLA score below the interinstitutional regression line. Adjusting CLA data in this way presumably attenuates variation in CLA scores attributable to variation in SAT scores and thereby exposes other potential sources of variation in CLA scores, such as educational experiences. This method of identifying students who “over-performed” and “under-performed” on the CLA revealed interesting patterns.
We created three categories similar to those used in the institutional report for grouping institutional scores—“below expected” (AdjCLA more than one standard error below “expected” CLA), “at expected” (within one standard error below or above “expected”), and “above expected” (more than one standard error above “expected”)—and sorted student CLA performance into these groups. (We used data from the interinstitutional regression for these analyses because the "nationally normed Individual regression" data were unavailable to us, so this was the best available and most consistent way for us and colleagues at other institutions to explore variations in students' CLA performance.) The mean SAT score of students in the “below expected” group was about 5 percent greater than the mean SAT score of students in the “above expected” group, but we found no statistically significant differences among SAT scores of the students in the three groups. However, “above expected” students had CLA scores that were 24 percent greater than those of “below expected” students, and CLA scores varied significantly among all three groups. And we were pleasantly surprised to discover seemingly “less capable” students (i.e., those with SATs and GPAs below the college mean) among those in the “above expected” group with high actual CLA scores. Thus, something more than intellectual ability, as measured by the SAT, seems to have led to high CLA performance for some students. With this new way of looking at students’ performance, we set out once again to look for patterns. This time, we had more success.

At Kalamazoo College, CLA performance seems to vary with the academic division in which students majored. Adjusted CLA scores differed significantly among divisions, even though actual CLA scores did not, with students in natural sciences having the lowest AdjCLA. This observation is corroborated by the distribution of students among the three performance categories. The natural sciences showed a bimodal distribution (fig. 2), with eight “below
expected,” three “at expected,” and eleven “above expected” scores, whereas all other divisions showed uni-modal distributions, with the vast majority of scores in the “at expected” and “above expected” ranges. The bimodal distribution in natural sciences led to hypotheses about causes for the “below expected” performance of some science majors and prompted us to examine NSSE results more closely.

**Interdivisional Differences in CLA Performance**

We hypothesized that student engagement in “programs and activities that institutions provide for their learning and personal development” (nsse.iub.edu/html/quick_facts.cfm) would correlate positively with CLA scores. However, data from seniors who completed both the NSSE and the CLA (n = 48) revealed no significant correlations between any measures of engagement (benchmarks or individual questions) and performance on the CLA. In retrospect, these results are not surprising given that NSSE data are self-reported whereas CLA data are direct measures of abilities. And our analyses again probably suffer from the small sample size and a relatively homogeneous group of students. (Homogeneity, in this case, is in terms of experiences—for example, all Kalamazoo students complete a language requirement, take comprehensive examinations, and complete a senior project, and over 80 percent study abroad.) However, our success with comparing adjusted CLA scores among academic divisions led us to perform similar analyses of NSSE data from a larger sample of seniors.
Figure 2. Distribution of students among three CLA performance categories differed among academic divisions in which students majored. Students in natural sciences performed both “below” and “above” expected; students in other divisions performed mostly “at” and “above” expected.

We reexamined data from all seniors who took the NSSE in 2005–6 (the response rate was 76 percent) by comparing responses from students majoring in each of the five academic divisions. We found that the “Level of Academic Challenge” (LAC) benchmark differed significantly among divisions. The LAC “score” for natural sciences was significantly lower than scores for humanities and for social sciences, prompting us to examine responses to each question comprising this benchmark. Students in humanities and social sciences scored significantly higher than students in natural sciences on three areas: (1) number of written papers between five and nineteen pages; (2) number of assigned textbooks; and (3) making judgments
about the value of information. If these responses truly highlight different experiences of students in these disciplines, then we might be seeing reasons for interdivisional differences in CLA performance and possibilities for improving our curriculum. Students who write well and who have had more experience making judgments about the value of information would theoretically perform better on the CLA.

**Insights from Student Interviews**

Interviews of Kalamazoo seniors provide additional information about effects of various educational experiences. Students in a qualitative research methods course administered, transcribed, and analyzed interviews of thirty-one seniors who took the CLA. Examining the interview transcripts from students with high CLA scores and students with low CLA scores revealed intriguing intergroup differences that corroborate insights gained from examining disaggregated CLA and NSSE scores. The following “patterns” emerged: foreign language proficiency seemed to correlate positively with CLA scores; students who used phrases like “personal initiative” generally did better on the CLA; and some science majors seemed to get “lost” in their major, but those who did explore other disciplines tended to do well on the CLA.

The interviews also caused us to wonder about transformational learning at Kalamazoo. We are intrigued by Kiely’s (2006) finding that transformational learning may be catalyzed by experiences of “high-intensity dissonance” that essentially force students to change the parameters of their thinking. We wonder if Kalamazoo’s distinctive focus on integrated, experiential learning might provide students not only with many opportunities to encounter high-intensity dissonance, but also with critically important structures for processing these experiences so that transformational learning is captured. In the interviews we found evidence of
transformational learning occurring through, for example, challenging courses, service-learning, and long-term, immersive study abroad programs. Moreover, the interviews suggest that students who perform well on the CLA might be those with the confidence, initiative, and (with regard to study abroad) language ability to place themselves in situations where they not only experience high-intensity dissonance, but experience it in such a way that they develop habits of mind that help them perform well in situations like those encountered on the CLA.

**Preliminary Inferences**

Clearly, a college education enhances critical thinking, analytical reasoning, and effective writing, and the trajectories students take through that education seem to affect the degree to which those abilities develop. Although small sample sizes preclude our reaching definitive conclusions about factors affecting CLA performance, at this point in our explorations we surmise the following: a high “value-added” education emphasizes *all skills* measured by the CLA and creates opportunities for students to experience, reflect on, and learn from “high-intensity dissonance.” Analytical reasoning and critical thinking are essential for performing well on the CLA, but without effective writing students cannot fully demonstrate those skills.

Several questions remain. What causes some “high-ability” students to under-perform on the CLA, and what experiences help students with “weaker” academic records perform above expected? Could it be that some natural science students do not get as much practice with writing as students in other divisions (as noted by Bok 2006), and were therefore unable to demonstrate their abilities to think and reason on the CLA? If encounters with “high-intensity dissonance” bring about developmental leaps, how do we ensure that all students benefit from those experiences? Moreover, what are the conditions under which encounters with high-intensity
dissonance actually lead to transformational learning? And how can we best use lessons learned from investigations like those described here to inform curricular decisions?

Data and stories from assessment of student learning provide "ground truth" that allows our heads to believe what our hearts tell us. We in the academic realm live, at some level, in the cerebral sphere of influence that makes us skeptical of hunches born outside of our heads. And yet, we "know" in our hearts - from noticing changes in demeanor, new twinkles in eyes, and more conviction in voices - that we effect significant growth in our students. Assessment of student learning helps cause the spheres of the head and heart to fuse into a powerfully convincing whole. Through that fusion, we find affirmation of the learning that takes place during college and develop the impetus for writing the next draft of our institution’s narrative.
References


Hersh, R. H. 2006. What now? What can we do once we have the CLA results? www.caee.org/content/pro_collegiate_reports_publications.htm


Appendix Seven

Spring Meeting at the Center of Inquiry in the Liberal Arts
Catalyst for Cognizance and Change
A Collaborative Value-Added Assessment Project Supported by The Teagle Foundation

Collaborative Meeting
Schedule of Events and Notes from Meeting
Center of Inquiry in the Liberal Arts
Wabash College
12-14 April 2007

FRIDAY, 13 April
8:00 Breakfast (for those who spent the night)
10:00 Welcome to the Center of Inquiry in the Liberal Arts – Bill Doemel, Director of Operations, Center of Inquiry in the Liberal Arts
10:15 Reports and discussion on lessons learned from CLA/NSSE analyses
Noon Lunch – Followed by meetings of college teams to discuss state of assessment, and what could be done to improve it, at home institutions
1:30 Reports from lunch discussions and ensuing conversations
2:30 Words from Charlie Blaich (Director of Inquiries, Center of Inquiry in the Liberal Arts) about his national study
3:00 Break
3:30 Progress reports on Targeted Assessment Projects
4:00 Are we a Community of Practice?
5:00 Break until dinner
6:00 Dinner and discussion

SATURDAY, 14 April
8:00 Breakfast
9:00 Discuss ideas for Annual Report to the Teagle Foundation
10:00 Discuss plans for fall data sharing (at CC) and for next year (our “final” year)
10:30 Break
11:00 Wrap-up meeting, with comments and reflections from Charlie Blaich
Noon Lunch
1:00 Head home

Notes from Meeting
13 April 2007


(Note: We had no “official” scribe for the minutes, except for our discussion about the annual report and plans for the fall data sharing, so these notes are not a thorough representation of what transpired at the meeting. That noted...they’re not too bad either...
After Bill Doemel welcomed us to the Center and introduced Christina Gilbert, Paul S. reminded everyone (again) about keeping what’s shared at the meeting within the “four walls.” We then all introduce ourselves for the benefit of those new to the group.

We had a wide-ranging discussion about the CLA/NSSE data that were shared at our fall meeting at KC and then subsequently analyzed in more depth. (Please see data for each college appended, without commentary, at the end of these meeting notes.) One new, and important, observation we raised (and then revisited periodically) was that our three institutions seem to attract students with non-overlapping attributes (aside from slightly different SAT scores). How might these potentially different “inputs” affect how students respond to a college education, and how might these apparently different attributes affect how students approach the CLA? (This observation and conversation calls for a closer look at our CIRP data; see below.) Another topic of interest was the role of “intense dissonance” (noted in the Peer Review paper) in effecting student learning. KC folks talked about how this can, and often does, take place while on study abroad. Where else might it occur and how important is it? We also talked at some length about the CLA itself and about our interactions with folks at CAE/CLA. (Please see in the “annual report” section of these notes.)

Following lunch, we had intra-institutional conversations about the state of assessment of student learning “at home.” (Carving out time at our meetings for each of the teams to focus on assessment-related topics is helpful because creating space in schedules for patient reflection and conversation can be difficult during the crush of the academic year.) Reports from those conversations were enlightening. At CC, there seems to be a less-than-positive atmosphere for assessment, even though Paul, Larry, and Amanda (and a few other colleagues) are doing all they can to “carry the banner.” While understandable, especially in light of CC’s results on the CLA, this seems somewhat problematic when considered in the context of CC’s imminent NCA visit this fall. (Unfortunately, the rest of us could not be of much help, other than serving as a receptive audience for a “public” airing of some frustration.) At EC, one-year departmental plans are submitted, but these contain little assessment of student learning. Five-year departmental plans are supposed to contain assessment-related topics, but they mainly report on performance of majors on comprehensive exams, on staffing levels and needs, and on the status of the curriculum. At KC there is little resistance to assessment of student learning; there is genuine curiosity (among a fairly large group) about what our Teagle-funded project is uncovering, but not everyone is fully tuned in. There seems to be palpable positive energy about assessment of student learning on campus. Departments and programs are (supposed to be) developing assessment plans (and a few of them have done so); plans will be implemented within the coming year. Several faculty committees (Assessment, Educational Policies, Committee on Teaching, and Faculty Executive Committee) and many faculty and administrators frequently ask, “Where are the data?” or “How do we know?” Assessment of student learning seems to be on a fruitful trajectory at KC; with any luck, greater institutional commitment (including a line item in the budget) will be forthcoming.

Charlie Blaich then gave a brief report about the Wabash National Study of Liberal Arts Education. He gave us a sense of what they hope to accomplish through the study and he outlined the “scaffolding steps” being taken to get the study established. Several folks at the meeting expressed interest in learning more about the various “outcomes measures” Charlie et al. are using because many of these measures seem like they would complement the CLA well.
Following a break, we heard progress reports on the Targeted Assessment projects. Unlike the varied responses at the three campuses to the CLA results, responses to our Targeted Assessment projects are much more positive. On all three campuses, these projects seem to be generating positive energy for assessment of student learning. Given that much of what had happened at KC was described in the Peer Review paper, and already discussed earlier in the day, we focused on the CC and EC projects. The CC project targets the (not required) senior “capstones” and how students make progress toward and through them. Project funds are being used to get faculty, students, and alumni talking with each other about the effectiveness of the capstones. In Economics, interviews with current students and a survey of alumni have been employed. The History department held focus group dinners, and a change in the curriculum might grow out of them. Amanda interviewed Sociology faculty and will interview students to look for congruence. Work in Mathematics, Biology, English, Anthropology, and Psychology is in progress (please see “update” at the end of these meeting notes). There continues to be interest among the CC team in finding out more about senior capstones, and their effectiveness, at EC and KC. The EC project, also a work in progress, targets quantitative reasoning (QR) and writing in first-year courses. Bill B. described the assessment instrument (a pre- and post-test) that he developed for his Ecological Biology course and how he changed the course as a result of what he learned about changes (or lack thereof) in students who took the course. As a result of his inquiry, the entire science division will be examining outcomes for QR and scientific reasoning so that a more sustained effort to effect changes in students can be put in place. Bob S. then described the project, run by Deb Jackson (now on sabbatical), in which improvements in first-year writing were examined. Last summer, Deb convened faculty readers from CC, EC, and KC (at KC) to develop, standardize, and implement a grading rubric for papers written by EC students. Early and late papers from students in several courses were then graded by two readers using this rubric and scores on these papers were compared. Modest, but not statistically significant, changes were found in writing ability over the course of one semester. After perusing these results, a writing consultant at EC was not surprised by the lack of significant change, in part because there were too many variables and the sample size was too small. Possible problems with inter-reader reliability and a lack of consistency in how the rubric was employed have become apparent and will need to be addressed. (Further work on all three projects is clearly warranted. Building and sustaining momentum seems problematic when these projects appear to be “extra” tasks for already busy faculty and staff.)

As a lead-in to dinner and further conversations about the work of our collaborative, in preparation for our Saturday morning discussion about our annual report, we talked about whether or not we see ourselves as a Community of Practice (CoP). This conversation was prompted by an encounter Paul S. had with the CoP concept, at a meeting with Teagle Foundation folks earlier in the year, and it was informed by a two-page primer on CoPs by Brook Manville. Using the CoP concept and terminology as a context for thinking and talking about what our collaborative has been doing seemed helpful. Recurring questions were the following: Where do we go from here? How can we expand our CoP within our institutions and among institutions with problems/situations similar to ours? How can we transform our learning research into action research? (That is, how can we use what we’re learning to effect changes leading to improvement?) We see our CoP serving as a means of developing personally and professionally, and we see our CoP serving as a means of breaking down “silos” on our home campuses. (That is, we might be making headway toward diminishing the tyranny of departments.) Our CoP also helps foster the “baking” of some half-baked ideas. Being able to
test these ideas among assessment savvy “critical friends” can frequently be affirming. (Yup, it’s working!) Dinner, and many post-dinner conversations ensued.

Following breakfast, we spent quite a bit of time reflecting on and talking about our accomplishments during the preceding year, what to include in our annual report, and what we should plan to do before we meet again at CC in October. The following is a list of discussion topics.

LESSONS LEARNED FROM ANALYZING THE CLA

− We like the CLA as an assessment instrument, except for its lack of emphasis on quantitative reasoning, because it measures outcomes of student learning that are at the core of a liberal arts education. That said, it is not a test of general student learning because it focuses only on critical thinking, analytical reasoning, problem solving, and writing. Multiple measures of student learning need to be used to get a more complete picture of an institution’s effect on students.
− Having a single CLA data point for each institution is pretty useless.
− Examining/interrogating disaggregated scores has been helpful, but there are risks of reading too much into variation in individual scores.
− Triangulating (i.e., viewing data from different perspectives, including those gained from interviewing students and from “dissecting” NSSE data) within and among institutions has been very helpful and can help mitigate risks of over-interpreting CLA data.
− CLA results should reveal each institution to itself. (As Bob Southard noted, the “measles” we see in the scatter plots should map reasonably closely to the “measles” we encounter on campus.) The data will frequently be “affirming,” but there will also be surprises. Affirmative information can be used to frame a discussion on how the institution can build on strengths, and surprising information can be used to frame further inquiries into the source of the surprise. Following up on CLA analyses with “focused inquiries” into particular areas of the collegiate experience would be a good way to put all the information to good use (i.e., work toward “closing the loop”).
− How can we help faculty pay attention to, and follow-up on the (positive or negative) CLA results? Part of the answer probably lies in (faculty and administrative) leadership. But, we also need to remember that not everyone on our campuses will care about results like these. A communication and campus involvement plan should be devised (up front?).
− What’s the most effective way of dealing with news (good or bad)? (This point is clearly applicable to many measures of institutional characteristics.)
− We detect different “energy levels” at CC, EC, and KC in response to getting the CLA results. Are these related to the different results at the three institutions, or is there something else happening? Our project seems to have helped reveal campuses “values” with regard to assessment of student learning.
− Examining the culture of a campus regarding assessment before giving the CLA is important. If there is a healthy culture of continuous improvement, results from the CLA (or other assessment instruments) will be very useful and worthwhile. If there is a dysfunctional culture, the results will have a minimal impact on institutional effectiveness and improvement.
COMMENTS ABOUT ADMINISTERING THE CLA

− We need more help from the CAE (CLA) folks. How reliable are those “single data points” for each institution? Are there cohort effects (i.e. how much year-to-year variation in an institution’s score can be expected)? How about providing a national regression of scores from individual students? How much of the scatter in individual scores is truly due to inter-student differences in ability? Providing better “customer support” (like that provided by the NSSE folks) would be very helpful.

− Getting students to “volunteer” to take the CLA continues to be difficult. Once “in the door,” however, students seem to take the CLA seriously.

− Does the selection process (i.e. stratified random sample, based on GPA and major but gender-blind), and the means of getting students to take the CLA, affect the results? Women students seem to be more willing to get involved in activities on campus; is there also a gender bias in the CLA results? (For example – of the 76 KC students who took the CLA this past spring, 53 are female.) Are folks at CAE paying attention to this?

− We need to help find ways to convey lessons learned from our “CLA development group” (i.e. the users who are attempting to unpack the CLA data) back to folks at CAE (CLA) so as to “push back” effectively and help improve the CLA.

− There seems to be tension between the CAE’s apparent interest in broader (i.e. national) policy issues and our interest in more local utility of the CLA.

OTHER LESSONS LEARNED…

− Focused Inquiries (what we originally called “Targeted Assessments,” but decided at our spring meeting to rename to make them more appealing) helped stimulate the practice of inquiry and personalize the “data” collected at each of the three institutions.

− Our project has served as a catalyst for inquiry, and for change, at CC, EC, and KC. Through the project, in general, and through the Focused Inquiries, in particular, we have “recruited” interested faculty into a growing practice of inquiry. Through our project we seem to be dismantling (to a certain extent) “silos” within and among campuses.

− Our project might be paving the way for assessment of student learning within majors/programs at CC, EC, and KC.

− We need to focus on “Action Learning” (i.e. doing something with what we’ve learned, instead of just studying it to death)

NEXT STEPS

− We need to examine our CIRP data, from the past five to ten years, thoroughly to find out if each of the three institutions attracts different “kinds” of students. This grew out of a vague sense of apparent differences among students at the three institutions and how they seemed to approach taking the CLA.

− We want to broaden the CLA comparison group beyond our three institutions to get a better sense of patterns in the data and of how those patterns can be interpreted. A good start will be the upcoming CLA Workshop (22-24 July) at the CILA.

− We need to continue with our Focused Inquiries, especially in light of the new (2007) set of CLA data from seniors at CC and KC. Making plans to do this will be a primary topic of conversation at our fall (25-28 October) meeting at Colorado College.
We wrapped up the meeting with comments and reflections from Charlie Blaich, who noted the following:

+ Seeing us genuinely grappling with and working through the “bugs” in the CLA was good. We should think about helping to codify ways in which the CLA (as well as other assessment instruments) could be used most beneficially by us and by other institutions. And, we need to decide how the CLA (and/or other instruments) fit the “ends” of institutions (*i.e.* the “lived mission” not just what’s in the catalogue and on the www.)

+ We have a good blend of many disciplinary perspectives.

+ Digging into problems, and then analyzing and interpreting the data, is fun, but how do we put this stuff into action? (Charlie referred to the “problem” of approaching our work as another academic exercise as the “teaching and learning center effect.”) So...did student learning actually improve?) How do we use what we learn to effect change on campus? Collecting and analyzing data from assessment of student learning is an important first step; other steps must follow. [**Here’s a huge insight**...the title of our proposal to the Teagle Foundation was “Catalyst for Cognizance and Change.” We’re certainly accomplishing the first half – becoming more aware and better informed – through our grant-funded work. We now need to apply what we are learning to effect changes where necessary.]

+ Ultimately, faculty truly are curious about whether students are learning. Good, effective, strong(?), and persistent leadership on each of the campuses is needed to help those involved in assessment of student learning stay the course while others get over their ambivalence about assessment. We need to create the “space” for this to happen; our collaborative is helping do that, but we need help “at home” to gain better traction.

+ Asking faculty (and others) leading and inviting questions, like those that follow, always helps. What are your curriculum questions and concerns? What are we doing well? What can we do better? What can we do to get rid of the ‘assessment’ word and all the negative connotations it carries with it? What do you want to learn about your students’ learning?

We adjourned to lunch and departures for home. The Center of Inquiry in the Liberal Arts was a wonderful setting for a meeting like ours. We enjoyed frequent and productive interactions in a very comfortable, yet invigorating, environment. We had another successful meeting.
Colorado College Update on Targeted Assessments of Senior Capstone Projects.

During the past year a number of departments considered submitting proposals to conduct a study of senior capstone project that is currently part of their departmental requirements or one that is under consideration. The following departments submitted formal proposals with budget requests and all were approved by the Teagle Grant leadership group.

1. Economics Department. Will study a number of questions that will enable the department to determine if they should consider a more directed progression of coursework for preparing majors to tackle a project independently. One part of their proposed study examines how the earliest experiences in the major influence students progression through the major and eventual capstone experiences. In another part of the study they will use focus groups of current students and seniors to match their responses to those obtained from an earlier survey of alumni to see what changes in the progression of courses is deemed advisable. Budget: $3,000

2. Sociology Department. Asking a few key questions about progression of majors toward the capstone project including the following: What bodies of knowledge, habits of thought, and skill sets serve to make students more intellectually independent, particularly as it pertains to the senior capstone experience? How are these bodies of knowledge integrated into our curriculum? How could they be better integrated? They will use focus group techniques with faculty and also with group of seniors and conduct a major department retreat to digest the information and take action steps. Budget: $3,200

3. History Department. They will build on an external review that prompted them to consider better ways to organize the curriculum to prepare students for a capstone. Examining the progression and mix of courses is at the heart of their study. Budget: $1,500.

4. International Studies. This Interdisciplinary group is conducting a study of the impact of international experiences on students' overall development and involvement in campus and academic life. This was funded summer, 2006. Budget: $2,100.

In addition to the departmental level budgets we have set aside an additional $2,200 for anticipated expenses by the College's Office of Institutional Research for work associated with these projects and those likely to be funded in the near future.

In the last three months the Teagle leadership group met with several additional departments who are considering proposals for study of capstones. English has a proposal in draft form that they will submit in July. Paul Kuerbis met with the 11 members of Biology to talk about assessment of the effectiveness of the major (What do biology students need to know, understand and value?) in mid-May. They are considering instituting a variety of changes in the lower division curriculum, re-instituting a senior oral exam and making other changes. Religion will actively pursue a proposal in the fall. Chemistry is studying (without Teagle funds at present) a re-organization of the major and considering instituting a senior capstone. They may submit a proposal to study a progression of writing, oral and investigative skills that could intentionally lead students toward adequate preparation to conduct a capstone project. Mathematics anticipates having a draft proposal by the end of the summer. Anthropology and Psychology are also in discussions about possible proposals that might be submitted early this fall. Thus Colorado College wishes to encumber Targeted Assessment funds in anticipation of having expenses in this category during the waning months of the Teagle initiative.
2006 Colorado College Seniors
CLA vs Adjusted CLA Scores

Adjusted CLA Score (Actual - Expected)

CLA = 0.83(AdjCLA) + 1307; \( r^2 = 0.85 \)

2006 Colorado College Seniors
Adjusted CLA Scores for Academic Divisions

Adjusted CLA Score (Actual - Expected)
2006 Colorado College Seniors
SAT Scores for Academic Divisions

2006 Colorado College Seniors
Adjusted CLA Scores vs SAT
2006 Colorado College Seniors
CLA Scores for Academic Divisions

Academic Division

FineArts | ForLang | Humanities | MathSci | SocSci
CLA Score
1200 | 1300 | 1400 | 1500 | 1600

2006 Colorado College Seniors
CLA Performance of Academic Divisions

Number of Students
Below | At | Above

CLA Performance

Teagle CCECKC Collaborative Meeting Notes 13-14 April 2007
2006 Earlham College Seniors
CLA vs Adjusted CLA Scores

Adjusted CLA Score (Actual - Expected)

CLA = 0.86(AdjCL) + 1267; \( r^2 = 0.65 \)

2006 Earlham College Seniors
Adjusted CLA Scores for Academic Divisions

Academic Division
FineArts ForLang Humanities MathSci SocSci

Adjusted CLA Score (Actual-Expected)
2006 Earlham College Seniors
CLA Scores for Academic Divisions

CLA Score

Academic Division
FineArts ForLang Humanities MathSci SocSci

CLA Performance
Below At Above

Number of Students

2006 Earlham College Seniors
CLA Performance of Academic Divisions

CLA Performance
Below At Above

Number of Students

FineArts ForLang Humanities MathSci SocSci
2006 Kalamazoo College Seniors
CLA vs Adjusted CLA Scores

Adjusted CLA Score (Actual - Expected)

CLA = 0.80(AdjCLA) + 1325; r² = 0.68

2006 Kalamazoo College Seniors
Adjusted CLA Scores for Academic Divisions
(Asterisk indicates significantly different)
2006 Kalamazoo College Seniors
SAT Scores for Academic Divisions

2006 Kalamazoo College Seniors
Adjusted CLA Scores vs SAT
The diagram shows the CLA scores for 2006 Kalamazoo College Seniors across different academic divisions: FineArts, ForLang, Humanities, MathSci, and SocSci. The scores range from 1200 to 1600.