

University of Colorado's President's Teaching and Learning Collaborative  
Progress Report, Fall 2007  
Carnegie Academy for the Scholarship of Teaching and Learning

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The University of Colorado President's Teaching and Learning Collaborative (PTLC) participates in the System-wide Collaboration cluster of the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL). Accordingly, we introduce this report on the second half of our first year of operation with a discussion of what we have learned about collaboration across our three campuses.

*Context*

The University of Colorado has three universities, the University of Colorado at Boulder, the University of Colorado at Colorado Springs, and the University of Colorado at Denver and Health Sciences Center. The latter was formed recently by merging previously a separate campus in downtown Denver with the Health Sciences center. PTLC is a system-wide program fostered by the President's Teaching Scholars Program which is a system-wide program reporting to the System Vice President for Academic Affairs and Research. The Steering Committee for PTLC includes faculty from all three universities. Funding for the program comes in part from the system president's office and in part from chancellors of the three universities.

*System-wide Operations*

PTLC recruited faculty investigators for scholarship of teaching and learning (SoTL) projects at each university through a "Call for Proposals" (see Appendix A). Investigators are supported by coaches (faculty knowledgeable about SoTL process) and mentors (faculty knowledgeable about the investigator's discipline.) Investigators, coaches, mentors, and steering committee members met four times in the spring and two times in the fall to discuss project progress: issues and successes.

*Impact of System-wide Operations*

One impact of PTLC at the system has been that faculty at all three universities have opportunity to carry out SoTL projects with collegial support. Faculty from all three universities participated in a pilot program in 2006 that led to the launch of PTLC in 2007 and helped to establish the program. It is very doubtful that the leadership available at any one of the universities would have created a SoTL campus program.

Some administrators have urged that the program present itself more as an activity of the separate universities rather than a system-level program. They believe that some faculty are more likely to respond to what they see as a "home" initiative. They may also be responding to a current thrust in system administration to de-emphasize system level programs.

System-level operations allows some sharing of information resources. In the spring, librarians from two of the universities collaborated to identify library resources on SoTL for the participants. There were presentations to the group by experienced SoTL researchers and a researcher on educational theory from the university at Boulder. It is unlikely that participants from the other universities would have had access to these presentations outside the PTLC framework.

Few collaborations, however, across university boundaries have developed. There have been a few cross-university contacts outside the group meetings but no sustained interactions have developed. Participants have indicated they hope to witness or be part of "cross university" collaborations in the future.

Interviews and surveys document the impact of the small-group discussions among investigators, coaches, and mentors at the PTLC Progress Report meetings. There is no specific evidence that attendees coming from different universities is uniquely valuable. In theory, a SoTL activity at any one university could possibly draw nearly the same range of disciplinary participation. Interest in and knowledge of SoTL is thinly spread and a system-wide collaboration draws together a critical mass of faculty. This fall participants were asked about what benefits they gain from being a system-wide collaborative. Their responses are included in this report.

*Program Description*

The President's Teaching and Learning Collaborative (PTLC) is a University of Colorado system-wide program serving faculty at three campuses. The disciplines involved are:

- Applied Mathematics
- Behavior Science
- Business
- Communication and Evaluation
- Communications
- Computer Science
- Ecology and Evolutionary Biology
- Education
- Educational Administration
- Electrical and Computer Engineering
- English
- Environmental Studies
- Geography
- Journalism and Mass Communication
- Keyboard
- Mechanical Engineering
- Medical Oncology
- Medicine
- Music and Entertainment Industries
- Nursing
- Organic Chemistry
- Pharmacy
- Psychology
- Rhetoric and Composition
- Sociology
- Spanish and Portuguese
- Visual and Performing Arts

The goals of the PTLC are to promote the Scholarship of Teaching and Learning (SoTL) in an effort to improve teaching, learning, and classroom assessment in undergraduate education and to publish research in a refereed journal (see Appendix B). The scholarship of teaching and learning is the "creation and dissemination of original work that makes a useful contribution to knowledge and practice of other teachers" ([www.carnegiefoundation.org](http://www.carnegiefoundation.org)). The program director, Dr. Mary Ann Shea, and coordinator, Prof. Clayton Lewis, requested proposals in the fall of 2006. Participant-researchers accepted to the program were matched with coaches (faculty with knowledge of educational research and trained in the Carnegie coaching process) and mentors (faculty with expertise in the disciplines being examined). Participant-researchers also received modest funding for student research associates support for data collection and analysis. This report records the second half of the PTLC introductory year ending December 2007.

Participant-researchers met with coaches and mentors and attended whole group Progress Report meetings on two occasions this fall. The purposes of the meetings were:

- to attend to administrative tasks
- to share literature resources
- to report on educational research progress
- to problem solve regarding research difficulties and
- to discuss relevant topics in teaching and learning.

While the meetings, establishing personal connections and learning about teaching and learning were the foremost resources provided by the PTLC, additional resources included:

- research articles sent via mail and discussed in meetings
- a library resource web page with links to SoTL journals, online communities and investigations of pedagogy initiatives at other campuses.

### *Meeting Descriptions*

The October meeting was the first meeting of the 2007 cohort since May. The meeting had a collaborative and congenial feel to it. The ideas and comments that were shared by participants built on each other. People did not make disconnected comments merely to be heard but they seemed to be genuinely trying to contribute to the community's discussion. The group was notably focused on quantitative research though some researchers mentioned their qualitative efforts. The meeting took the form of a whole-group discussion with about 20 participants. The group encouraged one researcher to publish about his project though his efforts had not been well-received at his particular campus which means the study is not as robust as had been hoped. Similarly the researchers spoke of their hope of producing more than one publication from their single research project. One coach commented that the idea of publishing "incomplete" research was new to her and that she now sees how "slices" of projects can be published at any staged if they are framed strategically. For example, a researcher could publish a literature review, a description of methodology, a description of a project, or a report of final outcomes. One researcher pointed out that less formal or less prestigious periodicals (but peer reviewed) are an efficient way to reach a large and varied audience because their circulation is often greater. The researchers seemed particularly self-reflective when they described their work. They talked about what they have learned in the course of their research particularly about the research process and about their methodology. Many researchers talked about how their research is teaching them about creating effective pedagogy and employing effective strategies in their classrooms.

The November meeting was the final meeting of the 2007 cohort. All nine researchers who were present took turns speaking about the progress of their work. Eight of the nine plan to have submitted an article for publication by January 2008, which is the principle goal of the PTLC. A common theme of the research presented at this meeting was the study of practical tools and models. One researcher studied the use of archived lectures by students. Another has researched second-language learners' use of correction and feedback. A third is developing methods to track and predict students' later use of school knowledge in the field. Many of the researchers also spoke about whether work like theirs has been published previously. If they found their work was very different from research published previously, their next question was why no other researcher had taken up their topic. This led researchers to talk about the scarcity of research about learning and teaching within their particular disciplines and the importance of locating their research in theory and practice.

### *Theory of Change*

The intent of the PTLC and of the Carnegie Foundation to sustain this effort was to support and promote research in undergraduate learning. Note that the research questions are focused primarily on teaching and learning not on the development of research skills. The theory of change developed and nurtured in the Carnegie Foundation for the Advancement of Teaching is that through research, professors develop insight into their teaching and their students' learning. Research in pedagogy informs teaching practice and is based on data analysis. Professors then refine their teaching and/or their assessment of student learning. This research

adds new knowledge in a specific area of pedagogy and thereby contributes to the research literature.

*Formative and Summative Evaluation Questions*

Evaluation research questions included the following:

1. How do professors best increase their understanding of pedagogy and how students learn via participation in the PTLC program?
  - a. How does PTLC program help professors understand their function and role as a teacher?
    - i. How does the PTLC program help professors define their role as a teacher?
    - ii. How does the PTLC program help professors view and understand learning and their students as learners?
  - b. How does the PTLC program help professors understand the art/science of teaching? How does the PTLC program help professors understand different instructional methods?
    - i. How does the PTLC program help professor participants improve their own instructional methods?
2. How do professors best increase their understanding of the concept of learning via participation in the PTLC program?
  - a. How does the PTLC program help professor participants understand their students' learning needs?
  - b. How does the PTLC program help professor participants understand different types of learning?
  - c. How does the PTLC program help professor participants understand how people learn?
3. How do professors best improve the learning of their students via participation in the PTLC program?
  - a. How does the PTLC program support professors to help improve the academic achievement of their students?

This report is organized around themes that emerged in the qualitative data with quotes drawn directly from interviews, survey, reports, and meetings in an effort to express the PTLC participants' ideas in their own words.

*Evaluation Methods*

Data for this evaluation has come from interviews, surveys, Final Reports, and observations of participants in PTLC meetings. Participants were self-selected for both the survey and the interviews: not all chose to be interviewed. Nine interviews were conducted (see Appendix C for questions). All researchers, coaches, and mentors were asked to complete the surveys. Seven researchers and two coaches or mentors responded to the first survey (see Appendices D and E for questions). Five researchers and one coach or mentor responded to the second survey (see Appendices F and G for questions). Survey responses were anonymous. Each researcher was asked to complete a Final Report about their specific project and about their involvement with the PTLC. It consisted of ten questions (see Appendix H). Data was read repeatedly and systematically allowing for themes to emerge. An effort was made to allow participant voices to tell the story of the Collaborative. Quotations have been included in this report.

*Focus on learning over time – changes in understanding*

- The researchers who are involved with the PTLC come from a variety of departments with a variety of prior levels of involvement in educational research. They have different ways of thinking about learning, knowledge, and experience in measuring learning. When asked if their involvement with the PTLC has changed the way they think about or define learning most said that their understanding had changed:

“I think that for me my understanding of really needing to understand whether my students are learning has deepened.”
“The concept of active participation has become more important in my definition.”
“It has changed from the point of view of the student participants.”
“While is hasn't changed, my understanding has been broadened and deepened.”

- Almost all said that their understanding had changed. As one person said in the above quotation, her/his understanding had “broadened and deepened.” This is reflective of the answers given by almost all 2007 participants.

*The value of the PTLC meetings this fall*

- Again and again, participants asserted that the regular meetings of the PTLC were of great value to them. Here are some things participants said about which aspects of the meetings they found important:

“Sharing progress among the fellows”
“In terms of getting people to meetings, as you know, it's all about resources!”
“I would say it was encouraging to hear progress reports--both success stories and challenges that participants are having. In particular, I found it encouraging to hear faculty urge an investigator whose project was meeting administrative resistance to forge ahead in creative ways.”
...”the extended discussions”
“For me it was very good to get the feedback and encouragement on how to proceed from here. We are a bit stuck and the group helped me feel less stuck.”
...“continuing to meet with colleagues around issues of mutual interest”
“The most beneficial aspects of the program were the monthly meetings where my colleagues shared their projects’ objectives, philosophies, theories, methodologies, and shortcomings with each other. Listening to them and knowing that I had to report my progress kept me on track which is a challenge with a full teaching load.”

- Many participants said that the meetings were their favorite part of their participation with the PTLC over the past year. They commented about the helpfulness of other participants in the suggestions that were made about research projects. They talked about how encouraging it was to be part of a group who valued learning and teaching. In fact, some participants were so enthused about the meetings that some remarked they were signing up to act as coaches and mentors to the 2008 cohort so they can continue to attend the meetings.

*PTLC as a system-wide collaborative*

- The PTLC is a collaborative among all University of Colorado campuses. Because we are interested in whether something is gained or lost by the collaborative established as a system-wide program, participants were surveyed and interviewed about whether they believe the value of the PTLC relates to or depends on this aspect. When asked, no participants said that the PTLC would be better if it were not system-wide. Some said that it did not matter to them

whether it was system-wide or not, and the majority said that there is value to the collaborative being system-wide. Here are further comments:

...“more perspective from a broader range of specialties”
“The major advantages are (a) the potential for more funding, and (b) an increased network for collaboration.”
...“through contacts linking the whole system, else we would all be stuck in our own departments, or at best, our own campus”
“It helps from a standpoint of sustainability.”
“It is an essential part of its function; working across boundaries is the only way to engage all faculty and eventually change teaching practices systemwide”

- One of the themes of participants’ responses is that the PTLC gains credibility by existing at the system level. This idea seems to relate less to the size of the program and more to the scope and potential reach of the program. By being system-wide, the program seems to be of greater consequence than a program that existed separately on each campus.
- The other theme of participants’ responses is that diversity results from a system-wide program. Several participants spoke of not wanting to be isolated on their campuses. Participants mentioned gaining understanding of a greater diversity of students being studied in a system-wide collaborative.

*A model collaboration—enthusiasm for the PTLC*

- Participants have spoken enthusiastically about the way the PTLC has affected them. Some have mentioned the ways it has changed their teaching and/or research. Others have been eager to express how the camaraderie they have found within the PTLC has been personally rewarding. Still others have expressed zeal for the PTLC because of the ways the program is important to the university system. Here are some of the comments:

“PTLC is one of the best things to happen to me in the university.”
The PTLC is a “grass roots movement” that is “changing approaches to teaching.”
“It was inspirational for me to see this group of people really take time and spend the energy on their projects. These are people who truly believe in the importance of their teaching and their students learning.”
“This is really going well for me. I am thankful for opportunity to participate.”
“I have enjoyed it. It has sort of reinvigorated my role as a researcher, and I’ve always loved research. It’s nice to be held accountable, to actually research and write to the point of submitting for publication. And I do think that, as a Ph.D., we have that responsibility to our fields to do that because that is what we have been taught to do. So, yeah, it’s helping me meet that professional responsibility that I feel.”
“I think it was a good experience. I was happy to be involved with it. It definitely pushed me forward. So, at the end of it, I am very glad that I did join up and was involved.”
“I cannot express adequately what a pleasure it has been for me to work with the PTLC group. This is one of the best collaborative experiences that I can recall, and over my 35 + years in higher education I have been involved in many of them.”

- One theme common to the remarks of researchers involved with the PTLC is that it served as a “conscience” for them over the past year. Though many researchers were new to educational research, they had been considering taking up a research project about learning and teaching before their involvement with the PTLC. The PTLC was a guide to help them

get started and be supported in their research. Their coaches and mentors helped direct their efforts. Some of the researchers had already had past experience in conducting educational research and the PTLC's "Call for Proposals" encouraged them to take up a new project. Whether researchers were new to educational research or whether they had had prior experience, the PTLC served as a vehicle for them to work toward the goal of submitting an article for publication by January 2008.

*Recommendations from the data collected thus far*

- No participants have achieved any types of collaboration as a result of their work with the PTLC. Here are some specific suggestions:

“RFPs [Request For Proposals] for collaborative efforts and a decided effort to pull together faculty with similar interests (not necessarily similar disciplines) would help.”
“Meet on the different campuses on a rotational basis.”
“Maybe something in the RFP [Request For Proposals] that says, here is an issue we would like faculty to come together and look at.”

- Several participants suggested the PTLC's "Call for Proposals" specifically include mention of the value of collaborative projects. Some suggested researchers could work on a single study jointly. Others suggested that researchers could work on separate research studies but their efforts and perhaps their final product of article submission could be collaborative because of similarity of topic. Encouraging this type of collaboration would be a move toward a more integrated system-wide PTLC.
- Many participants (including researcher, mentors, and coaches) suggested that having funding would increase participation in the PTLC. Since participation in PTLC is an "add-on" to already busy schedules, greater funding could potentially attract greater participation as it would serve as a marker of the importance of the PTLC and, by extension, the importance of The Scholarship of Teaching and Learning. Participants have suggested that offering course-release to participate in PTLC research would be a way for the CU system to support educational research.
- Participants were interested in ways to promote or publicize the PTLC. Here are some strategies suggested by participants for ways to promote growth of the PTLC at CU:

Research presentation: “I think that the current strategy of getting someone new each year is fine. Perhaps there is an additional way to get PTLC known -- mini conference(s)?”
Department meetings: “I would be happy to go to the Physics department, go to the Math department, or whatever, and just talk about what the program is. Just sort of talk it up, you know, before the RFPs come out in the fall.”
Local chapters: “I would start local chapters on each campus and then try to get the whole group together occasionally.”

- One researcher suggested having mini-conferences during which PTLC researchers could present their work. This could mean being part of a research colloquium that already exists or the PTLC could host its own research presentations. Another participant suggested that each PTLC participant attend a faculty meeting in another department and speak about the PTLC. This could be done shortly before or just after the "Call for Proposals" is sent out, and it would give faculty an opportunity to ask questions of someone who has been involved in the process. The third participant quoted here suggests that there would be greater participation if

the PTLC met on each individual campus. The idea is that travel to meetings may be a hindrance to participation.

- Other suggestions:

“Use a two-year cycle. Use the first year to help participants develop a proposal, rather than having them do it themselves.”

“A visit from an HRC representative in an early PTLC meeting might help demystify the process for new researchers—adding a human face to a committee that people often tend to think of as mysterious and remote.”

### *Conclusions*

This section begins to answer the evaluation questions posed in the beginning of the report. Though the 2007 cohort’s involvement as researchers is coming to an end many of their research projects are ongoing. Definitive answers to these questions are not yet available. The following articulates trends and patterns in participant-researcher survey and interview responses.

- *How do professors best increase their understanding of pedagogy and how students learn via participation in the PTLC program?*
  - The nature of researcher’s PTLC research requires them to reflect on their teaching and their students’ learning. Participants’ roles as teacher-researchers was a topic of discussion at PTLC meetings particularly as the researchers considered what they learned over the past year of their involvement with the PTLC.
  - PTLC researchers considered the art and science of teaching beyond their classrooms. For example, some thought about how their classes fit into the program or departments curriculum.
  - Researchers spoke of moving to a student-centered approach to teaching.
  - Researchers noted that though self-reflection was helpful the PTLC meetings and their meetings with coaches and mentors were advantageous. They observed that talking with others teachers is a useful and supportive way to gain more understanding of philosophies of teaching in general and of their individual pedagogy specifically.
- *How do professors best increase their understanding of the concept of learning via participation in the PTLC program?*
  - Researchers have spent more time considering learning because of their involvement with the PTLC. Researchers have reflected on their own learning in addition to reflecting on their students’ learning. Researchers have spoken about student engagement and about students’ attitudes toward learning. Additionally, researchers spoke of expanding their ideas of learning beyond mere skill acquisition.
- *How do professors best improve the student learning via participation in the PTLC program?*
  - We can say that researchers have changed their classroom practices as a result of their involvement with the PTLC. Some mentioned being inspired by the other participants who are working hard to improve the learning and teaching in their classrooms while others mentioned that their own research has influenced the way they orchestrate their classrooms. In sum, participants said that because their research relates to learning, teaching, and assessing learning they are thinking about those subjects more and that causes them to change the way they teach and facilitate learning in their courses.

Appendix A  
PTLC 2008 Call for Proposals

## CALL FOR PROPOSALS

President's Teaching and Learning Collaborative  
University of Colorado.

Collaboration. Leadership. Assessing Classroom Learning. Pedagogical Change. Publication. Collegiality. These are the elements of the President's Teaching and Learning Collaborative that inspire investigators.

The President's Teaching and Learning Collaborative (PTLC) of the University of Colorado is publishing a call for proposed projects that investigate the scholarship of teaching and learning as it contributes to a greater depth of student learning in higher education. PTLC is interested in projects from a variety of disciplines and perspectives as well as system Schools of Education disciplines and not just educational research. **The deadline for proposals is Thursday October 24<sup>th</sup>, 2007.**

Current PTLC investigators said the following about the PTLC program:

- *“In my case, the PTLC program has prompted me to attempt an objective look at teaching and learning, my own as well as that of others. Reflecting on the educational process is a necessary step to improving on it.”*
- *“There is added visibility and recognition of team-based endeavors to enhance teaching and learning.”*
- *“We have interacted with many people across the campus, both faculty and staff, during our investigation. Many of these people are individuals with whom we would likely not have interacted with otherwise.”*

### 1. PTLC Goals

*What kinds of work does the program support?*

- Anne Becher inquires: “Does error classification in short compositions help students avoid common errors on subsequent papers?”
- Kenneth Bettenhausen wants to know “whether participation in freshman seminars increases student engagement, retention rates and academic success.”
- Alan Mickelson is developing “an assessment methodology that can provide a running assessment of student development during a course.”

Central work of the PTLC is to create and disseminate examples of the scholarship of teaching and learning that contribute to thought and practice in and across fields. To this end, each scholar designs and undertakes an investigation aimed at deepening understanding of and practice related to an important issue in innovative learning. Several features for projects should be kept in mind:

1. Proposed work should center on the definitions, experiences, problems, and values, and

the investigations of one's own students and classroom practices.

2. The focus of this work should be teaching and learning for understanding, exploring primarily the character and depth of student learning that results (or does not) from teacher practice.
3. We look for attention to enduring, widely recognized issues and questions that have broad relevance or implications for student learning; scholarship that advances understanding of such questions is more likely to find audiences and outlets thereby contributing to far-reaching thinking and practice.
4. We are interested in work that demonstrates a commitment to the personal and social development of students.
5. Also of interest is work with explicit links to prior and ongoing areas of investigation, and established lines of research; like other forms of scholarship, the scholarship of teaching and learning builds on and is situated in reference to work done by others. Please conduct a literature review of the research related to the problem to be investigated and include it in the project proposal.

## 2. Benefits and Expectations

Investigators will receive \$800 to support a graduate or undergraduate research assistant. Travel support to present project results at a conference will be available by application (funds will support about ten of the 20 participants this year.)

Investigators accepted into the PTLC should expect to meet regularly with coaches and mentors to define and revise the educational research project. Monthly PTLC meetings allow investigators, coaches and mentors to discuss scholarship of teaching and learning in small groups. The small working groups share ideas, open their research questions and research methodology to peer review, and critique one another's efforts. Publication, or notification of acceptance for publication, is expected by December 2008. Investigators receive recognition at the campus and departmental level upon completion of their research, in December of 2008. The growth of the PTLC depends on investigators' willingness to coach and mentor future PTLC investigators following their term in the program.

In addition to the support of the coach and mentor, investigators accepted to the PTLC program receive funds for an undergraduate research assistant. In some cases, these funds were used for more expert assistance. For example, one PTLC member paid a methodology expert to review a survey he planned to administer to students in his educational research project. Investigators also participate in scholarly discussions and presentations of teaching and learning theory, and receive assistance from reference librarians to research their topic of study.

The Institutional Review Board/Human Research Committee process should be completed in a timely manner. This review may take up to six weeks, depending on the proposed project. PTLC coaches, mentors, the director, and the coordinator may be consulted to assist in this process.

Data collection should take place by the summer of 2008, to ensure time to analyze the data and write up the results.

### 3. PTLC Eligibility

Any faculty member and or teaching professor on any campus of the University of Colorado can apply. We will look for faculty with a record of innovation in teaching and/or the assessment of learning. Experience in educational research is NOT a requirement; the aim of the program is to broaden participation of faculty in effective inquiry in learning and teaching. Familiarity with the literature on learning and teaching in one's discipline is an on-going necessity. The goal is to publish research.

### 4. 6. PTLC Review Criteria

For 2008 the President's Teaching and Learning Collaborative (PTLC) will focus on projects emphasizing student learning at any educational level, undergraduate and above. Projects should be such that meaningful results can be obtained during the 2008 academic year and thereby will be accepted in a peer reviewed journal.

Applications will be judged on the following:

- Significance for the undergraduate instructional program within the CU system (1-5 points)
- Enhancement of student learning outcomes and the student learning experience through improvement of pedagogy and instructional delivery (1-5 points)
- Enhancement of the understanding of teaching and student learning (1-5 points)
- Originality of the project (1-5 points)
- Quality of the project plan (1-5 points)

Appendix B  
Distribution of PTLC Research

Researchers	Distribution of research: publications, presentations, and other communications
Abrams, Gene Cascava, Radu	<ul style="list-style-type: none"> <li>◦ Submitted an article to <i>Internet and Higher Education</i> in November 2007</li> </ul>
Basey, John	<ul style="list-style-type: none"> <li>◦ Presented a seminar to the Graduate Teacher Program at CU Boulder in September 2007</li> <li>◦ Submitted an article to <i>International Journal for the Scholarship of Teaching and Learning</i> in November 2007</li> <li>◦ Results will be integrated into lab manuals for General Biology Lab I, General Biology Lab II, General Biology Lab: A Human Approach, and Microbiology Lab</li> </ul>
Becher, Anne	<ul style="list-style-type: none"> <li>◦ Has proposed a presentation to the Colorado Congress of Foreign Language Teachers during their annual conference in 2008</li> <li>◦ Considering proposing a presentation at the American Association of Spanish and Portuguese's annual conference in 2008 or 2009</li> </ul>
Ellis, Erik	<ul style="list-style-type: none"> <li>◦ Has had one work accepted for publication in <i>Multimodal Literacies and Emerging Genres in Student Compositions</i></li> <li>◦ Hopes to publish in a leading journal in his field, such as <i>College English</i>, <i>College Composition and Communication</i> or <i>Computers and Composition</i></li> </ul>
Grabinger, Scott	<ul style="list-style-type: none"> <li>◦ Journal article               <ul style="list-style-type: none"> <li>◦ Grabinger, R. S., Aplin, C., &amp; Ponnappa-Brenner, G. (2008). Supporting learners with cognitive impairments in online environments. <i>TechTrends</i> (X), January/May, pp. XXX.</li> </ul> </li> <li>◦ Presentations:               <ul style="list-style-type: none"> <li>◦ Grabinger, R. S., Aplin, C., &amp; Ponnappa-Brenner, G. (2007). Supporting postsecondary learners with disabilities in online environments. Sloan-C Conference, Orlando, FL, November.</li> <li>◦ Grabinger, R. S., Aplin, C., &amp; Ponnappa-Brenner, G. (2007). Supporting postsecondary learners with disabilities in online environments. Presentation at the m-ICTE2000 conference, Seville, Spain. Refereed.</li> <li>◦ Grabinger, R. S., &amp; Aplin, Cary. (2006). The Intersection of Neuroscience and Education. Presented at the Developmental Psychobiology Research Group at the University Health Sciences Center. February 14, 2006. Invited.</li> </ul> </li> <li>◦ Possible places of submission</li> <li>◦ <i>TechTrends</i>, <i>ALT-J</i>, <i>E-JIST</i>, <i>The e-Journal of Instructional Science and Technology</i>, <i>Technical Horizons in Education</i>, <i>Academic Exchange Quarterly</i></li> </ul>
Huggins, Joe	<ul style="list-style-type: none"> <li>◦ Plans to submit an article to <i>Academic Medicine</i></li> </ul>

Lewis, Clayton	<ul style="list-style-type: none"> <li>◦ Lewis, C. 2007. Attitudes and beliefs about computer science among students and faculty. SIGCSE Bull. 39, 2 (Jun. 2007), 37-41.</li> </ul>
Mickelson, Alan	<ul style="list-style-type: none"> <li>◦ Article published in IEEE Transactions on Education, November 2007</li> <li>◦ Two conference presentation in American Society for Engineering Education Annual Conference and Exposition, Hawaii, June of 2007</li> </ul>
Muth, Rod	<ul style="list-style-type: none"> <li>◦ Plans to be part of papers with student colleagues that will be presented at conferences</li> <li>◦ Papers presented at conferences will then be submitted for publication in journals</li> </ul>
Schoffstall, Allen	<ul style="list-style-type: none"> <li>◦ Will give a talk at the 20<sup>th</sup> Biennial BCCE Conference in Bloomington, Indiana, in July of 2008</li> </ul>
Turner, Christopher	<ul style="list-style-type: none"> <li>◦ Will submit a manuscript to the American Journal of Pharmaceutical Education</li> <li>◦ A poster abstract will be submitted for presentation at the July, 2008 annual meeting of the American Association of Colleges of Pharmacy</li> </ul>
Zigmond, Rosalyn	<ul style="list-style-type: none"> <li>◦ Currently writing 2 articles</li> <li>◦ Hopes to present at a professional conference</li> </ul>

Appendix C  
Interview Questions for Researchers

1. What was it that helped decide to become involved with the PTLC?
2. Can you describe what did you do over the summer in conjunction with your research for the PTLC?
3. More generally, how is your project progressing? [can you describe the evolution of your project?]
  - a. Research questions (narrowed, changed)
  - b. Methods
  - c. Data collection
  - d. Analysis
4. Has your work on your research project changed the environment of your classroom or program in any way?
5. If you were to imagine a student, now or in the future, participating in your classroom, can you describe the ways your PTLC research might affect her or his learning?
6. As educators we think about learning and the expression of concepts learned all the time. How do you think your participation in the PTLC has affected these thoughts, assumptions and ideas?
  - a. Focused these ideas?
  - b. Given you a specific reason to think about these ideas?
  - c. Shifted your conception of learning?
  - d. Changed your way of measuring that learning?
  - e. Enabled you to think about documenting your specific goals for student learning?
  - f. For student assessment of that learning?
7. Has your PTLC participation changed your thinking about yourself as a teacher? How?
8. Do you think your work on your PTLC project and your involvement generally is enabling you to think about documenting your specific goals for student learning in a different way?
9. Has your participation in the PTLC changed the way you think about publishing your research? (publishing a lit review first, publishing a piece of your work as a case study, publishing about the process rather than outcomes, etc.)
10. How has the PTLC met, or failed to meet, your needs as an educational researcher?
11. How has the PTLC facilitated collaboration between and among other colleagues in your school, your dept or your campus?

- a. Have you worked as part of a pair or team with other investigators directly because of the opportunity to learn about SoTL together?
  - b. Even beyond SoTL, were other collaborations begun or reinforced based on the opportunity to learn together?
12. Have you significantly changed part of your project based on your interaction with the group at meetings or with your mentor/coach?
  13. If you were to reflect back on your involvement with the PTLC over the past year, what stands out most for you?
  14. What meaning do you see PTLC bring to your research? What I mean is, how would your research feel different if you worked on it without PTLC involvement?
  15. How does the value of PTLC relate to or depend on it being a system-wide collaborative?
  16. How do you believe this program is or will provide institutional leadership? Do you think the PTLC can in any way change how the Scholarship of Teaching and Learning is viewed by people at the university?
  17. What suggestions do you have to improve the collaborative?
    - a. Realistically, in consideration of limited resources, what could we change **tomorrow** that would improve the experience?
    - b. In a more idealized world, with fewer restrictions on resources, what would you like to see changed?
  18. What suggestions can you offer regarding the logistics of your involvement with the PTLC? (e. g., travel to meetings at Anschutz, meeting with coach and mentor)

Appendix D  
Survey Questions for Researchers, First Survey

1. What was the most important aspect of the May 10<sup>th</sup> PTLC meeting, in terms of encouraging or promoting research in teaching and learning?
2. What in your opinion, does learning look like in your classroom, lab, or academic program? How do you know it has occurred?
3. Do you perceive a change in your own understanding of learning in the undergraduate classroom? (For example, do you notice a change in your conception of what learning "looks like," or about the evidence you might use to determine it has taken place?) If so, please describe this change.
4. In your opinion, does the PTLC promote inquiry into professors' teaching? In what way(s)?
5. In your opinion, does the PTLC promote inquiry into student learning? In what way(s)?
6. Do you see the PTLC program as providing an avenue for institutional leadership? How so?
7. What are some of the key references you are using in your research project?
8. What research methods are you using?
9. Describe the status of your data collection.
10. How do you plan to analyze your data?
11. In which journals do you hope to publish?
12. Do you think the PTLC promotes faculty collaboration at the level of the CU system? If yes, how so?
13. Do you think the PTLC promotes collaboration at the campus level? If yes, how so?
14. Do you have any suggestions for how the PTLC can encourage collaboration and PTLC research advancement in the summer months? If so, let us know here or via email to: [eyerman@colorado.edu](mailto:eyerman@colorado.edu).

Appendix E  
Survey Questions for Mentors and Coaches, First Survey

1. In your opinion, what was the most important aspect of the last PTLC meeting, in terms of promoting research on teaching and learning?
2. In your opinion, does the PTLC promote inquiry into professors' teaching? Please explain.
3. In your opinion, does the PTLC promote inquiry into student learning? Please explain.
4. Do you see the PTLC program as providing an avenue for institutional leadership? Please explain.
5. Have you joined the PTLC Google group? How might you use the discussion board, if at all?
6. Do you see your role as a coach or mentor as an opportunity to promote scholarly efforts at your campus? Please explain.
7. How could the PTLC program improve your facility with mentoring and coaching?
8. Has your participant changed or narrowed his or her project research questions since the last meeting?
9. How would you describe that change (if applicable)?
10. Has your participant changed his or her research methods and/or data collection strategies since the last meeting?
11. How would you describe that change (if applicable)?
12. Do you think the PTLC promotes faculty collaboration at the level of the CU system? Please explain.
13. Do you think the PTLC promotes collaboration at the campus level? Please explain.
14. How can the PTLC encourage faculty collaboration and production over the summer months?

Appendix F  
Survey Questions for Researchers, Second Survey

1. What were the most important aspects of the October and November 2007 PTLC meetings, particularly in terms of encouraging educational research?
2. What is your definition of learning?
3. Has your conception of learning changed because of your involvement with the PTLC? (involvement includes work on your research project, conversations at PTLC meetings, and interaction with coach/mentor)
4. If your conception of learning has changed, please explain how it changed.
5. How does the PTLC promote inquiry into professors' teaching?
6. How does the PTLC promote inquiry into student learning?
7. Do you think the PTLC can in any way change how the Scholarship of Teaching and Learning is viewed by people at the university?
8. What research methods are you using?
  - a. Quantitative
  - b. Qualitative
  - c. Combination of quantitative and qualitative
9. Do you plan to have submitted an article about your research project to a journal before January 2008?
10. Do you plan to have given a presentation about your research project before January 2008?
11. How does the value of PTLC relate to or depend on it being a system-wide collaborative?
12. Do you think the PTLC promotes faculty collaboration at the level of the CU system?
13. Do you think the PTLC promotes collaboration at the campus level?
14. Do you have any suggestions for how the PTLC could encourage greater collaboration?
15. Were you satisfied with the level of contact you had with your coach and/or mentor? Please explain.
16. How could the PTLC gain greater participation throughout the CU system? That is, what are some ways we could encourage faculty and instructors to submit proposals?

Appendix G  
Survey Questions for Mentors and Coaches

1. What were the most important aspects of the October and November 2007 PTLC meetings, particularly in terms of encouraging educational research?
2. Do you have any suggestions for ways to structure future PTLC meetings?
3. Do you have any suggestions for goals that could be set for future PTLC meetings?
4. How does the PTLC promote inquiry into professors' teaching?
5. How does the PTLC promote inquiry into student learning?
6. Do you think the PTLC can in any way change how the Scholarship of Teaching and Learning is viewed by people at the university?
7. How does the value of PTLC relate to or depend on it being a system-wide collaborative?
8. Do you think the PTLC promotes faculty collaboration at the level of the CU system?
9. Do you think the PTLC promotes collaboration at the campus level?
10. Do you have any suggestions for how the PTLC could encourage greater collaboration?
11. Were you satisfied with the level of contact you had with the investigator you are coaching/mentoring? Please explain.
12. Did you feel adequately prepared to act as a coach/mentor?
13. What are some ways the PTLC could better prepare future mentors and coaches?
14. How could the PTLC gain greater participation throughout the CU system? That is, what are some ways we could encourage faculty and instructors to submit proposals?

Appendix H  
Final Report Questions for Researchers

1. Please describe the teaching and learning problem you addressed and the course revision you undertook. What question(s) did you address? What research procedures did you follow in gathering evidence, etc?
2. What results did you obtain?
3. What do you believe these results add to your discipline's understanding of teaching and learning?
4. What do you believe your work adds to our understanding of scholarship of teaching and learning as a perspective on student learning and measuring student learning?
5. Describe the next phase of your work on this project. What steps will you take on campus (and elsewhere) to continue the work you started this year?
6. Describe the presentations, publications, course materials and other forms of scholarship that have occurred or are planned as a result of your project.
7. What kinds of grants if any have you received for your project?
8. Please detail how you spent the money for the grants you received.
9. In a final page, please reflect on your experience as a CU President's Teaching and Learning Scholar. What were the most beneficial aspects of the program? What would you like us to know as we work with subsequent classes of scholars?
10. Anything else