

A DIFFERENT WAY TO THINK ABOUT DEVELOPMENTAL EDUCATION

The Promise of Faculty Inquiry

FOR TEACHING AND LEARNING BASIC SKILLS

Mary Taylor Huber

A Report from
The Carnegie Foundation for the Advancement of Teaching
**STRENGTHENING PRE-COLLEGIATE EDUCATION
IN COMMUNITY COLLEGES**
2008

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We have learned that many of our students have the ability to do...very significant learning that absolutely puts them on the pathway to success in college.

(Chabot College, SPECC Interim Report, 2007, Appendix, p. 3)

Nothing is more important to student success in community college than mastering the basic skills of reading, writing, and mathematics. Nationwide, according to one estimate, “60 percent of students ages 17 to 20 in two-year colleges...need remedial courses” (Kirst, 2007, p. 2). And, while fewer (42 percent of entering students) actually enroll in these courses, it is clear that the scope of the enterprise is huge.¹ So, too, are the stakes for students, higher education, and the larger society. When underprepared students have trouble passing their basic skills courses and gaining the proficiencies they need, they are unlikely to succeed in college-level work, transfer to a four-year institution, or earn a certificate or associate’s degree. These set-backs not only delay or derail students’ academic progress; they also dim their prospects for the future and diminish the college’s intellectual life. Of the many challenges facing community colleges, improving learning in the basic skills is, for many educators, priority number one (Merrow, 2007).

Most community colleges today recognize that for adults to successfully master the basic skills, a complex mix of ingredients must be involved.² State-of-the-art programs address students’ needs for financial aid, academic tutoring and counseling, social support, and a sense of membership in the college community. But it has proven much harder to reach inside the basic skills classroom in ways that help teachers break through the barriers raised by students’ poor preparation, to discover and build on students’ strengths. Most basic skills students do indeed have the ability to do very significant learning—but only if teachers can tap into that talent, engage students with the pleasures (and difficulties) of reading, writing, and fundamental mathematics, sustain their academic ambitions, and stimulate their critical and creative powers of mind. The question is, how?

SPECC PROJECT RESOURCES

“The Promise of Faculty Inquiry for Teaching and Learning Basic Skills” is one of a number of SPECC products and publications developed by Carnegie staff members. For a full listing, see www.carnegiefoundation.org/specc.

This essay explores the promise of **faculty inquiry** to develop and foster this kind of teaching and learning in the basic skills. “Faculty inquiry” is a term that encompasses a broad set of practices that engage teachers in looking closely and critically at student learning for the purpose of improving their own courses and programs. As part of the larger scholarship of teaching and learning movement, it also involves going public with insights, experiences and results that other educators can evaluate and build on (Huber and Hutchings, 2005). A mathematics instructor at Los Medanos College captured the spirit well in his description of what it’s been like to work with a group of colleagues on questions about teaching and learning in the college’s pre-algebra basic skills course:

In the past, I would always just teach by what feels right; if I try something in class and it doesn’t feel like it works, I’ll try something different the next semester. But this time we’re being systematic about it. We have a research question, we [read] literature to [find out] what the experts say, and we’re trying to implement [a new approach]. At the end of the semester we’ll assess it and see what we have gotten, and post it on the Web for the whole world to see. (Holtmann, in Holtmann et al., 2007, Introduction, Instructor’s Perspective video)

Classroom-oriented studies are central to faculty inquiry, but when inquiry is pursued in company with colleagues teaching other sections of the same course or other courses in the same developmental sequence, the work can also give new direction to curriculum design, support the impact of co-curricular interventions, and breathe life into larger institutional agendas like assessment and accreditation. Pursuing these activities with an eye towards asking good questions, gathering and examining evidence, experimenting with new approaches, and circulating the knowledge gained can help sustain a cycle of improvement and innovation not only in the basic skills program, but also in the college as a whole. When educators pursue inquiry in the company of students and colleagues, they begin to create a “teaching commons” on their campus—a set of interconnected forums where conversations about learning take place, where innovations in curriculum and pedagogy get tried out, and where questions and answers about education are exchanged, critiqued, and built upon. Indeed, the teaching commons in this larger sense goes well beyond the campus itself, to extend to all those educators regionally, nationally, and internationally who attend the conferences, read the publications, and examine the Web sites where the work and findings from inquiry are shared (see Huber and Hutchings, 2005).

This essay looks at how faculty inquiry has been mobilized to improve the teaching and learning of basic skills at a cluster of California community colleges participating in the Carnegie Foundation’s initiative on Strengthening Pre-collegiate Education in Community Colleges (SPECC), undertaken with The William and Flora Hewlett Foundation as funding partner.³ A three-and-a-half year multi-site action research project, SPECC has focused on teaching and learning in basic mathematics and English language arts courses at 11 California community

CAMPUSES PARTICIPATING IN SPECC

- Cerritos College
- Chabot College
- City College of San Francisco
- College of the Desert
- College of the Sequoias
- Glendale Community College
- Laney College
- Los Medanos College
- Merced College
- Pasadena City College
- West Hills College District

colleges. On each of these campuses, educators are using faculty inquiry to explore and assess different approaches to classroom instruction as well as for course and program design and evaluation. In the process, these small teams of colleagues are creating the foundation for a more collaborative culture in their colleges around one of the most difficult educational problems faced in community colleges across the country and, indeed, in higher education at large.

My colleagues and I at the Carnegie Foundation believe that the experience of faculty inquiry at these 11 colleges may encourage others to design similar opportunities for their faculty—and in the process, create richer and more productive experiences that help students learn and master the all-important basic skills. It is easy for faculty working on their own to become discouraged by the narrow reach of their best efforts. When faculty inquire together about how to improve their own classrooms and their department's courses and programs, space is opened for conversation and for hope. As one SPECC participant commented: "We are contributing to a cultural change about the value of evidence in the institution. Our focus has been on determining whether we are accomplishing what it is that we believe is important...It actually makes me believe that we can make a small difference in [students'] lives."

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Bringing Faculty Inquiry into Basic Skills Instruction

One might think that community colleges would be especially friendly homes for faculty inquiry into teaching and learning. They are, after all, “teaching colleges,” whose faculty are not expected to conduct the kinds and amount of scholarly research that is common in other types of higher education institutions. The reality is considerably more complex. While most community college faculty are indeed focused on teaching, they are not much more likely than faculty in other types of colleges and universities to have had professional pedagogical training. And they are very busy. As Norton Grubb and associates point out: “The dark side of being a teaching institution is that faculty have to teach much more—an average of sixteen classroom hours a week, 50 percent more than faculty in state colleges and more than twice that of faculty in research universities, with obvious effects on the time available to ruminate about what good teaching might be” (1999, p. 9). The situation is even worse, of course, for the many, many adjunct faculty who are only paid to teach part-time. Indeed, according to

the US Department of Education, 68 percent of the faculty in public two-year colleges hold part-time appointments (Snyder, Dillow, and Hoffman, 2008, Table 235).

Just as important as these general purpose programs, however, are targeted efforts to bring faculty inquiry to bear on particular educational tasks, issues, and innovations.

There’s also the question of campus culture, and how open community colleges are to faculty inquiry. Howard Tinberg, Donna Duffy, and Jack Mino, three community college faculty involved in the scholarship of teaching and learning, write: “In a sharply utilitarian culture, shaped most recently by calls for accountability and shrinking state support, reflecting on one’s teaching and sharing that reflective work with a community of scholars are activities that often are perceived as, at best, luxuries and, at worst, distractions from the teaching mission of the college” (2007, p. 28).⁴ For this reason, it is often hard to find resources of time and money to support faculty inquiry (and other kinds of innovation) within the regular budget of most community colleges. In the beginning, at least, much may depend on faculty members’ sense of commitment to the work, their desire to work with colleagues on common problems, and the availability of internal seed money or external support.

Still, despite the many hurdles, faculty inquiry is making headway. Community college instructors and their institutions participate in national scholarship of teaching and learning initiatives like the Carnegie Academy for the Scholarship of Teaching and Learning (CASTL) and the Visible Knowledge Project (VKP).⁵ Notable programs to encourage faculty inquiry can be found at large community college systems like the Maricopa Community Colleges in Phoenix and Miami-Dade College in Florida, as well as at high-profile campuses like La Guardia Community College in New York City, which sponsors annually a year-long scholarship of teaching and learning seminar and a journal, *In Transit*, to make the work public.⁶ Just as important as these general purpose programs, however, are targeted efforts to bring faculty inquiry to bear on particular educational tasks, issues, and innovations—as faculty at the campuses participating in SPECC are doing to explore and improve teaching and learning in the basic skills.

On SPECC campuses, and we imagine this would also be true of others, faculty inquiry has not been the first or only approach undertaken to improve instruction in the basic skills. In fact, the 11 colleges participating in SPECC were selected precisely because of their long-term commitment to innovation. Along with community colleges nationwide, they have shifted away from older ideas about remedial education towards a new approach that does “not focus narrowly on identifying ‘deficits’ in students’ academic backgrounds,” but draws instead on “a broader, holistic understanding of students’ needs” (Malnarich et al., 2003, pp. 21–22). Like others, SPECC campuses have implemented curricula and pedagogy that involve “the teaching of basic skills combined with assessment, advising, counseling, tutoring, and individualized learning experiences designed not just to reteach basic content, but also to promote student development” (Boylan and Saxon, 1998, pp. 7–8).

Indeed, SPECC colleges have contributed important early experiments in combining such courses and support services into learning communities that “provide students the opportunity to share the curriculum and learn together” (Tinto, 1997, p. 62).⁷ Laney College’s Project Bridge, for example, founded in the late 1970s and “arguably one of the longest-running learning communities in the United States,” now “serves about 100 students each semester, including some...who are ‘so under-prepared for academic work that they are often considered beyond hope educationally’” (Griffith, Jacobs, Wilson, and Dashiell, 1989, cited in Laney College, 2004, p. 2).⁸ There is also the nationally recognized Puente program, a learning community for Mexican-American and Latino students, founded in 1981 by instructors at Chabot College, that continues to offer a year-long writing, counseling, and mentoring program that links counseling with instruction in developmental English.⁹ Of course, each SPECC campus has its own special history of mobilization around issues in teaching and learning basic skills, often using external grants and other special funding to design and redesign critical parts of their developmental education programs and facilities.

The pace of innovation has picked up in recent years as basic skills education moves to the forefront of community college policy discussions both nationally and at home (see, for example, Bailey and Morest, 2006; Mellow and Heelan, 2008). In California, concern has been especially great because of the high percentage of entering students who place into the basic skills sequence (70 percent in English; 90 percent in math), and because of the low percentage of these students who go on to transfer or complete a certificate or degree.¹⁰ With a highly diverse demographic “tidal wave” of students starting higher education in a community college and a state economy experiencing a shortage of educated workers, this represents a failure that neither students nor the state can afford.¹¹ As Colleen Moore and Nancy Shulock write, “California has one of the most accessible community college systems in the country, and Californians are rightfully proud of that. But the reality of low completion rates begs the question: access to what? We need to do more than open the door to college” (2007, p. v). A whole spate of strategic plans and reports have held basic skills policies and programs up to official scrutiny, with the aim of doing better not just for special cohorts of students, but for all students who are coming to campus underprepared for college work.

Thus the basic skills agenda for SPECC colleges today is deeper and broader than ever. Campuses are still working through the logistical, curricular, and pedagogical demands of learning communities—trying to find the right course pairings, the right level of counseling and academic assistance, the right kind of professional development. They are exploring tutoring in its various versions—from reading specialists to Supplemental Instruction (a form of peer tutoring by students who were previously successful in the same course). They are looking at new roles for technology in the lab and in the classroom. And they are exploring the benefits of new approaches to teaching reading, writing, and math. As the Carnegie Foundation team notes in our comprehensive report on the project, *Basic Skills for Complex Lives: Designs for Learning in the Community College* (2008), SPECC campuses are using this variety of models to create learning experiences with highly structured activities that engage basic skills students in interesting, intellectually challenging work, encourage sustained effort, and help students learn not only the necessary material but also how to be a student—learning how to study, learning how to learn.

Threaded throughout these efforts and contributing to them are forms of inquiry and assessment that are helping faculty learn more about their students' learning. Using a variety of techniques and tools—for example, interviews and focus groups, special surveys and diagnostic tests, carefully crafted assignments and common exams—SPECC instructors are making learning visible for themselves, their students and their colleagues. They are doing so for many reasons: because teaching and learning are complex endeavors that raise consequential questions; because the so-called “basic skills” are not, in fact, so basic or simple (Asera, 2007); because involving students in thinking about learning is good pedagogy; and because finding out more about learning can help instructors improve the activities and relationships that nurture it. In short, the goals of faculty inquiry, as undertaken on campuses participating in the SPECC program, are to 1) inform and support classroom teaching and learning, 2) design better courses and programs, and 3) create a more collaborative teaching culture among basic skills instructors on campus and beyond. Let us look at each of these goals in turn.

FIVE PRINCIPLES FROM *BASIC SKILLS FOR COMPLEX LIVES*

The most promising innovations are shaped by an understanding that basic skills are not so basic, that even underprepared learners bring assets to their work, and that life today presents unprecedented challenges. Classrooms that reflect these understandings are characterized by the following principles of design and practice:

HIGH STRUCTURE

Provide explicit step-by-step guidance for undertaking complicated academic tasks.

HIGH CHALLENGE

Engage students in authentic debate and intellectual exchange.

INTENSITY

Create learning experiences that hold students' attention more fully because they are more sustained, more engaging, high "dosage."

INTENTIONALITY AND LEARNING HOW TO LEARN

Help students understand themselves as learners, understand what is expected and why, and master strategies for studying that will help them succeed.

INQUIRY AND ASSESSMENT TO MAKE LEARNING VISIBLE

Make students' experience as learners visible to teachers and to students themselves in ways that can inform and support what happens in classrooms.

Source: The Carnegie Foundation for the Advancement of Teaching. *Basic Skills for Complex Lives: Designs for Learning in the Community College* (2008).

Inquiry to Inform and Support Classroom Teaching and Learning

The core work of faculty inquiry involves instructors asking questions about the teaching and learning that goes on in their own classrooms, then seeking answers by consulting the literature, gathering and analyzing evidence, and engaging students in the process whenever possible. Instructors then use what they find out to improve the experience of their students and share this work with colleagues so that they and their students can benefit too. Usually, questioning begins with a problem the instructor has perceived—something that’s not going right. Indeed, that is the key move. As Randy Bass notes in his classic article titled “What’s the Problem?” the scholarship of teaching and learning pivots on turning problems in teaching from something to be avoided into opportunities for investigation. As Bass notes: “Having a ‘problem’ [in this sense] is at the heart of the investigative process; it is the compound of generative questions around which all creative and productive activity revolves” (1999, p. 1).

Once one is on the lookout for problems that invite investigation, the rest of the process, however circuitous, falls into place. Like any other kind of scholarship, the scholarship of teaching and learning involves talking to people (including students!) about the issues one is concerned with, reading the literature, refining and narrowing one’s questions, figuring out what kinds of evidence might speak to those questions, and coming up with a strategy for gathering and analyzing that material. It may take a while to reflect on what one discovers and figure out appropriate ways to change one’s approach in the classroom—and then check to see if the new approach is actually working as one had hoped.¹²

In this section, we’ll look first at how faculty are asking questions and seeking answers about student learning that they can use to improve classroom teaching. Second, we’ll look at how faculty are working together to support and extend these kinds of inquiries. Clearly, it’s possible to do this kind of work pretty much on one’s own—relying on colleagues away from campus for conversation and feedback—and many scholars of teaching and learning do so. But working with others who share a local context is not only more efficient and pleasurable; it can also lead, as we shall see, to the kind of collaborative inquiry and shared responsibility for student learning that is particularly important for basic skills education.

Asking Questions, Seeking Answers

Katie Hern, an English instructor at Chabot College, begins her discussion of classroom inquiry with a classic account of finding and defining a problem: “After a disheartening moment in Fall 2005, I had to stop and take a closer look at my students” (2007a, p. 1). Hern was teaching three sections of a developmental course just one level below college English, and only 55 percent of the students passed. Now, this was not a particularly bad success rate compared to other sections of the course, and even to national averages. But it surprised Hern, because the largest proportion of the students who dropped out or withdrew “had demonstrated, on tests and essays, that they could do the kinds of reading, reasoning, and writing [she] was asking of them” (2007a, p. 1). Thinking about this anomaly, Hern decided that attrition in her sections was not as much about student ability as it was about sustainability: “These students could do the work, but they did not sustain the focus, motivation, and effort to pass the course” (2007a, p. 1).

For the next two years, Hern explored this “sustainability gap” through interviews with students and self-reflective essays that she asked students to write, aided by discussions with colleagues and with students in later English classes who helped her interpret what was going on—an educational experience for the students as well as for Hern (see Hern, 2007b, Closing the Gap, Students Explain the Sustainability Gap video). Needless to say, Hern found that able students floundered for different reasons. Some talked about being lazy or bored—cases of “low academic motivation.” Some talked about competing demands from jobs and family. Others were too insecure about their own abilities to ask for help when they became lost or confused—“help that, because of the skills they already had, might have meant the difference between success and failure” (2007a, p. 3).

Some students found themselves lost in the college environment, where there was, as one put it, “too much freedom” compared to high school, or where, as another put it, “teachers don’t really care.” Hern’s inquiries also showed that some students just didn’t know how to manage the workload or judge where they stood in class (2007a, pp. 3–4; 2007b, Student Cases).

What does one do about such seemingly intractable problems? Hern began with the things she could most readily control. For example, she simplified her grading practices and made them more visible to students; she made sustainability a topic of discussion in class; she scheduled regular individual conferences with students early in the semester, and signed all students up for a meeting on a draft of their first essay. Students who still seemed to be slipping got a personal note of concern. And while always quick to praise her students, Hern has become even “more intentional about enthusiastically recognizing what they are doing well” (personal communication, May 8, 2008). What she has found so far, while not definitive, is encouraging. “I can point to a growing number of students who appeared to be falling into the gap but then recovered and passed my classes. At a minimum, I am more conscious of the dynamics that keep students from being successful” (2007a, p. 4).

Katie Hern is not alone. At all 11 campuses participating in SPECC, faculty inquiry groups were organized to provide advice, direction, and support to instructors who wished to intensify their focus on teaching and learning in this way. On Carnegie’s 2008 survey of participants in these groups, some 117 instructors (85 percent of the respondents) noted that they had framed and investigated specific questions about teaching and learning in their classrooms under the auspices of the SPECC program.¹³ From written comments, we learned how valuable this kind of inquiry could be for testing and evaluating classroom teaching strategies: “I had to really focus on a teaching strategy and deliver my results throughout the term,” said one instructor. “I’ve never so thoroughly documented my teaching nor have I really been this rigorous in checking to see if what I’m doing is really working.” Participants also commented on the close connection between inquiry and innovation. According to one,

Working with others who share a local context is not only more efficient and pleasurable; it can also lead to the kind of collaborative inquiry and shared responsibility for student learning that is particularly important for basic skills education.

“I am more aware of how students are learning and I can adapt to their needs more easily. I ask questions of myself in terms of how students learn and I experiment more with activities in search of answers.”

This focus on students and their learning is central to the faculty inquiry process. Consider Katalina Wethington, who participated in a scholarship of teaching and learning seminar at Los Medanos College in fall 2006. Wethington, like Hern, was puzzled by a problem in a developmental English course one level below freshman English. In Wethington’s case, however, the problem was a specific roadblock to learning that she had observed again and again:

The impetus for this investigation is my observation that the majority of students in developmental classes have difficulty properly applying evidence to the argument they are building or the point they are trying to support. I have especially noted the frequent misapplication of quotations from primary and secondary sources... Does this difficulty reflect a lack of understanding of the role of quotes in academic discourse, difficulty in simply choosing the right quote(s), or a larger weakness as far as creating logical connections between pieces of an argument? (Wethington, 2007, Explanation of Project)

Using a trio of techniques to investigate these questions, Wethington assessed students’ initial understanding of quote incorporation by asking them to write an ungraded paragraph—and took that opportunity to solicit her students’ help as co-inquirers. “This task is anonymous and will not be graded. So don’t feel pressured, but do give it your best shot! This will help me see how well you as a class have understood the concept of incorporating quotes...” (Wethington, 2007, Methods of Investigation). Wethington also analyzed student work throughout the semester by means of a specially-designed rubric to categorize quotation expertise, and she conducted and videotaped “think alouds” with selected students earlier and later in the semester.¹⁴ In these sessions, she asked students to write a short essay and then discuss with the investigator a set of questions like: “Can you explain to me why you chose the quote in the paragraph?” and, if they find it difficult to explain or feel they may have chosen the wrong quote, “What kind of quote might have worked better?” (Wethington, 2007, Short and Long Assignment Think-Aloud Questions).

Wethington found out that early in the semester, while students appeared to understand the technique of quotation incorporation, “it hadn’t yet sunk in that it wasn’t a I-did-it-everything-is-fine-I-don’t-have-to-think-about-it-anymore equation. In essence, the idea of a thoughtful, recursive process wasn’t clear, nor was the idea [that] using [the three-step process they had been taught] didn’t [bring] immediate success. The inner logic of what they were writing and why still eluded them and made it impossible for them to self-edit.” For Wethington, this meant emphasizing that good writing was about clear thinking, for which there is no “trick” (2007, Think-Aloud Results).

Later in the semester, Wethington found that one of these same students who earlier felt that “nothing is wrong” was now aware that something was not quite right with her use of quotation and could say exactly what it was. If rewriting now, the student said, “I think...what

I would have done is find a quote that would have described more that [the character] was obsessive because the quote I use doesn't describe that he was obsessive; it just describes the part where [another character] kills him" (2007, Think-Aloud Results). Her student's willingness to pause and doubt her earlier choice pleased Wethington. "This represents, to me," she said, "the best I could ask for in self-reflection and growth as a student learns a new skill" (2007, Think-Aloud Results). Wethington realized that it is wrong to assume that students can easily transfer a concept (like using quotes effectively) from one genre to another, and that it would be better for instructors to discuss the effective use of quotes with every kind of text they teach.

Faculty inquiry has the potential to open up the classroom for teachers and students alike, make learning—its strengths as well as its weaknesses—more visible, and encourage exploration of alternative roads to student success.

Faculty inquiry at the classroom level is not only helpful for honing homegrown pedagogies but also extends to exploring the best ways to implement pedagogical principles and practices developed far from one's campus or disciplinary home. For example, many SPECC campuses have been inspired by ideas from Reading Apprenticeship, an approach to reading initially developed for grades K-12 by the Strategic Literacy Initiative of WestEd.¹⁵ Yet interest is not limited to English teachers. The program also appeals to instructors who are trying to help students do better in developmental math. Yu-Chung Chang of Pasadena City College, for example, is using faculty inquiry to develop and evaluate a technique that she calls WRAMPS (Writing and Reading Activities for Math Problem Solving), a "nine-step process that requires students to break a word problem into small pieces by using reading and writing strategies" (Chang, 2007). In a similar vein, Laura Graff, Dustin Culhan, and Felix Marhuenda-Donate from College of the Desert are asking their students to outline their algebra and arithmetic textbooks in order to develop learning and study skills that will help them become more active learners of mathematics (Graff, Culhan, and Marhuenda-Donate, 2007). These instructors, along with Katie Hern (2007b) and others, have made special efforts to document their inquiries—and their students' learning—in the *Windows on Learning* collection of multimedia accounts by SPECC faculty, available through the Carnegie Foundation Web site, at www.gallery.carnegiefoundation.org/specc.

As these examples suggest, faculty inquiry has the potential to open up the classroom for teachers and students alike, make learning—its strengths as well as its weaknesses—more visible, and encourage exploration of alternative roads to student success. On the one hand, this kind of inquiry is a way of breaking out of subservience to pedagogical routines that are not serving teachers or students well. And on the other, it's a way of exploring the potential of a new pedagogy that an instructor has designed, or of breathing local life into pedagogical ideas that circulate nationally or internationally, but which, at their worst, can devolve into "homogenizing clichés" (see Vale, 2008, p. 125). Basic skills instructors engaged in faculty inquiry are exploring a variety of problems and solutions, to see how things play out with their particular students, in their particular classrooms, at their particular college—but always with an eye to sharing their ideas with colleagues on campus and beyond.

Working with Colleagues

Stories about faculty inquiry to inform classroom teaching appropriately “star” the individuals who are teaching these classes, feature the problems they choose to grapple with, follow the methods they use to gather and analyze data, and conclude with the changes they make in their teaching in light of their findings. But one of the most important lessons from the national movement is that the scholarship of teaching and learning, like any other kind of scholarship, is best conducted and sustained in the company of colleagues (see, for example, Bernstein et al., 2006; Savory, Burnett, and Goodburn, 2007). In some cases, the *only* company available is an “invisible college” of people with shared interests in a particular discipline or pedagogy (like service learning, or problem-based learning), pursuing their work at different institutions—often because people nearby are not interested or not available. In SPECC, however, faculty inquiry was generally orchestrated through face-to-face faculty inquiry groups (FIGs, for short), which provided both a continuing source of ideas and support and a first audience for work in progress and lessons learned.

Community college teachers, like their counterparts in other types of institutions, often find the experience of working together to be as powerful as the act of inquiry itself. One

survey respondent wrote: “I developed critical thinking exercises that demand more from my students, and my FIG was/is very supportive in developing this new curriculum.” Another said: “We had extensive discussions about our students’ learning and the role of technology in the classroom and how to improve the technology. My time in that group transformed my teaching practice in a way *I know* benefits the students.” And another commented: “After discussing and explicitly stating what we feel is important for our students to learn, I became more explicit in incorporating the same things in the lessons I prepared for my students. I am now making a more conscious effort to address the things that a student who produces ‘good’ work according to our rubric would learn from the topic discussed. I no longer expect the student to make the connections I want him or her to make without a group discussion or activity specifically addressing it.”

Clearly, working together with colleagues can help sharpen inquiry through critique and discussion from the beginning of the process to the end. Sometimes, too, the process involves active collaboration. At City College of San Francisco, FIG participants from different departments paired up to conduct student focus groups in each other’s classes. The teams began with the administration of a student survey that each teacher developed for his or her class. Each teacher

FACULTY INQUIRY GROUPS

- Create professional communities in which educators can share what happens in classrooms
- Articulate and negotiate the most important outcomes for student learning
- Use the tools of classroom research to understand the experience of students more deeply
- Share insights and findings
- Examine a wide range of evidence, from examples of student work to campus-level quantitative data tracking patterns of student performance
- Invite and offer critical reflection and peer review
- Foster collaboration in the design of curriculum, assignments, and assessments
- Build trust as an essential component of ongoing improvement
- Support professional identity and responsibility among educators

Source: The Carnegie Foundation for the Advancement of Teaching. *Windows on Learning: Resources for Basic Skills Education*. <http://gallery.carnegiefoundation.org/specc/>.

then developed focus group questions and discussed them with the colleague who was to conduct the actual in-class interview. These questions “addressed a wide range of teaching and learning concerns, including course content, materials, expectations, instructor methodology, student-teacher relationships and student learning style preferences.” After the focus group sessions, the two instructors discussed and documented the results, and later shared lessons they’d learned with other participating pairs. The goals were “to help teachers inform themselves about student perspectives and to incorporate this information back into course curriculum and methodology;” encourage “students to contribute to classroom...instruction and to critically reflect on their experience as learners;” and broaden instructors’ experience through “discussions of teaching and learning from a perspective that was different from their own discipline and their personal pedagogical styles” (City College of San Francisco, SPECC Interim Report, 2007, p. 6).

SPECC campuses explored many models for bringing people together in faculty inquiry groups, which varied depending on the circumstances of the college, the history of faculty collaboration in developmental education, the creativity of the coordinators, and the purpose at hand. Some groups emphasized individual projects; others focused on a theme of common concern. Some involved colleagues from across disciplines; some were specific to teachers of sections of the same course. At one campus, staff from the Teaching and Learning Center facilitated faculty inquiry groups; at another, faculty with special responsibility for coordinating basic skills instruction did the job. Laney College used a special model of “reflective inquiry” to conduct its faculty inquiry groups; ¹⁶ others developed highly structured activities (like City College of San Francisco’s student focus group exchange); and many ended up with a productive mix. As Katie Hern noted of Chabot College:

We’ve done three kinds of faculty inquiry in the SPECC grant—from primarily solo inquiries like my sustainability research (which was then shared and discussed in broader faculty forums), to our developmental English Faculty Inquiry Group focused around Student Learning Outcomes in one class, to the multi-disciplinary Faculty Inquiry Group with social science that connects individual inquiries by each faculty member with a central question around “How can we all be basic skills teachers while still addressing content coverage?” (2008)

With all of these possibilities in play, it is clear that the potential of faculty inquiry to improve basic skills instruction goes beyond informing classroom teaching and extends to the design of the courses and programs that particular classrooms serve.

Inquiry to Design Better Courses and Programs

Indeed, it's really at this next level—the design of courses and programs—that the bigger benefits of faculty inquiry set in. This is because most basic skills classes are taught not as stand-alones, but as sections of a larger course, taught in a sequence of courses designed to move students from wherever they place when they enter college up to the college-level courses that count for transfer, a certificate, or an associate's degree. Some colleges have just two or three levels in each subject; some have four or more. At Cerritos College, one of the largest community colleges in California, the English department enrolls 2800 students each semester in courses three levels below Freshman Composition, while the Mathematics department enrolls 3300 students in courses three levels below Intermediate Algebra—with each one taught in multiple sections.

While improving teaching and learning in each classroom (or section) is obviously an important professional responsibility for individual instructors, there are many reasons—including concerns about equity—to get the instructors of these courses and sequences on the same page.

This is not something that can or should be done by fiat. As professionals, most community college instructors value and need the freedom to teach their section of a course in their own way. Getting teachers together to assure an appropriate degree of alignment is not always easy—especially (but not only) because so many are adjuncts with limited time available for such collaboration. Looking at students and their learning is, we believe, a particularly powerful and attractive path to follow. When members of a faculty inquiry group all teach the same course, it's often hard to draw a line between what individuals are exploring in their own classrooms and the kinds of exchanges that can help inform and coordinate teaching across sections—at least among those participating in the group. And many SPECC campuses have gone further, designing new efforts to collaboratively explore and evaluate student learning at the course and program levels, infusing principles of faculty inquiry into regular program activities, like course and program evaluation and design. While the challenges are many, SPECC campuses have developed interesting approaches to explore and answer different questions that contribute to the problem: Who are our students? What and how should we teach? How can we coordinate and evaluate our efforts?

Who Are Our Students?

One of the most elementary questions basic skills educators would like to answer is also one of the most elusive: Who are our students? How do they reflect our general student population? How do they differ? What pathways do they follow through our programs? This was the kind of question Katie Hern addressed through her study of the “sustainability gap” among students in her developmental English section. But when we get to the broader levels of the course and program, information is harder to come by. As we note in the Carnegie Foundation's SPECC project report, *Basic Skills for Complex Lives: Designs for Learning in the Community College* (2008), institutional research offices can be important collaborators, but because there are often limits to what their busy staff can do, SPECC faculty have been creative in finding their own answers to their questions.

Basic skills faculty at Cerritos College, for example, have conducted their own surveys, which showed some surprising differences in the demographic profile of the students taking developmental mathematics and English. They found that their developmental students cannot be “lumped into a general category.” In fact, their basic skills math students are older than basic skills English students: 69 percent in math are between the ages of 19 and 30, while 72 percent in English are 18 and under. Consistent with this finding, the Cerritos SPECC team found that their basic skills math students work more hours (nearly half work 20 or more hours per week, compared to only 28 percent of their English students); and the math students have been enrolled in the college longer (nearly half for two or more semesters compared to nearly 70 percent in English who have no previous college experience). “We need to address the needs of basic skills English students based on [this] information, that is, an immature young adult,” the team concludes. “And we must do the same for the math student, who is an older more experienced student with outside demands of job and family” (Cerritos College, SPECC Interim Report, 2007, p. 3).

Questions about students can also focus on behavior. For example, Myra Snell, the developmental mathematics coordinator at Los Medanos College, was concerned (as all program administrators are) with attrition. As part of a larger “flow-through” study of students beginning at various levels of developmental education, Snell was able to document the huge impact that “stopping out” of mathematics has on students’ persistence through the basic skills sequence. Nearly half (47 percent) of those who completed the elementary algebra course and then enrolled in intermediate algebra completed the transfer-level mathematics course within three years. However, the rate was much lower (25 percent) for students who completed elementary algebra, but waited to enroll in intermediate algebra. (Interestingly, the figures were even more striking in English: 41 percent of those who continued the sequence without a break wound up completing a transfer-level course versus 12 percent for those who stopped out). As Snell remarked in presenting these data, “they gave us a sense of urgency to talk to students about getting an educational plan and setting academic and career goals” (See Snell 2007; 2008).¹⁷

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Understanding students' attitudes and values is critical in designing curricula and pedagogy that may help them succeed in their courses and persist in the basic skills sequence. Everyone agrees in principle that it's important to build on the strengths students bring to the classroom, but for many instructors, it's students' weaknesses that meet the eye. Janice Connal and Frank Mixson of Cerritos College have complemented their demographic explorations with studies of the ways basic skills students see themselves as college students in order to help faculty interpret their behavior differently. In short, they argue, students who don't turn in work, who skip class or come late, or who don't study for an exam are avoiding confrontation with a situation that may confirm their worst fears about themselves. Insecure about their identities

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as college students, they dislike activities that they consider juvenile or that expose them to the disapproval of their instructors or peers (Connal and Mixson, 2007).

The implications that Connal and Mixson draw from their research for classroom instruction support the kinds of innovation in which most SPECC campuses are involved. Students need structure and scaffolding that break down tasks into small units. Students benefit from small group

work, where they can explore topics with less risk and gain emotional support from peers. And they need external motivation, such as rewards for each task, accountability for doing the reading and other classwork, and opportunities to show finished work publicly (Connal and Mixson, 2007). While pedagogical changes like these can be risky, especially when they upset long-held and widely supported expectations for interaction between teachers, students, and subject matter, the SPECC team's interviews with students suggest that the difference from traditional classrooms (where they have, by definition, not done well in the past) is appreciated. "Whatever the particulars," SPECC team member Andrea Bueschel writes, "the key point seems to be that students notice when things are different, which in turn helps them think about their own learning and their role in that process" (2008).

What and How Should We Teach?

These questions about matching pedagogy to students' needs speak to individual faculty about the choices they might make in their own classrooms, but can also be usefully addressed at the course and program levels. Planning basic skills courses and articulating them into a coherent sequence have long been faculty responsibilities, but they take on new dimensions when informed by collaborative inquiry. Sometimes, as we shall see, inquiry flows naturally into the tasks of design and evaluation. Sometimes it explores the potential of new pedagogical ideas as they flow among teachers in the same program. And sometimes it goes further. Indeed, if one is willing to study one's own understanding of the material one is trying to teach, a whole world of challenging questions opens up.

At Los Medanos College, Myra Snell and her colleagues in the pre-algebra teaching community took the time to go back to the foundations of this very basic mathematics course, turning to research literature on arithmetic teaching in elementary and middle school. In spring 2006, the group read Liping Ma's *Knowing and Teaching Elementary Mathematics*, and

“developed an appreciation for the conceptual richness of arithmetic and a realization that we needed to do more to understand these concepts before we could teach them effectively” (Los Medanos College, 2007, p. 2). Building on this work the next year, Snell and six instructors—including two adjuncts—met to read and discuss another book: Susan Lamon’s *Teaching Fractions and Ratios for Understanding*. The instructors worked through problems from the book, thinking aloud as they went, but denying themselves the use of algorithms in order to place themselves in students’ shoes—a process that brought their own unexamined arithmetical reasoning to light. Each participant then took responsibility for a different chapter in the book, summarizing key ideas, creating a set of problems to address these ideas, producing a snapshot of students’ thinking on one of these problems, and comparing it to the student work presented in Lamon’s book. These exercises enabled the group to create a framework for understanding the developmental stages of student thinking to use as a resource “to help instructors make instructional decisions during class.” (Los Medanos College, SPECC Interim Report, September 2007, p. 2).

Glendale Community College’s developmental writing program has been home to a particularly interesting exploration of a new pedagogical model, known as *Full E-mersion*, involving instructional technology. The Glendale team, led by Chris Juzwiak, faculty chair of the college’s Developmental Writing Committee, has been developing, implementing and evaluating this set of Web-based tools and practices for teaching the ins and outs of composition. Used well in a lab equipped with computers, these materials—including multimedia PowerPoint presentations, in-class exercises, photographic prompts for student essays, and samples of student work—can keep a 90-minute writing workshop humming along. Yet this plan did not come together all at once. Among the various tools the team has used to refine *Full E-mersion* is the student think aloud, which has helped identify where and why students were having difficulties.

In one of these experiments, instructor Denise Ezell probed students’ “ability to distinguish relevant from irrelevant supporting details,” and found that students might stumble when a situation described in an exercise did not apply personally to them. One student, for example, selected the sentence “While stuck in traffic, you choke on smog,” as a detail that did *not* support the general idea that “air pollution affects our daily activities.” His reasoning? It didn’t happen to him because he keeps *his* car windows rolled up (Ezell, 2007). The point, of course, of finding out precisely why students are making mistakes, is to create new materials or teaching strategies that can transform these “learning obstacles...into learning springboards” (Glendale College, SPECC Proposal, 2004, p. 3).

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Glendale’s work with instructional technology is also notable because of efforts to bring as many writing teachers as possible on board as users and co-composers of “an original, *living* (Web-based) textbook” (Glendale College, SPECC Proposal, 2004, p. 3). In practice, this

has meant involving instructors in collaborative faculty research and development. With reassigned time or stipends in 2004, two faculty new to the technology became participant-observers in Juzwiak's most basic developmental English course, where they were paired with students representing different skill levels, who agreed to serve as co-inquirers and be closely observed in class and in the lab. The instructors met throughout to reflect on what they were learning from the experience, and to discuss and propose revisions and extensions of the teaching materials. As the team documents in their *Windows on Learning* Web site (Ezell and Juzwiak, 2007), the process has since been extended to other levels of the developmental writing sequence and has employed ever more sophisticated methods to link materials to the students' learning process. The Glendale SPECC team comments:

While excellent teaching is inextricably linked to empathy for the student learning process, and good teachers invariably assess how students respond to assignments, instructional materials, and pedagogical innovations, the 'scholarship of learning' per se elevates these often informal and intuitive operations to a new level of technique and structure...From the onset, we have embraced these new opportunities to 'get inside our students minds' and make their learning processes visible. (Glendale Community College, SPECC Interim Report, July 2006, p. 3)

How Can We Coordinate and Evaluate Our Efforts?

Making learning visible through faculty inquiry can, in Juzwiak's words, "elevate" many educational tasks, from exploring and refining pedagogy at the classroom, course, or program level (as we have seen) to coordinating and evaluating teaching and learning across the sections and sequences of a developmental program. This is territory that has been transformed in recent years by increasing pressure on colleges to be accountable not only for "inputs" to a program—course offerings, qualifications of teachers, classroom space, availability of

counselors, technology, and the like—but also the "outputs" in regard to student learning and performance. Thus, SPECC colleges (like many others) are looking at a variety of ways to see how their students, collectively, are doing, including assessing samples of student work collected in portfolios, comparing students' performance on common exam questions, and collaborating on formulating formal expectations for student learning outcomes as guides for course and program design and assessment. Many SPECC colleges are finding that these activities turn out to be productive sites for faculty inquiry as well.

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Coordinating instruction across course sections has been a special concern of the SPECC team at the

City College of San Francisco (CCSF), which has a very large student population (100,000 each year, with 47,000 taking credit courses) and a correspondingly large developmental education program with large numbers of faculty teaching the many sections needed to accommodate the students enrolled in each course. Over the past several years, CCSF's

English department has been revamping its basic skills program, with the aim of establishing a close relationship between assessment and program improvement, developing a common set of expectations about student learning outcomes, and proposing common pedagogical approaches to help students meet those expectations.

Along the way, the SPECC team writes: “A core of dedicated faculty has regularly contributed to the initiatives using their own classrooms as the lab for testing the feasibility and effectiveness of a long series of innovations developed through a consistent ‘faculty inquiry’ model” (City College of San Francisco, SPECC Interim Report, 2007, p. 1).

But the challenges are serious. In the process of assessing their newly combined reading and writing courses at the lowest level in the program, the team discovered that despite their efforts to get all the instructors on board—including training in Reading Apprenticeship techniques, portfolio reviews of student work, and engagement in the inquiry process—there was still too little consistency in the criteria by which instructors were grading students. Indeed, while the faculty who had participated in the process had made impressive gains, when the team looked at the department as a whole, “across *all* levels of the reading and composition sequence,” they found that grade variability was “extremely broad” (City College of San Francisco, SPECC 2006 Annual Report, p. 4). How could they decide how well *any* part of their program was doing if student work of the “same” quality was failed by one instructor and passed by another? This was a problem in both senses of the word—something you’d like to avoid, as well as something you want to find out more about. It was certainly a problem that the team responsible for CCSF’s combined reading and writing course felt it worthwhile to address.

The CCSF team’s solution had several components. They developed a more elaborated course outline and standardized syllabus (that instructors could use if they wished), a better “skills protocol” for each of the assignments, and new criteria for grading them. They also took a close look at how individual instructors were weighting such things as attendance, homework, class participation, and the various assignments. Most importantly, they continued to get instructors together to look closely at student work. According to Erin Denney, Basic Skills Coordinator for CCSF’s English Department, “the portfolio assessment taught us many things. Perhaps most importantly, since it was holistically graded, it helped us to all get on the same page as teachers about what we were looking for in papers. Although we had talked a lot about standards and practices, nothing beats actually looking at student work together and comparing how we assess that work” (Denney, 2008).

While one would think that mathematics would be less susceptible to the problems of coordination and grade variability (it is, after all, more “objective” than reading and composition), that turns out not to be the case. Math teachers also vary in how they teach and how they grade, creating similar concerns about whether all their students are getting the preparation they need. But instead of portfolio assessment, mathematics programs in

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SPECC colleges have been experimenting with common exam questions among different sections of a course, or—as the mathematics department at Glendale Community College has been doing in pre-collegiate algebra since 2000—administering a completely common final examination. In the case of Glendale, the effort has created opportunity for inquiry both in creating the exam and studying the results. As Carnegie senior scholar Lloyd Bond notes, “the

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very process of developing and coming to consensus on an assessment framework, along with the development of exercises and a scoring rubric, all tend to get faculty on the same page about what is important for students to know and be able to do” (2007). When the scores are in for the semester, individuals can see how their students are doing in comparison to others. And, because the scores are also disaggregated by item (for example, negative exponents, complex fractions, or geometry word problems on the elementary algebra exam), the group can look at the combined results over the

years to see which topics are still causing students trouble, and where they are doing better. “The entire project,” Bond concludes “stimulates faculty discussion and reflection in ways that did not occur before” (2007).

Indeed, coupling inquiry with assessment has found a home on most SPECC campuses because of the new accreditation requirement that all courses and programs—not just in the basic skills—develop common student learning outcomes (SLOs).¹⁸ In our survey of SPECC participants, over two-thirds (68 percent) said that they had discussed SLOs in their faculty inquiry groups. One participant noted that the primary purpose of their group was “to start the process of assessing student work as it relates to one SLO—hopefully, using the process as a model for other SLOs. We are developing a rubric and it will be used [for the assessment].” Another wrote: “I have really come to value collaboration and norming in creating SLOs and grading. I have come to be convinced that normed pedagogy, content, and grading standards are crucial for this level of Basic Skills English classes.” And another respondent, though hardly a fan of “normed pedagogy” still valued “working together on the SLOs...It was different than sharing ideas or techniques about what we do. It was about working toward a common standard for what we are looking for in our students, and then leaving it up to each of us to do the best that we could to get there.”

Building a Collaborative Teaching Culture

The experience of the campuses participating in SPECC suggests that the promise of faculty inquiry is not limited to the specific contributions of participants; rather, it extends to improving teaching and learning in basic skills courses and programs more generally. Indeed, it would be a mistake to think that teachers of clearly designated developmental education courses are the only ones facing the educational challenges posed by underprepared students. In fact, a student taking a pre-collegiate reading or writing class may also be taking a regular college course in history or biology or industrial design.¹⁹ Other students in these college-level courses may have skipped the placement test altogether, or taken it but still not enrolled in the recommended basic skills course or courses. What this means is that a great many students on community college campuses have skills in reading, writing, and mathematics that are below college level. And there is widespread concern that these students' limitations in basic academic skills contribute to high attrition rates in courses throughout the curriculum and to increasing pressures on faculty throughout the college to lower standards in order to help struggling students move on (see also, Perin and Charron, 2006, p. 191).

There are good reasons, then, as several SPECC campuses have recognized, to include teachers of other kinds of courses in their faculty inquiry groups. At Laney College, for example, vocational education teachers participating in reflective inquiry found, somewhat to their surprise, that their students shared much in common with those taking basic skills English and math. They found out that most vocational education students did not even take the placement tests. One teacher, “for the first time saw the importance of taking inventory of who his students were by looking at their ethnicity, age, and educational, language and work backgrounds. In addition, as a result of the [reflective inquiry] process, Vocational Education instructors engaged the process of assessment of student reading. Instead of assuming literacy, they were able to discern the students who could be having difficulty with vocational texts used in the class versus those who could navigate the text without difficulty” (Laney College, SPECC Interim Report, 2007, p. 5).

The question of reading is particularly vexing at colleges that serve so many underprepared students—a message driven home by interviews with students about their experiences of reading conducted and filmed by faculty and student assistants at Chabot College. In the video, *Reading Between the Lives* (McFarland et al., 2007), students from across the campus are quite open about their fear of looking stupid in class, and their resentment of teachers who assign expensive books and either don't use them productively or simply assume that students know how to approach and make good use of these complex texts.²⁰ Although video is an unconventional medium for conducting and presenting faculty inquiry, it can provide a particularly revealing and effective way of involving students as co-inquirers and conveying to college educators the social and emotional dimensions of their engagements with learning. As one member of the Chabot SPECC team commented: “[The film] has legs because the students vocalize what we faculty and administrators know; we were too nervous to lift up the rock and look underneath” (Chabot College, SPECC Interim Report, 2007, p. 3).

Lifting up rocks and looking underneath is, in fact, a pretty good metaphor for what faculty inquiry generally does—and it must be said that the results are not always to everyone’s liking. What one learns by listening closely to students can be disturbing, as the Chabot video certainly is. One’s favorite innovation may turn out to need a lot more work than one imagined. Some instructors wonder whether you learn enough from, say, a pre-post test, to subject students to more testing and take up class time with it (Laney College, SPECC Interim Report, 2007). And there are some who wish the faculty inquiry focus to be more—or less—practically oriented; more—or less—focused on effective teaching strategies; more—or less—focused on evaluation. As one survey respondent commented: “I have gained much more energy and value from professional development that has focused on students and on a variety of faculty voices about teaching and learning. Rewriting course outlines and department policies has tended to pull our team away from these issues and discussions, rather than help us explore them.”

The thorniest issues concerning faculty inquiry, not surprisingly, concern its link with decisions about course or program design. “While most of our inquiry activities were excellent and generated constructive and thought-provoking dialogue,” one survey participant wrote, “our programmatic answers to those questions have been less than satisfying.” In fact, it was clear from campus reports and survey respondents that while faculty inquiry has the potential to increase the sense of participation in such decisions, the results can nonetheless touch raw nerves. The SPECC team at City College of San Francisco, for example, noted that while an inquiry approach should allow the course team to be open to input from new faculty coming in, there remains tension with faculty expectations regarding “their independence in adopting materials, pedagogies, and assessment criteria and methodologies” (City College of

San Francisco, SPECC Interim Report, 2007, p. 3). Some survey respondents put it more bluntly: “It divided our department with regard to teaching methods,” and “there has been a backlash from non-basic skills instructors who don’t like what we’re doing.”

Whatever the doubts and downsides, however, faculty inquiry holds great promise for instructors who embrace it as an integral part of how they

conduct themselves as teachers. This is not to say that they are *always* engaged in formal classroom research. Rather, they are educators who go about their teaching with the lessons of faculty inquiry in mind. By asking questions about student learning and seeking answers, these instructors become aware of a larger body of literature that can help frame their understanding of what’s happening in their classrooms. They carefully analyze their students’ work and refine their plans, assignments, and assessments in light of what they see. They are genuinely interested in what their students are thinking, and probe whenever necessary to find out where students are coming up against roadblocks to learning. And, of course, they are doing all of this in company with colleagues, sometimes in support of their own classroom concerns, and sometimes in support of their course or program’s collective responsibility to students.

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Indeed, one of the major lessons from the SPECC campuses is that faculty inquiry can play a powerful role in building a more collegial teaching culture around the education of students in the basic skills.²¹ There are many, many dedicated teachers in the pre-collegiate programs of California community colleges, but it is clear that the “default state of idiosyncratic instruction” is not serving students well.²² There is another way. When asked what contributions participation in the faculty inquiry group had made in their programs and departments, 88 percent of respondents to the SPECC survey cited “an openness to new ideas about improving basic skills education,” 84 percent cited “a willingness to try new classroom approaches,” and 78 percent cited “a culture of trust in talking about teaching.” For community colleges, then, where the problems of educating underprepared students are so pervasive, the promise of faculty inquiry lies ultimately in its capacity to develop the kinds of collaborative processes and relations that faculty, like students, need to do their best work.

Indeed, one of the major lessons from the SPECC campuses is that faculty inquiry can play a powerful role in building a more collegial teaching culture around the education of students in the basic skills.

Conclusion

Creating a robust set of opportunities for faculty inquiry in community colleges will not be an easy task. For starters, there are no easy answers for how to organize the effort. As we have seen in this essay, SPECC campuses have experimented with multiple models for organizing this work, and there will be much for other campuses (and even other departments and programs on the same campuses) to learn as leaders make lessons from their experience

Community colleges have great strengths to bring to this work, not least being the strong commitment of core staff to the sector’s historic mission of access and opportunity for all students. Indeed, community colleges may eventually pioneer important new directions in the larger movement to strengthen the scholarship of teaching and learning in higher education.

public. Second, there are huge challenges of money and time, which concern the compensation and scheduling necessary to engage adjunct instructors in faculty inquiry, as well as the extent to which full-time instructors can be involved. It is common for full-time instructors on SPECC campuses to feel that the extra effort required to participate in inquiry is time taken away from students. It is not surprising then that many survey respondents thought that building these kinds of discussions into regular faculty meetings (90 percent), integrating inquiry into various campus initiatives (87 percent), or reassigned time for participation (76 percent) would be “important” or “very important” for sustaining the work when grant support was no longer available. Integrating inquiry into existing

and new initiatives—for example, learning communities or supplemental instruction—as well as incorporating it into existing opportunities for professional development, would go some way towards making it possible for inquiry to be a more regular component of instructors’ professional responsibilities at community colleges.

Yet community colleges have great strengths to bring to this work as well, not least being the strong commitment of core staff to the sector’s historic mission of access and opportunity for all students. Indeed, community colleges may eventually pioneer important new directions in the larger movement to strengthen the scholarship of teaching and learning in higher education. Howard Tinberg, Donna Duffy, and Jack Mino, the community college-based scholars of teaching mentioned earlier in this essay, suggest that “with the opportunities afforded by small classes and close attention to individual students’ learning needs—both hallmarks of two-year-college instruction—faculty at these colleges have extraordinary advantages as teacher/scholars,” and that “with its focus on general education as well as the promotion of workplace and civic literacy, the faculty who teach there have few disciplinary axes to grind...[making] it easier for faculty to engage in new forms of scholarship that require crossing disciplinary boundaries” (2007, pp. 28-29). As we have seen in this essay, community college faculty are also pioneers in the process of integrating principles from the scholarship of teaching and learning into a wide variety of pedagogical innovations, curricular initiatives, and efforts to improve and evaluate courses and programs.

Faculty inquiry is not a magic bullet. Indeed, faculty inquiry is not a thing in itself, though it may seem odd to say so in an essay that explores its promise for teaching and learning basic skills. Like the scholarship of teaching and learning more generally, faculty inquiry is better understood as an *approach* to doing other things that matter—teaching, revising a course, trying out new pedagogical ideas, writing student learning outcomes. In short, faculty inquiry is a *way* of engaging in professional practice that is taking hold throughout the academy as talented and committed faculty face the growing challenge of preparing students for personal, professional, and civic life in the twenty-first century. Nowhere else is the dedication so strong, the challenge so high, and the goal so important as in teaching and learning basic skills in community colleges. The promise of faculty inquiry to promote increased local knowledge about teaching and learning, shared responsibility for student success, and a culture of evidence across the institution should recommend it to all who care about the many, many hopeful but underprepared students who come to community college as a critical step on “the (often rocky) path to the American Dream” (Merrow, 2007).

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NOTES

¹ According to Michael Kirst, “The U.S. Education Department’s ‘Principal Indicators of Student Academic Histories in Postsecondary Education, 1971-2000’ reports that 12th graders in 1992 had a remediation rate of 61.1 percent for community colleges and 25.3 percent at four-year colleges” (2007, p. 2). The estimates are mixed for later years. The U.S. Department of Education reported that 42 percent of entering freshmen enrolled in remedial courses in public 2-year colleges in fall 2000 (2003, p. 2). But many experts believe that figure to be misleading. Kirst himself estimates that 60 percent of community college students ages 17 to 20 need remediation (2007, p. 2), while California expert Nancy Shulock is reported to have said: “Nobody has the exact numbers, but 60, 70, or 80 percent of incoming students at the community colleges need remedial education” (in Merrow, 2007, p. 17).

² See *Basic Skills as a Foundation for Student Success in California* by the Center for Student Success and the Research and Planning Group for California Community Colleges (2007) for a comprehensive review of the literature on elements of successful basic skills programs. Writing about the meaning of quality in teaching more generally, Fenstermacher and Richardson note four ingredients to successful learning: “willingness and effort by the learner;” “a social surround supportive of teaching and learning;” the “opportunity to teach and learn;” and “good teaching” (2005, p. 190).

³ The California Basic Skills Initiative (BSI), a statewide effort that aims to increase the ability to address basic skills and English as a Second Language needs through education on effective practices and professional development, defines basic skills as “foundation skills in reading, writing, mathematics, and English as a Second Language, as well as learning skills and study skills, which are necessary for students to succeed in college-level work” (see <http://www.cccbsi.org/effective-practices>). While courses at this level are often referred to as remedial or developmental, as well as basic skills, the project reported on in this essay used the term “pre-collegiate” because it seemed more representative of the course itself and signals work that does not receive transfer-level credit. But we use the other terms interchangeably as well.

⁴ Indeed, one community college participant in the national scholarship of teaching and learning movement was initially turned down for tenure because his interest in teaching seemed too scholarly! “We’re here to teach,” he was told. “We’re not here to think about teaching. You should find yourself a job at a four-year school where you have time to think about teaching.” This scholar, a chemist, sought support from nationally known chemistry educators whom he had met through Project Kaleidoscope, a national alliance of undergraduate science educators. The case was eventually decided in his favor (see Huber, 2004, p. 222).

⁵ For example, community college faculty accounted for 14 out of 140 Carnegie Scholars in CASTL’s national fellowship program (from 1998 to 2006), and several emerged as leaders in CASTL’s sequence of campus programs (see, for example, Sperling, 2003; Gleason and Klein, 2004; Harper-Marinick, 2004; Barkley et al, 2004). Faculty from Cerritos College (a SPECC participant) were also active in VKP. See CASTL’s description at <http://www.carnegiefoundation.org/programs/index.asp?key=21> and information about VKP at <http://crossroads.georgetown.edu/vkp/>.

⁶ The Maricopa Institute for Learning, one of several professional development programs housed at the Maricopa Center for Learning and Instruction at Maricopa Community College in Phoenix, has provided annual fellowships since 2000 “for residential faculty in any discipline who are interested in examining significant issues in their teaching fields...through classroom research projects. Its secondary purpose is to create a community of scholars

that will engage in conversations about the scholarship of teaching and learning” (see <http://www.mcli.dist.maricopa.edu/mil/index.php>; also see Harper–Marinick, 2004). Miami–Dade College in Florida, a participant in the CASTL Leadership Program, is engaged in several initiatives, including efforts to “increase faculty participation in the scholarship of teaching and learning”; “improve student learning through a variety of continuous improvement processes in developmental education”; “increase visibility and dialogue on the scholarship of teaching and learning (and related initiatives) in developmental education with other urban community colleges and at state, regional, national, and international conferences;” and “encourage developmental education faculty to document their research and findings that contribute to student success” (Miami Dade College CASTL Leadership Program, 2007, pp. 2–4). Among the programs offered by LaGuardia Community College’s Center for Teaching and Learning is the Carnegie Seminar on Scholarship, Teaching & Integration. This year-long seminar “offers LaGuardia faculty an introduction to the scholarship of teaching and learning and an opportunity to engage in self-directed inquiry into the nature of teaching and student learning in their own classrooms. Building upon participants’ prior pedagogical inquiries (nurtured particularly in programs such as Designed for Learning, Writing in the Disciplines, and Critical Thinking Across the Curriculum, or in work with learning communities and First Year Academies) the seminar provides faculty with opportunities to deepen their understandings and prepare to go public with their insights, using vehicles ranging from course portfolios and conference presentations to scholarly articles” (see <http://www.lagcc.cuny.edu/CTL/programs.htm>).

⁷ According to the Washington Center for Improving the Quality of Undergraduate Education, curricular learning communities in higher education “are classes that are linked or clustered during an academic term, often around an interdisciplinary theme, and enroll a common cohort of students. A variety of approaches are used to build these learning communities, with all intended to restructure the students’ time, credit, and learning experiences to build community among students, between students and their teachers, and among faculty members and disciplines” (n.d.). Typically, learning communities involve “restructuring the classroom, altering faculty practice and linking courses one to another so that students encounter learning as a shared rather than an isolated experience” (Tinto, 1997, p. 62).

⁸ A full-service program, Project Bridge offers pre-collegiate courses in reading, writing, math, computers, sociology, ethnic studies and career preparation. See <http://laney.peralta.edu/apps/comm.asp?§1=30158>.

⁹ Now offered in 56 community colleges and 36 high schools around the state, Puente has served as a model for other efforts, like the Daraja Program for African American students, that help students gain a sense of membership in the college community “through paired courses, mentoring, peer-to-peer support, and interdisciplinary content that reflects students’ backgrounds” (Chabot College, SPECC Application, 2004). See also: <http://www.chabotcollege.edu/daraja/>.

¹⁰ According to the Center for Student Success, “only one-quarter of students initially enrolling in a reading fundamentals course in community college ever enroll in a transfer-level English class, and only 10 percent of students beginning in a basic math course ever enroll in a transferable math course” (2005, cited in Moore and Shulock, 2007, p. 12). The figures on placement in remedial courses are from the Chancellor’s office (Fisher, 2007, also cited in Moore and Shulock, 2007, p. 12).

¹¹ The system has been bracing for both the size and diversity of a new cohort of college students. According to a 2003 report from the National Center for Public Policy and Higher Education, “The ‘tidal wave’ of potential college students is projected to increase overall demand for higher education in California by more than 700,000 students in this decade. Approximately two-thirds of these new enrollments will attend a community college as the

initial entry point into higher education if the opportunity is available to them...The demography of California, particularly of young Californians currently moving through the public schools, is changing rapidly. Increasing proportions of Hispanic students, first-generation college students, and students from low-income families are attending college” (Hayward et al., 2003, p. 6).

¹² Excellent how-to guides are now available for people interested in faculty inquiry. For one that emerges directly from teaching basic skills in a California community college, see Smokey Wilson’s “Guide to Classroom Research for Teachers” in her book *“What about Rose?” Using Teacher Research to Reverse School Failure* (2007, pp. 150–180). See also Kathleen McKinney’s *Enhancing Teaching through the Scholarship of Teaching and Learning: The Challenges and Joys of Juggling* (2007). “Teacher research” is a term most often used in the K–12 sector; the “scholarship of teaching and learning” is used more often (though not exclusively) in higher education.

¹³ The “SPECC Survey of Participants in Faculty Inquiry Groups” was conducted in January and February of 2008. Cheryl Richardson’s report on the survey can be found in the appendix to this essay.

¹⁴ In SPECC team member Lloyd Bond’s brief introduction to “The Think-Aloud Protocol: A High Yield/Low Stakes Assessment” (2008), the think aloud is defined as a “transcribed record of a person’s verbalizations of her thinking while attempting to solve a problem or perform a task...In many circumstances, the verbal protocol may well be the only reliable road into a student’s thinking.”

¹⁵ According to its Web site, Reading Apprenticeship is an approach to reading that “helps students become better readers by: engaging students in more reading—for recreation as well as for subject-area learning and self-challenge; making the teacher’s discipline-based reading processes and knowledge visible to students; making students’ reading processes, motivations, strategies, knowledge, and understandings visible to the teacher and to one another; helping students gain insight into their own reading processes; and helping them develop a repertoire of problem-solving strategies for overcoming obstacles and deepening comprehension of texts from various academic disciplines” (see http://www.wested.org/cs/sli/print/docs/sli/ra_framework.htm; see also Schoenbach et al., 1999).

¹⁶ Reflective Inquiry (RI) is a way of orchestrating discussion about teaching based on a protocol developed in the Teacher Knowledge Project of the School for International Training. Laney College’s interdisciplinary reflective inquiry group, meeting over the course of a year, consisted of pairs of faculty involved in basic skills in the departments of English, ESL, mathematics, and Project Bridge (learning community). In the following year, the new RI group added two faculty members from vocational education. RI participants were not only engaged in the conversational protocol of the formal faculty inquiry cycle, but were also encouraged to perform individual classroom research projects, visit classrooms of RI members, support and mentor classroom tutors, read and discuss scholarly writings, keep journals, write monthly reports, and make presentations to the wider college community on project results.

¹⁷ Snell’s findings are right in line with other research on what contributes to student success. As summarized by Nancy Shulock and colleagues in a recent policy report on improving California community colleges, research “demonstrates that students are more likely to succeed if they...attend continuously without stopping out,” and “indicates the importance of providing students with early counseling and orientation services to help them set clear goals and get them on a pathway to success” (2008, p. 9). Indeed the report lists “Effective Enrollment Patterns,” and “Clear Goals and Pathways” as two of six strategies for increasing student success that are suggested by the research literature but not adequately reflected in current policies and practices.

¹⁸ The Accrediting Commission for Community and Junior Colleges (ACCJC) of the Western Association of Schools and Colleges accredits California community colleges. In 2002, new standards were introduced that directed attention to student learning outcomes. One of the requirements for Standard II, concerning Student Learning Programs and Services, is that “the institution identifies students learning outcomes for courses, programs, certificates, and degrees; assesses student achievement of those outcomes; and uses assessment results to make improvements” (2002, p. 7). According to the AACJC’s “Standards Glossary,” student learning outcomes are the “knowledge, skills, abilities and attitudes that a student has attained at the end (or as a result) of his or her engagement in a particular set of collegiate experiences” (2002, p. 29).

¹⁹ In California, a 1991 judgment in a case brought by the Mexican American Legal Defense and Education Fund (MALDEF) has been widely interpreted to make placement in pre-collegiate courses only advisory, not mandatory (see Moore and Shulock, 2007, p. 27). In addition, faculty in many academic and vocational courses prefer not to have developmental courses as prerequisites, because the process of establishing requirements is so difficult, and could also significantly lower enrollments. In a new policy report, *It Could Happen*, Shulock, Moore, and colleagues recommend changes in policies and practices that would make it more likely that “students are placed in courses appropriate to their skill levels, and any needed remediation is begun immediately upon enrollment” (2008, p. 8).

²⁰ *Reading Between the Lives* (McFarland et al., 20007) is available online at Internet Archive, a grantee of the Hewlett Foundation. The film is divided into four parts and can be viewed by using the following link: http://www.archive.org/search.php?query=reading%20between%20the%20lives%20AND%20mediatype%3Amovies%20AND%20collection%3Aopensource_movies.

²¹ The idea of a “more collegial culture of teaching” comes from the call to “foster stronger collegial engagement and responsibility for effective teaching and learning” in a recent report of Harvard University’s Faculty of Arts and Sciences taskforce on teaching and career development (2007, p. 2). This is not just a community college problem!

²² The Los Medanos College team used this phrase in its SPECC Interim Report, 2007, p. 7.

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Appendix

Strengthening Pre-collegiate Education in Community Colleges: Survey of Participants in Faculty Inquiry Groups

Cheryl R. Richardson

This survey was conducted as a part of Strengthening Pre-collegiate Education in Community Colleges (SPECC), a project of The Carnegie Foundation for the Advancement of Teaching with The William and Flora Hewlett Foundation as a funding partner. The survey was designed to illuminate different models of faculty inquiry groups, the experiences of faculty involved, and the consequences of involvement. It was administered to faculty members and administrators who participated in a faculty inquiry group at one of the 11 SPECC California community colleges.

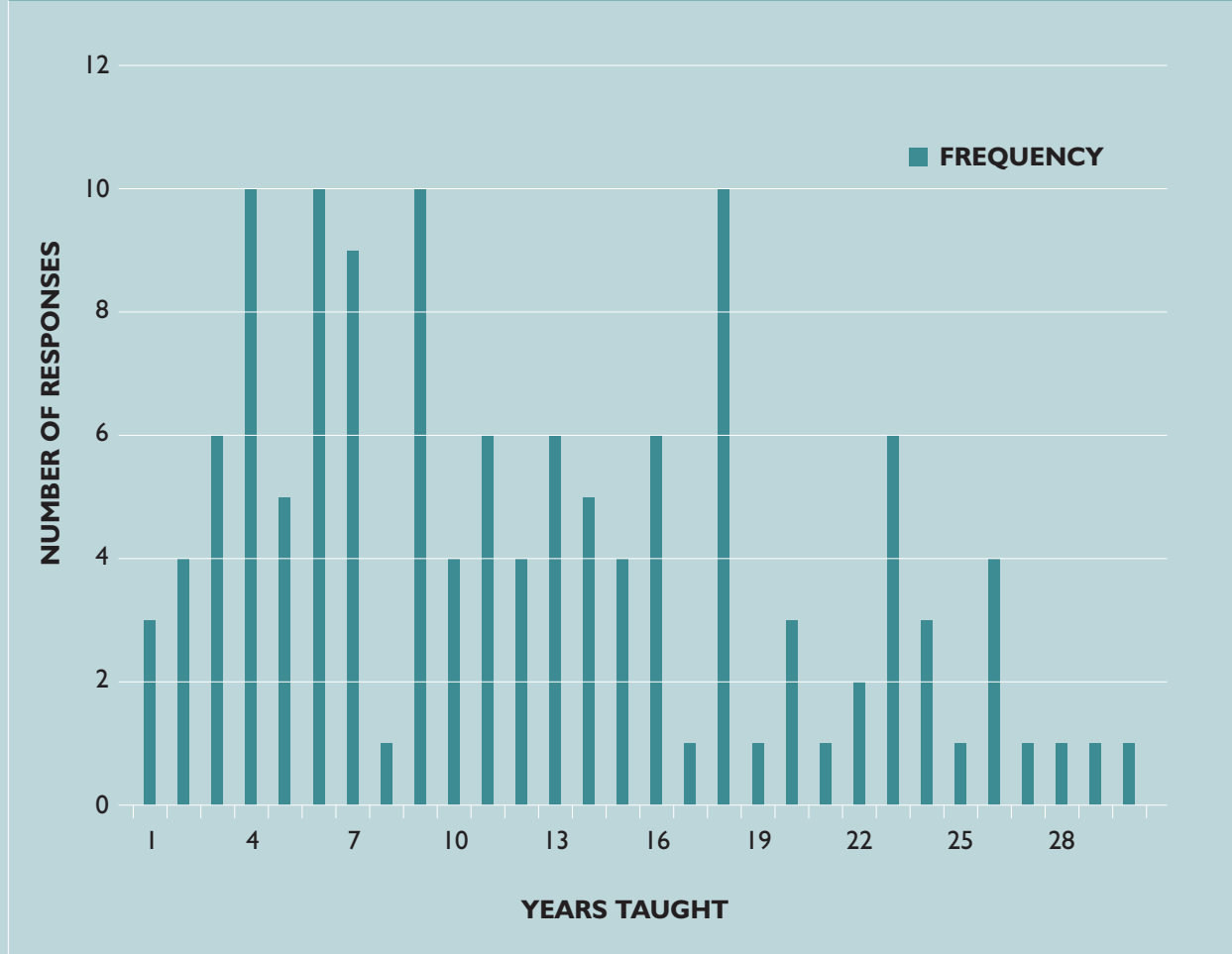
The questionnaire was drafted in January 2008 using an online survey-administering tool, SurveyMonkey.com. It went through a series of revisions based on feedback from Carnegie Foundation staff associated with the SPECC program, a pilot distribution to select SPECC campus coordinators, and the Carnegie Foundation human subjects review board. A link to the final version was sent to campus coordinators at the end of January 2008 to distribute to faculty whom they knew to have participated in a SPECC-associated faculty inquiry group since 2005. The survey was intended to be anonymous and confidential. Campus coordinators therefore provided a number to indicate the total number of faculty inquiry group participants to whom they would send the survey; they did not share e-mail addresses of these recipients with the Carnegie Foundation. Campus coordinators reportedly shared the link with 239 faculty members. With a few gentle reminders, most respondents returned the survey by the end of February 2008.

In total, 149 community college staff members responded to the survey, for a response rate of 62 percent. Although both distribution and response rates were uneven across the 11 colleges and one might assume that campuses with larger groups or higher response rates could skew the results, this was not the case. The chart below (Chart 1) shows the distribution of campuses' outreach and responses.

CHART 1		
College	Number of Surveys Sent	Response Percent of Total Number of Survey Respondents
Cerritos College	25	9
Chabot College	24	8
City College of San Francisco	30	19
College Of the Desert	20	11
College Of the Sequoias	19	7
Glendale Community College	12	6
Laney College	18	6
Los Medanos College	36	16
Merced College	20	5
Pasadena City College	10	5
West Hills College District	25	9
Declined to state		13

The majority of respondents (78 percent) were full-time faculty members; a significant minority (21 percent) were adjunct faculty members. Almost half of the respondents (49 percent) taught English, 41 percent taught mathematics, and 10 percent taught English as a Second Language (ESL). The respondents were a group from novice to veteran teachers, having taught in higher education from one to 37 years.

GRAPH 1
Number of Years Taught in Higher Education



Part I: Descriptions of Faculty Inquiry Groups

A slight majority of faculty inquiry groups contained between four and eight people (53 percent); 38 percent had between nine and 12 regular participants. Most of the groups met either for one academic year (35 percent) or longer than one academic year (40 percent), and held meetings once each month (71 percent).

Over three-quarters of the respondents reported participating in groups of faculty teaching basic skills courses (77 percent, n=107). Many groups also included faculty members teaching sections of the same course (66 percent). Many respondents also reported participating in groups that were “mixed” in various ways, including:

- A mixture of full-time and part-time faculty (68 percent)
- Faculty from the same department who are not necessarily teaching sections of the same course (61 percent)
- Faculty from different departments (43 percent)

Table A1 provides further details.

TABLE A1	
The participants in my group included the following (select all that apply) :	
139 responses to the question	
	Percent of respondents
Faculty teaching sections of the same course	66
Faculty from my department who are not necessarily teaching sections of the same course	61
Faculty from different departments	43
Faculty teaching basic skills courses	77
Faculty teaching general education courses	35
Only part-time faculty	.7
Only full-time faculty	25
A mixture of full-time and part-time faculty	68
Staff from my campus' institutional research offices	6
Counselor(s)	23

Part II: Activities of Faculty Inquiry Groups

The faculty inquiry groups in this study engaged their participants in a full range of activities associated with investigating student learning. A very large majority of respondents reported that their groups “framed and investigated questions about teaching and learning in our classrooms” (85 percent). A significant number of respondents also reported doing the following:

- Discussing student learning outcomes (68 percent)
- Looking at student work together (54 percent)
- Creating assessments (49 percent)

Very few groups invited outside experts (14 percent). Table A2 provides further detail.

TABLE A2
In our faculty inquiry group we:
 138 responses to the question

	Percent of respondents
Framed and investigated questions about teaching and learning in our classrooms	85
Discussed student learning outcomes (SLOs)	68
Looked together at student work	54
Created assessments	49
Read research literature	40
Examined institutional data	32
Developed assignments	30
Developed curricula	29
Developed common grading standards	28
Produced a public report	26
Developed an agenda based on a research question	24
Visited each other’s classes	23
Attended external training sessions	23
Invited outside experts to our meetings	14

When asked which methods respondents used to learn more about student learning, most respondents reported using pre- and post-tests (64 percent) and questionnaires (61 percent). Other methods used included journals (38 percent), think alouds (38 percent), and focus groups (26 percent).

Part III: Influences on Participation in a Faculty Inquiry Group

The most important motivation for respondents' involvement in a faculty inquiry group included "wanting to explore questions about student learning" and "wanting collegial contact." There were four possible responses related to these factors (see Table A3), and in several cases, over 75 percent of respondents felt these factors were "important" or "very important" to their involvement. Most often selected as "not important" to respondents' involvement were the offer of a stipend for participation (34 percent), and a sense of "having trouble with my teaching" (27 percent). Table A3 provides further detail.

TABLE A3
How important was each of the following to your involvement in a faculty inquiry group?
 132 responses to the question

	Not Applicable Percent of respondents	Not Important Percent of respondents	Important Percent of respondents	Very Important Percent of respondents
I had questions about my students' learning that I wanted to explore.	5	2	45	49
I wanted to find colleagues with whom to pursue my interests in teaching and learning	2	10	38	50
I was intrigued by what my colleagues had to say about the faculty inquiry group.	7	13	45	35
I wanted to meet with colleagues teaching the same course.	13	16	34	37
I was personally invited to participate.	15	20	39	26
I wanted to connect with colleagues outside my department.	37	9	36	19
A stipend was offered for participation.	16	34	34	16
I was having trouble with my teaching.	50	27	21	2
Release time was offered for participation.	65	14	12	10
It was a departmental, program, or campus expectation to participate.	60	20	12	9

Part IV: Consequences of Participation

Respondents reported that their participation in a faculty inquiry group has affected their classroom experience in a variety of ways. In particular, participation led to experimentation with teaching strategies (88 percent), deeper understanding of student learning (87 percent), confidence about meeting the needs of students (82 percent), re-energized teaching (74 percent), higher expectations for student learning (72 percent), and evidence that student learning has improved (70 percent). Table A4 provides further detail.

TABLE A4
To what extent do you agree with the following statements about the impact of the faculty inquiry group on your classroom experience?

131 responses to the question

	Agree–Strongly Agree Percent of respondents	Strongly Disagree–Disagree Percent of respondents
I have experimented with new teaching strategies.	88	12
My understanding of the student learning process has deepened.	87	12
I feel more confident about responding to student learning challenges that arise in the classroom.	82	18
My teaching has been re-energized.	74	26
I have raised my expectations for students' learning.	72	28
I have evidence that my students' learning has improved.	70	30
I have changed the kinds of assessments I use.	68	32

The consequences for individuals outside the classroom were broad, ranging from having an impact on one's personal goals to having an impact on the campus. Many agreed that their interest in reading research on teaching and learning has been heightened (73 percent), that they have a new network of colleagues across their institution (66 percent), and have a better understanding of how to “get things done” at their institution (62 percent). Table A5 provides further detail.

TABLE A5

To what extent do you agree with the following statements about the impact of the faculty inquiry group beyond the classroom?

132 responses to the question

	Agree–Strongly Agree Percent of respondents	Strongly Disagree–Disagree Percent of respondents
My interest in reading research on teaching and learning has heightened.	73	27
I have developed a new network of colleagues across my institution.	66	34
I have a better understanding of how to get things done at my institution.	62	38
I have taken on a leadership role in changing (or trying to change) departmental policies related to teaching and learning.	58	42
New opportunities at my institution have opened up for me.	53	47
I have taken on a leadership role in changing (or trying to change) institutional policies related to teaching and learning.	47	53

Respondents felt that participation in a faculty inquiry group also contributed to an attitudinal shift in their departments or programs. A large majority of respondents reported the following contributions: An openness to new ideas about improving basic skills education (88 percent), a willingness to try new classroom approaches (84 percent), and a culture of trust in talking about teaching (78 percent).

Half of the respondents reported making the results of their work done in conjunction with a faculty inquiry group public to others. Of this group of 74, most (80 percent) presented their work on their own campus. Some presented work at academic conferences (39 percent), on the World Wide Web (30 percent), or at another campus (18 percent). A few (11 percent) had published an article reporting on their work.

Part V: Support for Faculty Inquiry Groups

Respondents were asked about the importance of particular factors in strengthening and sustaining faculty inquiry groups. The element that was considered “important” or “very important” by the largest number of respondents was the supportive attitudes of colleagues (99 percent). Other important or very important factors included time at faculty meetings to discuss issues of teaching and learning (90 percent), integration of faculty inquiry groups into various campus initiatives (87 percent), encouragement from department chair (87 percent), support from administrators (86 percent), and the availability of a stipend (84 percent). A substantial proportion of respondents also said that career advancement policies that encourage faculty inquiry (77 percent) and release time from regular duties (76 percent) would be important or very important. Table A6 provides further detail.

TABLE A6

How important would each of the following be in strengthening and sustaining faculty inquiry groups on your campus?

131 responses to the question

	Very Important	Important	Not important
Supportive attitudes of colleagues	65	34	1
Time at faculty meetings that is devoted to issues of teaching and learning	51	39	10
Integration of faculty inquiry groups into various campus initiatives	41	46	13
Active encouragement from department chair	41	46	13
Active support from top-level administrators	47	39	14
Availability of a stipend	36	48	16
Career advancement policies that encourage faculty inquiry	40	37	23
Release time from regular duties	44	32	24

Other Observations

This report focuses on individual experiences within faculty inquiry groups. Because each campus followed different models, sometimes with more than one model on a campus, there were no consistent trends to report based on group size or activities.

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