Preparing Scholars of Teaching and Learning Using
A Model of Collaborative Peer Consulting and Action Research

Margaret Waterman, Janet Weber, Carl Pracht, Kathleen Conway, David Kunz,
Beverly Evans, Steven Hoffman, Brian Smentkowski, and David Starrett
Southeast Missouri State University

The Scholarship of Teaching and Learning (SoTL) Fellows Program at Southeast Missouri State University supports an annual cohort of 10 faculty Fellows to evaluate, through individual research projects, the effect of teaching on student learning of two or more of the university's General Education objectives. Designed around practical action research and collaborative peer consulting, the SoTL Fellows Program creates a multidisciplinary community of peers who meet approximately monthly (seminar schedule included). Subgroups within the seminar address sequenced questions about research processes and then collaboratively consult with one another as they apply the research processes to their specific projects. The Fellowship year culminates in a presentation of project findings to the University community. The Program is well supported by the Administration. Fellows receive up to $1500 for research and travel. Analysis of 3 cohorts of Fellows showed that 66% of the projects had clear results showing enhanced student learning. The surveyed Fellows affected over 4500 students in 100 courses. Most of the projects emphasized a new teaching approach, new curriculum materials, integrated applications, and active learning. Fifteen projects were presented at conferences and 7 were published in peer reviewed journals to date. Participation in the SoTL Fellows Program is viewed positively in promotion and tenure decisions, with Fellows reporting a variety of intrinsic rewards as well.

As a comprehensive regional university already committed to the Teacher Scholar model in its tenure and promotion processes, Southeast Missouri State University (Southeast) has deeply supported that commitment by initiating, funding, and continuing a faculty development opportunity called the Scholarship of Teaching and Learning (SoTL) Fellows Program. Now in its fifth year (2009-2010), the SoTL Fellows Program has three main goals: to improve student learning, to strengthen faculty skills and dossiers in the scholarship of teaching and learning, and to develop and reward a community of faculty members with expertise in the scholarship of teaching and learning. In addition, this program facilitates the incorporation of learning objectives from our general education program into courses that might not otherwise deliberately address such objectives. Faculty members selected for participation in the year long-program are called "SoTL Fellows."

The Southeast SoTL Fellows program is centered on action research projects proposed by the SoTL Fellows. Fellows attend a seminar structured around a practical model of action research (Mills, 2003). Using a sequenced set of open-ended questions about the research process, small groups of Fellows and program leaders (designated "SoTL Associates") consult with each other during seminar time using a process we call

"collaborative peer consulting." This method of peer consulting is used to help the Fellows develop and shape their projects, interpret findings, and prepare presentations.

In this paper we will situate our program in the context of SoTL concepts and projects elsewhere, describe our program, and report results of a study of the first three cohorts.

Background

In 1990, Ernest Boyer encouraged universities to broaden their definition of scholarship to include not only the scholarships of discovery, integration, and application but also the scholarship of teaching. Based on Boyer's work, many universities and colleges have implemented Scholarship of Teaching and Learning projects.

Much of the SoTL movement focuses faculty on discussion, peer review, and research to improve teaching strategies – an emphasis on the faculty side of the equation. Some of these programs promote scholarly research of learning; however, much of this research involves literature review. For example, Albers (2008) found that action learning groups (learning with the intent of changing one's practice) helped faculty members define their own pedagogical

problems and solutions to improve teaching and learning methods. In another setting, McGovern and Miller (2008) used published instruments on teaching behaviors to help faculty identify classroom behaviors amenable to modification. This self-assessment stimulated faculty thinking about ways to modify teaching and learning strategies. Faculty Learning Communities on focused on effective teaching practices were also useful in encouraging faculty to reflect on their own practices and to attempt to develop more interactive learning environments for students (Cox, 2004; Walker et al., 2008; Smith et al, 2008).

The Southeast SoTL Fellows Program embodies some elements of Faculty Learning Communities (FLC) but not others. For example, the SoTL Fellows Program is designed to

- Build university wide community through teaching and learning
- Nourish the scholarship of teaching and its application to student learning
- Broaden the evaluation of teaching and the assessment of learning
- Increase faculty collaboration across disciplines
- Increase financial support for teaching and learning initiatives
- Create an awareness of the complexity of teaching and learning.

All of these are FLC attributes, according to Cox (2004, p. 10). Despite these commonalities, The SoTL Fellows Program is not an FLC.

FLCs are commonly centered on communicating or investigating the literature of best practice and may be organized by faculty's academic level or teaching topic (Cox, 2004). Unlike an FLC, the Southeast SoTL Fellows Program is not designed to help faculty explore a body of content about teaching and learning (although in preparation for presentation and/or publication after the SoTL year, Fellows do situate their projects in the literature of action research and best practice). Further, in every cohort, SoTL Fellows represent every academic rank, a wide range of disciplines, and dissimilar projects. Instead of an FLC, the SoTL Fellows Program is a group of inquirers learning to do research on student learning within their own courses, a group that becomes a collaborative community as a result of ongoing peer consulting.

In addition to programs and learning communities emphasizing learning about best practice, the broader SoTL movement also encourages and validates the importance of educational research conducted by educators within their own classrooms and disciplines (Burman & Kleinsasser, 2004; Smith, 2008) and highlights the "often overlooked" opportunities for incorporating experimentation into the scholarship of teaching and learning (LoSchiavo et al., 2008). There are SoTL programs, including Southeast's, which focus on faculty research projects, with most of these projects falling into the category of action research (sometimes called classroom research).

Generally, action research is done with the goals of "gaining insight, developing reflective practice, effecting positive changes in the school environment … and improving student outcomes" (Mills, 2003, 5). Action researchers conduct systematic and evidence-based inquiries about teaching and learning in their courses and "are committed to taking action and effecting positive educational change based on their findings" (Mills, 2003, 3). Classroom–based action research projects have been found to be a very successful strategy for improving teaching and learning in K-12 education systems, with the involved teachers showing marked change in professional growth (Rathgen, 2006). Charlevoix (2008) described the benefits of classroom research for the student, teacher and community at large and reported over 70 discipline-specific journals devoted to SoTL publications.

SoTL programs using an action research approach include, for example, Grauerholz and Zipp (2008), who found that workshops were useful to help faculty develop ways to transform their own classroom experiences into research. Classroom assessment techniques (Angelo & Cross, 1993) have been used widely for researching classroom learning. Walker, Baepler, and Cohen (2008) implemented a three-year program that offered a large team of experts to faculty members teaching large classes. The experts helped faculty formulate research questions, gather data, devise an intervention plan, implement changes in their course, and evaluate results. In Australia, an action research SoTL program within a college of science, engineering and technology engaged faculty teams in group projects and connected the teams to educational consultants (Gray, Chang & Radloff, 2007).

In contrast to these examples, the SoTL Fellows Program at Southeast focuses on projects conducted by individual faculty (or rarely, pairs of faculty) to

determine the effects of teaching on student learning related to the University Studies learning objectives (listed in Table 3 below). It uses a goal-oriented seminar built around a practical action research model and makes frequent use of collaborative consulting among peers, within the seminar, on the projects and research processes. This seminar facilitates the formation of a collaborative community (Twale et al, 2002) of SoTL researchers from across many disciplines. In their research on formation of collaborative community among multidisciplinary groups of graduate students, Twale et al. define community as "belonging, mattering, sharing, bonding, and committing to be together as a group" (2002, 114). The structure of the SoTL Fellows Program gives the Fellows a sense of identity, a shared experience, shared goals, and a structure that encourages bonding within small groups.

Development and Design of the SoTL Fellows Program

The SoTL Fellows Program is administratively located in the Center for Scholarship in Teaching and Learning (CSTL). The CSTL was formed in 1985. Over time, the Center has changed from its original function as the home for a variety of activities on improving teaching to a more complex center using a multifaceted approach to enhance student learning.

A CSTL advisory group, the Teaching Associates, was formed in 1996 with a faculty representative from each of Southeast's five colleges, one school, and the library. One of the initial activities, and key to the success of the SoTL Fellows Program, was the development of a working model of the Teacher-Scholar, published online at (http://www.semo.edu/facultysenate/correspondence/index_16439.htm). This document was approved by Faculty Senate and is often used as a guide to developing and revising departmental promotion and tenure criteria. This was an important step in promoting the scholarship of teaching and learning because it has allowed a more learner-centered shift in promotion and tenure criteria to occur, a shift that Shapiro (2006) says is fundamental. Formalizing the Teacher-Scholar Model was also important because it clarified the concept of the scholarship of teaching and helped faculty close the gap in their perceptions, now realizing that scholarship of teaching could be evaluated for tenure, promotion, and merit increases (Buch, 2008).

As an institution committed to the Teacher-Scholar Model, the University holds the value that teaching and learning are strengthened by the integration of scholarship, including the scholarship of teaching. Further, as a recognized leader in the Carnegie Academy for the Scholarship of Teaching and Learning, the University has committed to supporting and enhancing the scholarship of teaching and communicating the results through presentations and publications.

The CSTL Teaching Associates developed and initially implemented the SoTL Fellows Program in 2005. The proposal for the program was chosen by the Provost as a University Teaching Initiative and was funded within Missouri's Funding For Results program. Based on the positive results attained in the first three years, the SoTL Fellows Program continues to receive support from the highest administrative levels and is funded for the next five years. The CSTL continues to provide administrative and logistical support for the Program.

The objectives of the SoTL Fellows Program are to:

1. Enhance the quality of instruction by examining how changes in instruction foster student learning,
2. Develop and reward a skilled and knowledgeable community of faculty focused on scholarly inquiry into learning and teaching,
3. Support SoTL Fellows in preparing and disseminating their findings at professional meetings and via publication,
4. Provide opportunities for SoTL Fellows to participate as leaders with the next cohorts of SoTL Fellows, and
5. Promote the integration of University Studies objectives into courses beyond those in the University Studies program.

Program Description

The SoTL Fellows Program supports cohorts of up to 10 faculty members in carrying out action research projects on the effectiveness of their teaching on student learning. To become a SoTL Fellow, any full time faculty member at Southeast, whether on tenure track or not, is eligible to apply by submitting a two-page application describing the teaching approach to be evaluated, the students and course in which the project will occur, and the potential ways data on learning might be collected. In addition, the SoTL Fellows Program requires that at least two learning objectives

from among the nine that form the basis of our general education program, called "University Studies," be incorporated and evaluated in each project. The proposed action research projects are planned for completion within one academic year. This application form is necessarily general to accommodate faculty members without educational research or action research skills. The committee leading the SoTL Fellows program, called the SoTL Associates, reads the applications (names removed) and selects the cohorts of Fellows.

The SoTL Fellows program also provides tangible external rewards to SoTL Fellows, with professional development funding up to $1500 awarded at the completion of the project and distributed as follows: each Fellow receives $500 to use at his or her discretion for professional development and up to $1000 to support travel to present the findings of the Fellow's project at meetings. Up to half of the travel money is from the University Studies Program. The Dean of University Studies provides support for the SoTL Fellows Program because SoTL projects integrate University Studies learning objectives into the courses under study.

The format for facilitating these action research projects and creating a collaborative community of faculty is a yearlong seminar that meets approximately monthly for two hours, including dinner. It begins in April of one year and ends in June of the next, with more meetings scheduled at the start of the fall semester to get the projects underway in a timely manner (Table 1).

Table 1
SoTL Fellows Program Seminar Schedule and Topics

Date	Time	Agenda
Late April	6:00-8:00 p.m.	New SoTL Fellows Orientation Meeting. Brief introductions, Presentation on Action Research Cycle, overview of data gathering methods, design vs. methods, and human subjects requirements. A series of questions to think about over summer.
Early May	5:00-9:00 p.m.	Public PROJECT PRESENTATIONS of Current Cohort: dinner symposium. **New Fellows attend**, as well as Provost, Deans, Chairs, prior Fellows and others in university community.
Early September	6:00-8:00 p.m.	Introductions, Updates on human subject applications, progress over summer. Initial peer group meetings with SoTL Associates. Collaborative peer consulting, using open ended questions on project goals, ideas for gathering data, how each type of data contributes, timeline for project
Late September	6:00-8:00 p.m.	Drafts of designs to be discussed. Collaborative peer consulting on refining variables, developing data gathering tools, peer review of newly developed instruments, and of any changed plans, designs, or instruments.
Mid October	6:00-8:00 p.m.	Data gathering instruments to be drafted by this date (if not before for some projects). Collaborative peer consulting on refining data gathering tools, results of pilot studies
Mid November	6:00-8:00 p.m.	Mini presentations by within-Program experts, on quantitative and qualitative data analysis. Collaborative peer consultation, with new groups formed on basis of types of data being collected, to discuss specifics.
Mid February	6:00-8:00 p.m.	Distribute requirements for final reports and guidelines for public project presentations. Collaborative peer consultation on activities since November, and issues within projects as needed by each Fellow.
Late March	6:00-8:00 p.m.	Whole group collaborative peer consulting on the draft presentations, discussing findings. Suggestions for strengthening the project for publication, information on SoTL journals.
Early May	5:00-9:00 p.m.	Public PROJECT PRESENTATIONS (as above). Some of these projects are still collecting data, since final exams have not happened yet.
June 30		Final written reports due.

In the seminar, the Fellows give progress reports, engage in collaborative peer consulting on project design, develop evaluations of student learning and other project outcomes, prepare their work for presentation, and discuss and present their findings. Formal presentations by SoTL Associates are kept to a minimum (e.g., a one hour overview of action research and procedures for human subjects approval at the outset of the year, then brief information on the schedule, formats for reports, etc. throughout the program) unless the Fellows request information about which an Associate or Fellow has expertise.

The seminar sessions are based on a framework organized around processes incorporated in the action research cycle (Calhoun, 1994) and addressed via a series of open-ended questions that are linked to the cycle. We used a Practical Action Research model (Mills, 2003) that focuses on methods and approaches to designing studies, gathering data, and analyzing data.

The seminar schedule also, and importantly, provides a structure of deadlines for intermediate goals and defined outcomes (Table 1). The disparate levels of Fellows' experience with action research, the need for some Fellows to be ready to collect data in fall semester, and the varied nature of the projects necessitated that the framework of these sessions be flexible.

The seminar heavily uses a unique form of small group peer consulting. Our model differs from the common practice of peer consulting in which mentors are assigned and/or a list of willing peers with expertise is made available to call on when needed (Cox, 1999; Walker, Baepler, & Cohen, 2008; Gray, Chang & Radloff, 2007). In the SoTL Fellows Program, collaborative peer consulting occurs frequently in small groups of SoTL Fellows and SoTL Associates. Each cohort of Fellows is assigned to groups of three to four Fellows, based on when data needs to be collected, level of experience with educational research, and discipline (the goal is to mix up expertise and disciplines). Each group is initially assigned one to two SoTL Associates, who might switch groups depending on need. The purpose of each group is to promote peer consulting by pooling the expertise of the diverse group members. As projects progress, groups may rearrange

membership to facilitate work on a specific topic (e.g., interviewing or qualitative data analysis).

To keep projects moving, the groups work on open-ended questions about different aspects of the action research cycle. As an example, Fellows are asked to differentiate their methods from their design and to justify how their design will help answer their questions. They are asked to show how each goal is linked to data to be gathered. In another session, they are asked to suggest methods for gathering those data. Sometimes Fellows work individually to prepare for a discussion of these kinds of questions during a seminar, and sometimes the questions are provided anew during

Figure 1
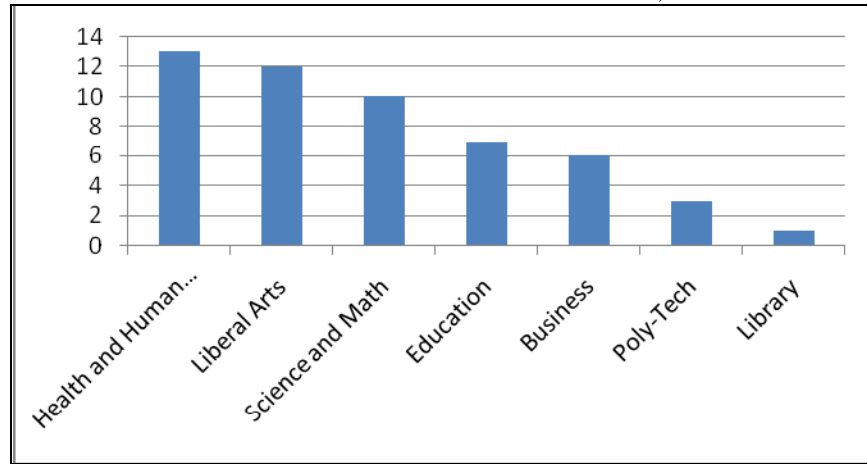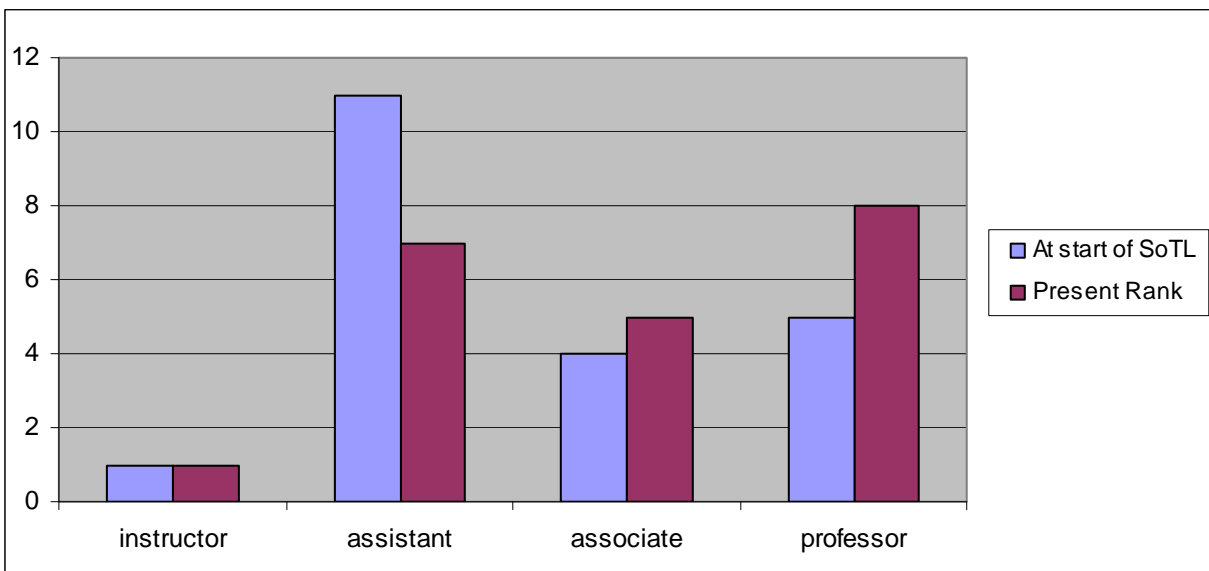Number of SoTL Fellows within Each Academic Unit, Five Cohorts

Figure 2
Ranks of the Studied SoTL Fellows at the Start of the Fellowship and at Time of the Interview

the seminar and Fellows work on them there. In either case, the questions stimulate brainstorming, friendly constructive criticism, sharing of expertise, and discussion.

As the SoTL Fellows explain their ideas, the peer consultants (all the small group members) clarify and assist with further development of the proposed projects. Expertise develops and is shared within the groups and across groups. As questions and interests evolve and SoTL Fellows request additional or specific information (e.g., qualitative methods, research design, online "Flashlight" evaluations, or Human Subject Procedures), the peer groups are asked to share any expertise they have in the area. Occasionally an outside expert is brought in when the expertise does not exist among the seminar members. Within the framework of action research processes and collaborative peer

consulting, the needs of an individual SoTL Fellow can be promptly addressed.

In addition to the reward of becoming skilled in educational action research, which is new to many faculty members outside the discipline of education, the SoTL Fellows' year culminates in a public presentation of the projects to the university community – a visible celebration of their work. This event is attended by the Provost, deans, chairs, Teaching and SoTL Associates, prior and new SoTL Fellows, and any other interested faculty. Leadership opportunities are also built into the Program so that former Fellows may continue their development and involvement.

Table 2
Categorization of the SoTL Projects Based on the Final Reports

Type of Project	Number of projects (N = 24)*	Examples
Try a new teaching method	21	Case based learning, discovery and inquiry in math, cooperative video analysis, role plays, voice/body rhythm for dance, visual learning, online study aids, conferences with students, simulations, projects for practitioners, meditation, scaffolding for cooperative learning, photo scavenger hunt, data mining, report writing, evidence based practice.
Develop and test new curriculum materials	20	Online modules, cases, materials modified for different learning modalities, new activities for cooperative learning, new video clips, decision systems software, "clicker" activities, powerpoint study aids, discovery/inquiry curriculum in geometry, political science simulations, empathy exercises.
Had students apply knowledge to realistic situation	17	Used realistic examples, had student solve realistic problems, address case studies based on real situations; make decisions based on evidence; prepare professional development workshop materials.
Use active learning strategies	17	Case studies, simulations, role plays, collaborative problem solving, focused discussion, photo scavenger hunt.
Tried techniques to affect how students learned	10	Adapted curriculum for different learning styles/ modalities, used meditation to reduce stress, fear, anxiety; variety of methods to improve transfer of learning, voice/body rhythm methods for dance.
Tested new technology and/or applications of common technology	7	Excel for decision making, data mining in excel, powerpoint study aids, videos, streaming presentations, podcasts, online data bases, personal response systems (clickers).
Address students' belief systems (esp. about differences)	6	Professional roles, receptivity to change, use of evidence for practice, value of cooperative learning, attitudes toward criminals.
Service learning.	2	Preparing and leading workshops for nurses, criminal justice project.

*Numbers add up to more than 24 because most projects had components in several categories.

General Characteristics of SoTL Fellows

Five diverse cohorts of faculty were selected as SoTL Fellows between 2005 and 2009. Thus far, 52 faculty members have been selected (over 10% of the total faculty at Southeast), representing 23 different departments (74%) from all academic units (Figure 1). Prior experience of SoTL Fellows with formal evaluation of student learning ranged from none to completion of formal research on learning. Very few of the SoTL Fellows had ever presented or published research findings on their own teaching strategies and student learning.

Subjects of this Study

A subgroup of the 52 SoTL Fellows was the subject of this study. Membership in one of the first three cohorts (2005, 2006 or 2007) and continuing employment at Southeast were the criteria for inclusion. Fellows in these cohorts included 29 faculty members from 18 different departments across five colleges and the library, with undergraduate teaching experience ranging from six to thirty-five years.

The majority of the studied SoTL Fellows were assistant professors when they received the SoTL fellowship. As of early 2009, many of these Fellows had been promoted to associate or professor ranks (Figure 2), indicating that their involvement in SoTL research projects did not hinder their promotion. Additionally, all tenure-track SoTL Fellows surveyed (20/21) reported that they felt their participation in the SoTL program had already been, or will be, viewed positively in the tenure and promotion processes – a significant reward.

Methods

Data were collected by means of a telephone interview developed by the SoTL Associates, which was administered by university researchers who are outside the SoTL program. SoTL Fellows from the first three cohorts were contacted during the late fall of 2008 and early spring of 2009 and were asked if they would be willing to participate in this study. Only one declined to participate, four had left the university and four could not be contacted. All together, 21 of the original 29 Fellows in the first three cohorts participated in the interview.

We also analyzed a total of 24 final project reports submitted by SoTL Fellows in these three cohorts, and still at Southeast, in order to answer the following questions: What kind of project was it? Were there clear results? Which University Studies learning objectives were addressed by the project?

Results

This section is organized around the five SoTL Program objectives referred to above.

> Objective 1: Enhance the quality of instruction by examining how changes in instruction foster student learning.

The teaching projects were as diverse as the groups of participants. Teaching strategies and tools that were developed and evaluated included case studies (commercial and self constructed), gaming-simulations, role-playing, clinical experiences, experiential exercises, decision support systems, videotape and film vignettes, instructional modules, service learning projects, cooperative learning, evidence-based practice concepts and databases, personal response systems, scavenger hunts, classroom meditation, project guidebooks, logarithm study aids, and voice/body/rhythm techniques for dance.

Table 2 identifies eight attributes of the projects that we perceived as we analyzed the final reports of the first three cohorts of SoTL Fellows. Nearly all projects implemented a new teaching method and/or new curriculum materials written by the SoTL Fellow for the project. Most of the Fellows examined active learning methods and incorporated some kind of application of disciplinary concepts to a realistic setting or problem. Nearly half of the projects had components intended to address the ways in which students were learning (e.g., to help them with

transfer of knowledge, reduction of anxiety, or to make materials more accessible for learners with different learning styles).

The authors' analysis of the final reports showed that 16 of the 24 projects (66%) showed clear evidence of improved student learning resulting from the SoTL project innovation.

The 21 surveyed SoTL Fellows affected 101 classes with over 4750 students during the time period of and since their Fellowship. Of the 21 Fellows, 19 thought that the SoTL Program made a positive impact on their teaching that continues to the present, and 18 of the 21 were still using the technique they examined during their project at the time of the interview. Of these, nine made modifications to their technique based on their findings.

> Objective 2: Develop and reward a skilled and knowledgeable community of faculty focused on scholarly inquiry into learning and teaching.

The SoTL Fellowship Program was designed to prepare faculty to conduct research on teaching and learning in their own courses by using an action research model and collaborative peer consulting. This goal was accomplished via the monthly two-hour evening seminar meetings described above, and resulted in a community of experienced SoTL scholars. The rewards for participation included the extrinsic rewards of professional development funds and travel funds, as well as publications and presentations that count toward promotion. Intrinsic rewards are described at the end of this objective.

Fellows used a variety of quantitative and qualitative research methodologies to evaluate learning associated with the new teaching strategies and materials described above. Effects on learning that were evaluated included student attitudes, perceptions, values, skills, knowledge comprehension, and critical thinking abilities. Several Fellows also evaluated their teaching methodologies by asking for student response to the new methods or materials. A variety of pre- and post-tests, observation rubrics, surveys, interview questionnaires, and self assessment tools were developed by the Fellows to measure learning and the quality of the teaching approaches used. Two Fellows used published instruments.

To illustrate the kinds of action research studies, we provide three examples. One assistant professor of leisure studies wanted to help students learn to apply theoretical concepts of leisure to everyday occurrences.

The teaching innovation was a "photo scavenger hunt" for images (published or their own) that illustrate different theories of leisure.   To measure student learning, the professor asked students to write an explanation of how the image represented the theory. These were scored with a rubric.   In addition, final exam scores were compared for classes that did the photo scavenger hunt vs. those that did not.   Finally, this professor asked students to rank different teaching methods used in class on a Likert scale of students' perceived effectiveness of each method.

Another assistant professor implemented a new way to teach tap dance based on techniques she learned at a professional workshop.   Some students were advanced and already had learned tap another way. Others were beginners with no tap experience. Evaluation of students' skills was accomplished by videotaping students in rehearsal and performance and then having an outside expert score the students using a set of criteria developed by the professor.   Guided observations as well as interviews with students were other methods used to gather data.

In a third example, an associate professor using commercial case studies for early childhood education wanted to see the effect of instructor-developed cases written for local contexts and conditions. Instructional methods were kept as consistent as possible, and cases were used in two courses. A rubric was developed to assess student written responses to the cases based on how the case was analyzed and resolved, students' ability to apply concepts to professional practice, ability to support opinions with evidence, and use of course concepts in case analysis. This professor used analysis of variance to test that both cohorts of students were similar at entry (they were) and then found statistical significance in scores, with students learning with locally relevant cases doing better in all parts.

As reported above, two-thirds of the projects reported positive increases in student learning. This is an extraordinary finding considering that the entry levels of action research skill for the Fellows was highly variable, with more than half of the Fellows having no experience with action research. It is also extraordinary given the fact that the projects were conducted over only one year. Several of the projects that were unable to report clear results identified small sample sizes, problems with the data collection procedures or instruments, or new awareness of variables that may have affected outcomes.

Nonetheless, these Fellows learned how to gather creditable evidence about their own teaching.

Eleven of the 21 surveyed Fellows (52%) are continuing to collect data about the teaching approach that they studied as a SoTL Fellow – and several of these are doing so as a way to prepare their projects for publication.

Some of the intrinsic rewards of being a SoTL Fellow were revealed when Fellows were asked to identify the greatest benefit of the SoTL program. Fifty-seven percent responded that the opportunity of getting to know other faculty members in order to share ideas was the number one benefit. Other benefits mentioned (approx. 10% each) included that the SoTL program provided professional development opportunities, that it provided an opportunity to implement new ideas, and that it provided structure with deadlines and intermediate products. Other comments (approx. 5% each) included that the SoTL program provided for a better understanding of research, placed emphasis on the importance of teaching, or benefited students.

Objective 3: Support SoTL fellows in preparing and disseminating their findings at professional meetings and via publication.

Publication and presentation to professional colleagues are necessary steps in the promotion process, a tangible reward. The SoTL Fellows Program was designed to support faculty in making their action research findings public. All Fellows presented their projects in draft form to their peers during the SoTL Fellows seminar in preparation for their public presentation to the university community at the end of their SoTL year. This required public presentation serves as preparation for further formal presentations outside the university.   As mentioned above, professional development funds up to $1500 are available to support research and travel.

At one of the seminar meetings, the SoTL Associates provided suggestions for conferences where SoTL presentations can be made and articles published. This information is on the Southeast SoTL website as well (cstl.semo.edu/sotl).

Fifteen of the 21 Fellows in this study (71%) presented their project one or more times beyond the SoTL program, for a total of 19 presentations by these surveyed faculty. Of these, 12 presentations were at national meetings, six at international meetings, and one at a regional meeting. Fifteen of these presentations were

peer reviewed. Seven additional presentations were planned at the time of the interview by these and others of the studied Fellows who had not yet presented.

To date, seven of the surveyed Fellows (33%) had published a paper, six of these in peer reviewed sources. Nine additional fellows plan to publish a paper that includes results of their SoTL projects.

Objective 4: Provide opportunities for SoTL fellows to participate as leaders in the next cohorts of SoTL Fellows.

Having opportunities to lead a University-wide program is another kind of reward for SoTL Fellows that is both an extrinsic and an intrinsic reward. A total of seven SoTL Fellows from the first three cohorts have served in a leadership role in the program as of this writing. Originally led by five to seven members of the CSTL Teaching Associates, the transition to a Fellow-led program began in Fall 2006 when three 2005 Fellows shared their experiences and served as peer leaders with the second cohort. In the third year of the program (2007), three former Fellows officially joined the leadership team, a team now named "SoTL Associates," thereby making the leadership 40% former Fellows. By 2008 (the fourth year), the majority of SoTL Associates were previous Fellows except for two of the original leaders who served a final year. SoTL Fellows were selected to serve as SoTL Associates based on the needs of the leadership group, the expertise of the SoTL Fellow, and interest and enthusiasm of the SoTL Fellow toward the program.

SoTL Associates are responsible for selecting cohorts of SoTL Fellows, planning and implementing the seminar program, working with small groups as

Table 3
Frequency of University Studies Objectives in the Analyzed SoTL Projects.

University Studies Objective	No. of SoTL projects addressing this objective (N = 24)	No.of SoTL projects in University Studies classes doing this objective(N = 7)	No. of SoTL project in NON-University Studies classes doing this objective (N = 17)
1. Ability to locate and gather information	12	5	7
2. Capabilities for critical thinking	20	6	14
3. Effective communication skills	9	2	7
4. Understanding of human experiences and ability to relate them to the present	4	2	2
5. Understanding of various cultures and their interrelationships	2	1	1
6. Ability to integrate the breadth and diversity of knowledge and experience	11	2	9
7. Ability to make informed, intelligent value decisions	7	2	
8. Ability to make informed, sensitive aesthetic responses	2	0	2
9. Ability to function in one's natural, social, and political environment	6	2	4

collaborative peer consultants, working with individual projects as needed, and signing off on final project reports, thereby releasing professional development funds to the Fellows.

Objective 5: Promote the integration of University Studies objectives into courses beyond those in the University Studies program.

The University Studies Program is Southeast's general education program, which has just celebrated its 20th year. Students are required to complete 36 hours of lower level courses and nine hours of upper level courses that meet some or all of the nine University Studies Objectives (listed in Table 3 below). The SoTL Fellows Program specified that each project should address and evaluate at least two of these objectives, whether or not the projects were being conducted in University Studies courses. The aim of this specification was to extend the University Studies objectives deliberately into courses beyond those in the general education program. Of the 24 projects analyzed, seven were conducted in University Studies courses and 17 were in non-University Studies courses.

Table 3 shows that the University Studies objectives were able to be addressed and evaluated in courses outside those of the University Studies program. For both types of course, helping students develop critical thinking capabilities topped the list of selected objectives for the SoTL projects. However, for non-University Studies courses, the next most used objective was the ability to integrate breadth and depth of knowledge, while for University Studies courses, the ability to locate and gather information was selected second most often.

Conclusions

The SoTL Fellows Program at Southeast Missouri State University has been remarkably successful by several measures: documented improvements in student learning, more engaged teaching and learning, disciplinary curricula connected to real world problems, number of faculty involved, representation of academic units, number of presentations and publications about the action research projects, number of promoted SoTL Fellows, the continued interest of prior Fellows in continuing their projects or starting new ones, and their

interest in serving on the leadership team for the program.

To try to understand how our program is achieving its success, we looked at research on effective faculty development and effective faculty collaboration. Quinlan (1998) studied faculty collaboration around teaching and suggests several factors that she found in successful collaborations. One factor is that good sessions have a defined agenda and leadership that keeps the members working towards meeting that agenda. Southeast's SoTL program was very project-oriented and had a seminar schedule that was well defined yet flexibly structured. We asked for intermediate products and set deadlines (flexibly met, of course).

A second factor Quinlan suggests is to connect the faculty members' discussions to specifics of teaching and learning rather than to abstract ideas. Having each SoTL Fellow work on an individual action research project and making the design and implementation of the project the focus of the seminar sessions was a way to ground teaching discussions in concrete examples and real problems.

Asking that faculty provide reasons for their decisions and actions also contributes to the effectiveness of the sessions, according to Quinlan. The process of collaborative peer consulting encouraged the Fellows to be clear about their ideas, rationales, and plans in a friendly and safe way. The open-ended questions about research processes also encouraged openness among fellows and associates about their reasons for decisions.

Another aspect of effective collaboration relates to the source of the initiative. When the collaboration is faculty led and owned, it is more likely to be shaped for the needs of the faculty, Quinlan suggests. The SoTL Program grew out of a group of faculty, the CSTL Teaching Associates, not professional faculty developers. It is based on proposals for individual action research projects. The seminar has been developed as a skeletal framework within which SoTL Fellows and Associates collaboratively consult with each other on faculty-owned projects, helping each other shape the projects and helping to meet each other's needs related to action research.

Quinlan suggests that the role of the administration is critical in validating the collaborative efforts. Our most senior administration has given unwavering support throughout the SoTL Fellows Program, from its inception, when Provost Jane Stephens declared it a major Teaching Initiative and saw to the funding, through the present, with her knowledge of individual Fellow's projects and her participation, and that of Deans and Chairs, at the annual SoTL Fellows presentations. The administrative support of the CSTL in providing meals, rooms, and materials is another way we can show validation by the administration. The access to University Studies travel funds is yet another support. Finally, the many promotions among SoTL Fellows represent a very public support for involvement of faculty in the SoTL Fellows Program.

While we have neither concrete data on the quality of the discussions nor documentation of the development of a sense of community, as leaders of this SoTL Fellows Program we have seen, within each cohort, the development of supportive small groups, the willingness of people to share their expertise and their ignorance, and genuine warmth among the SoTL Fellows and Associates. More than half of the surveyed SoTL Fellows cited group interaction and sharing as the most important benefit of the SoTL Fellows program. In their literature review, Twale et al. (2002, p 114) summarize how communities develop:

> A sense of community develops through the creation of a group identity and through the provision of opportunities for dialogue and conscious curricular integration. It also involves a process of overcoming isolation through networking, facilitating socialization into the professional role and allowing for risk taking and active participation in the learning process. We believe we have created a program that successfully fosters these characteristics.

Looking backward with the lens provided by Twale and her colleagues, we see that the SoTL Fellows Program creates identity and visibility for its participants and provides many opportunities for dialogue. If our curriculum was learning how to do action research in a new professional role as a scholar of teaching and learning, it was consciously integrated across disciplines and across projects so that faculty members could become socialized into the realm of SoTL research.

On a typical campus, including ours, faculty members are notoriously isolated. To counteract this, the monthly meetings always included time for socializing during which much networking occurred. Also, the series of open ended questions about action research processes created a framework for faculty members to take risks, yet feel safe and supported by the fact that everyone involved was taking the same risks and sharing publicly in the process of collaborative peer consulting.

Our findings suggest that building a SoTL Fellows Program centered on action research and collaborative peer consulting, which tangibly rewards faculty for their efforts, works well to improve not only student learning but also faculty teaching and skills in scholarship of teaching. Our SoTL Fellow Program provides not only the tangible rewards of money, presentations, publications, and better success in the classroom, but also the intangible rewards of striving with a collegial group during the Fellowship year, of making friendships and partnerships with people across campus, of having one's thinking stimulated by learning that different approaches to teaching exist in different disciplines, and of knowing there are resources and a community to support further work in the Scholarship of Teaching and Learning.

References

Albers, C. (2008). Improving pedagogy through action learning and scholarship of teaching and learning. *Teaching Sociology, 36*(1), 79-86.

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for college teachers* (2nd ed.). San Francisco, CA: Jossey-Bass.

Boyer, E. L. (1990). *Scholarship reconsidered: Priorities of the professoriate.* San Francisco, CA: Jossey-Bass.

Buch, K. (2008). Faculty perceptions of SoTL at a research institution: A preliminary study. *Technology of Psychology, 35*(4), 297-300.

Burman, M. E., & Kleinsasser, A. (2004). Ethical guidelines for use of student work: Moving from teaching's invisibility in the scholarship of teaching and learning. *The Journal of General Education, 53*(1), 59-79.

Calhoun, E. (1994). How to use action research in the self-renewing school. Alexandria, VA: Association for Supervision and Curriculum Development.

Charlevoix, D. J. (2008). Improving teaching and learning through classroom research. *American Meteorological Society, 89*(11), 1659-1664.

Cox, M. D. (1999). Peer consultation and faculty learning communities. *New Directions for Teaching and Learning*, 79, 39-49.

Cox, M. D. (2004). Introduction to faculty learning communities. *New Directions for Teaching and Learning, 97*, 5-23.

Grauerholz, L., & Zipp, J. H. (2008). How to do the scholarship of teaching and learning. *Teaching Sociology, 36*(1), 87-94.

Gray, K., Chang, R., & Radloff, A. (2007). Enhancing the scholarship of teaching and learning: Evaluation of a scheme to improve teaching and learning through action research. *International Journal of Teaching and Learning in Higher Education, 19*(1), 21-32.

LoSchiavo, F. M., Shatz, A., & Poling, D. A. (2008). Strengthening the scholarship of teaching and learning via experimentation. *Teaching of Psychology, 35*(4), 301-304.

McGovern, T. V., & Miller, S. L. (2008). Integrating teacher behaviors with character strengths and virtues for faculty development. *Teaching of Psychology, 35*(4), 278-285.

Mills, G. E. (2003). *Action research: A guide for the teacher researcher*, (2nd ed.). Upper Saddle River, NJ: Merrill- Prentice Hall.

Quinlan, K. M. (1998). Promoting faculty learning about collaborative teaching. *College Teaching, 46*(2), 43-47.

Rathgen, E. (2006). In the voice of teachers: The promise and challenge of participating in classroom-based research for teachers' professional learning. *Teaching and Teacher Education, 22*(5), 580-591.

Shapiro, H. N. (2006) Promotion and tenure and the scholarship of teaching and learning. *Change*, March/April, 39-43.

Smith, R. A. (2008) Moving toward the scholarship of teaching and learning: The classroom can be a lab, too. *Teaching of Psychology. 359*(4), 262-266.

Smith, T. R., McGowan, J., Allen, A. R., Johnson, W. D., Dickson, L. A., Najee-ullah, M. A., & Peters, M. (2008). Evaluating the impact of a faculty learning community on STEM teaching and learning. *The Journal of Negro Education, 77*(3), 203-227.

Twale, D. J., Schaller, M. A., Sawyer, A. H., & Polanski, P. J. (2002). Creating collaborative community in multidisciplinary settings. *Innovative Higher Education, 27*(2), 113-128.

Walker, J. D., Baepler, P., & Cohen, B. (2008). The scholarship of teaching and learning paradox: Results without rewards. *College Teaching, 56*(3), 183-189.

―――――――――――――――――――

MARGARET WATERMAN is a Professor of Biology at Southeast Missouri State University specializing in science education. Her research is on Investigative Case Based Learning for undergraduate biology education.

JANET WEBER is a Professor of Nursing and RN-BSN online Coordinator at Southeast Missouri State University. Her research focuses on interactive teaching strategies in nursing.

CARL PRACHT is a Professor of Library and Information Sciences at Southeast Missouri State University. His research interests include library instruction and recent trends in academic libraries.

KATHLEEN CONWAY is a Professor of Elementary, Early and Special Education, with research interests in collaborative learning and reflective teaching at Southeast Missouri State University.

DAVID A. KUNZ is a Professor of Finance. His areas of research include corporate and entrepreneurial finance. He is also interested in writing business cases for the classroom at Southeast Missouri State University.

BEVERLY EVANS is an Assistant Professor of Recreation at Southeast Missouri State University. Her research interests include scholarship of teaching and learning, theories of participation and constraints. She is the current SoTL Associates Chairperson.

STEVEN HOFFMAN is a Professor of History and Coordinator of the Historic Preservation Program at Southeast Missouri State University. His research interests are on the influence of race and class on the built environment.

BRIAN SMENTKOWSKI is an Associate Professor of Political Science and Faculty Associate in the Center for Scholarship in Teaching and Learning (CSTL) at Southeast Missouri State University. His disciplinary research is on law, courts, parties, and elections.

DAVID STARRETT is the Dean of the School of University Studies and Academic Information Services and Director of the Center for Scholarship in Teaching and Learning at Southeast Missouri State University.