

## **Developing Teacher Expertise for Economists through a Workshop Experience\***

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### **Abstract**

Between 2004 and 2010, the Committee on Economic Education of the American Economic Association sponsored the Teaching Innovations Program (TIP). The primary goal of TIP was to guide instructors of college level economics courses in the use of interactive teaching strategies which are effective but rarely used by college economics instructors. TIP participants attended a workshop which introduced them to a variety of interactive strategies and helped them determine which strategies would work best in their own course. The ten TIP workshops were fully subscribed, highly rated by participants, and effective in promoting in participants the willingness to implement interactive strategies.

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## **Introduction**

Between 2004 and 2010, the Committee on Economic Education (CEE) of the American Economic Association (AEA) sponsored the Teaching Innovations Program (TIP). The primary goal of TIP was to guide instructors of college level economics courses in the use of interactive teaching strategies which, despite their proven efficacy, are underused by instructors of college level economics courses (Becker and Watts, 1996 and 2001).

TIP provided a three phase instructional experience to its participants. In the first phase, participants attended a three day workshop at which they were introduced to a variety of interactive strategies and completed exercises designed to help them determine which strategies would work best for them. Between 2005 and 2009, TIP offered two workshops per year for a total of ten at a variety of U.S. locations. In phase two, participants completed follow-on instructional modules designed to help them implement their chosen interactive strategies in their own courses. In phase three, participants designed interactive strategies of their own and wrote about their experiences in teaching with them.

In this paper, I will describe the workshop component of TIP. The first section of the paper places the TIP workshops in their appropriate historical context. The second describes the workshops, lists the venues and describes the workshop program of instruction. The third section explains how participants were recruited and describes the participants and the instructional staff. The fourth and fifth sections of the paper describe the workshop curriculum and document how participants evaluated their workshop experience. The sixth section provides information about the cost of the TIP workshops and the final section concludes.

## **History**

The workshops offered as part of the TIP program are the latest installment in a long history of efforts by the AEA to provide its members with effective teacher education. The first efforts began in 1973 using funds from the Sloan Foundation. The original Teacher Training Program (TTP) started with a pilot program in 1973 and led to publication of a resource manual. The success of the pilot led to a five-year grant from the Lilly Foundation and a series of five workshops held between 1979 and 1983 which based instruction around the resource manual.

In 1990, Phillip Saunders and William Walstad published *The Principles of Economics Course: A Handbook for Instructors* which subsequently replaced the original resource manual.

The publication of the manual served as a springboard for the next wave of six TTP workshops which were held between 1992 and 1994 and again funded by the Lilly Foundation. The 1992-94 workshops served 236 participants. The workshop curriculum, participant evaluations, and the longer-run impact of the workshops on participants are described in Salemi, Saunders and Walstad (1996). Walstad and Saunders (1998) expanded the original *Handbook* and expanded its scope to the undergraduate curriculum in economics.

The first two series of teaching workshops provided participants with training about traditional teaching skills including lecturing, preparing for and leading discussion, creation and evaluation of fixed and constructed response examinations, and course management skills. The next series of workshops were a change in direction.

In two important articles, Becker and Watts (1996, 2001) documented that instructors of college level economics taught primarily using “chalk and talk” despite widespread evidence in the educational literature that more hands-on approaches to learning resulted in better outcomes. The next series of workshops, sponsored by the AEA Committee on Economic Education, focused on promoting the use of active and interactive teaching strategies.

Three new workshop formats were developed. First, the CEE and the National Council on Economic Education used funds provided by the Calvin K. Kazanjian Economics Foundation, Incorporated to develop a prototype “Active Learning Workshop” which was held at UNC-Chapel Hill in 1996 and 1997. Second, the CEE began in 1997 to sponsor one day active learning workshops as part of the annual meetings of the Allied Social Science Association (ASSA). The ASSA workshops are held on the second day of the meetings, comprise three two-hour sessions, and continue to be offered. Third, between 2001 and 2003, the Kazanjian Foundation provided funding to 24 regional workshops that served over 750 participants and focused not only helping participants adopt active learning strategies but also on building regional teaching communities.

The workshops held as part of the Teaching Innovations Program are, thus, the most recent installments in a long history of efforts by the Committee on Economic Education and its partners to help instructors teach college level economics using state of the art teaching and learning strategies.

## Venues

Table 1 provides an overview of the ten workshops that were conducted under the aegis of the TIP. The workshops served a total of 338 participants and were held at a variety of venues types and in a variety of locations. All of the venues provided residential facilities and on-site dining.

<b>Table 1</b>			
<b>Teaching Innovation Program Workshops</b>			
<b>Date</b>	<b>Venue</b>	<b>Number of Applicants</b>	<b>Number of Participants</b>
May 20-22, 2005	Paul J. Rizzo Conference Center, UNC-Chapel Hill NC	100	35
June 3-5, 2005	Georgetown University Conference Center DC		35
May 19-21, 2006	Chicago Marriott Suites O'Hare, Rosemont IL	76 (13)	35
June 2-4, 2006	Hotel Santa Fe, Santa Fe NM		34
May 18-20, 2007	Hotel Mar Monte, Santa Barbara CA	80 (8)	32
June 8-10, 2007	MIT Endicott House, Dedham MA		34
May 30 – June 1, 2008	St. Anthony Hotel, San Antonio, TX	83 (9)	35
June 6-8, 2008	Paul J. Rizzo Conference Center, UNC-Chapel Hill NC		31
June 5-7, 2009	Hotel Santa Fe, Santa Fe NM	81 (3)	34
June 12-14, 2009	Chicago Marriott Suites O'Hare, Rosemont IL		33
<b>Total</b>		<b>420</b>	<b>338</b>

We chose the Rizzo and Georgetown Centers and the MIT Endicott House because they are affiliated with universities and are designed to meet the requirements of an academic conference. We chose the Chicago Marriott Suites because its location near O'Hare airport provided participants with an opportunity to minimize the travel time associated with the workshop. We chose Hotel Santa Fe, Hotel Mar Monte and the St. Anthony Hotel because they are located in interesting and beautiful places that we believed would attract participants. While all of our venues were attractive in one way or another, our choice of venue did not appear to matter—every one of the workshops was over-subscribed.

## Recruitment

We recruited participants in a variety of ways. First, between 2005 and 2009 we published an annual conference brochure<sup>1</sup> that described the workshops, explained to prospective participants what they could expect, introduced the staff and workshop agenda, and set out the application procedure. We mailed copies of the annual brochure to every economics department in the United States and distributed copies at the meetings of regional economic associations and conferences where the program included economic education sessions. Second, we constructed and maintained a TIP web page (<http://www.vanderbilt.edu/AEA/AEACEE/TIP/TIP.htm>) that we linked to the web page of the AEA CEE. On the TIP web page, we provided a detailed explanation of TIP, posted a copy of our most recent brochure and provided a link to an on-line application form. We accepted applications between early September and mid-January.

Third, we published annual advertisements for TIP and its workshops in the *American Economic Review*, the *Journal of Economic Perspectives*, and the *Program of the Allied Social Science Association Meetings*. The ads<sup>2</sup> provided a brief overview of TIP, identified the dates and locations of the next workshops, and explained how to apply. Fourth, we added workshop announcements to the email “blasts” that the American Economic Association sends several times each year to every member for whom they have an email address.

The application procedure required prospective participants to complete an on-line application form in which they provided their contact information, a description of the institution at which they taught economics, their position at that institution, and their preferred workshop. Prospective participants also submitted a description of the economics course into which they intended to introduce interactive teaching strategies. They were also required to submit a letter in which their department chair indicated that the candidate was suitable for TIP and that the department would support the candidate’s efforts to use interactive teaching strategies. Finally, the prospective candidate was required to pay a \$100 participation fee which we used to defray the venue costs of the workshops.

We designed our application process to filter out applicants who would be willing to attend a workshop but unlikely to adopt interactive teaching strategies and develop their skills as interactive teachers through participation in phase two of TIP. Our filter was effective. Over the

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<sup>1</sup> A facsimile of the 2009 brochure is included as Appendix A.

<sup>2</sup> The ad copy for the first TIP workshop advertisement is included as Appendix B.

five years during which we accepted applications, we judged 41 applications to be incomplete and 16 applications to be unacceptable. In all those cases, we did not approve the application. I vetted the applications for the first three years of the program and KimMarie McGoldrick vetted them during the last two years.

Our recruiting efforts were successful in the sense that each year we received more applications from suitable candidates than we could accommodate. Table 1 reports the number of applications we received in each of the years we recruited. When we received more suitable applications than we could accommodate, we assigned participation rights to earlier applicants and offered later applicants rights of first refusal for workshops to be held the following year<sup>3</sup>. Table 1 reports in parentheses the number of applicants offered rights of first refusal each year.

Finally, as we promised NSF, we offered travel support to TIP participants who were employed by minority-serving post-secondary educational institutions. We announced the availability of this support in our brochure and allowed participants to apply for this travel support when they completed their on-line application. For the ten workshops together, we provided \$7088 of travel support to 13 different applicants.

### **Workshop Curriculum**

The heart of the workshop is its curriculum<sup>4</sup> and I will describe the TIP workshop curriculum in some detail. The workshops began at 1:00 PM on a Friday and concluded with an optional lunch at noon on the following Sunday.

The first session provided participants with an overview of the workshop and a review of the case for interactive learning. In the first four workshops, we devoted 1.5 hours to these two topics but later combined and shortened these sessions to 45 minutes to allow participants more free time on Saturday afternoon. As a substitute, we asked participants to read Salemi (2002) before the start of the workshop.

In the second session, participants worked on a team assignment in which they formed teams, interviewed teammates, discussed what instructors can do to promote student learning,

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<sup>3</sup> Each year, we followed a rolling admission process between September and the end of November so that early applicants could know of their acceptance in time to apply for travel funds at their home institutions. We stopped rolling admissions process at the beginning of December so that those who applied as the result of hearing about TIP at the ASSA meetings could be considered for admission. We assigned the remaining workshop slots to applicants on about January 15.

<sup>4</sup> The program for the 2009 workshop at the Hotel Santa Fe is included as Appendix C.

and prepared a presentation of their conclusions. The team assignment served as an icebreaker that introduced participants to one another and helped them become comfortable working together. It also helped participants focus on the idea that teacher development begins with a consideration of student learning<sup>5</sup>. Participant teams gave presentations based on their assignments on Saturday morning immediately after breakfast.

During the third and fourth sessions on Friday and during four sessions on Saturday, workshop instructors introduced participants to a variety of interactive teaching strategies. We attempted to offer a slightly different program at each of the two workshops held in a given year. At one workshop, we covered strategies that we believed would be most interesting to instructors who taught small-enrollment courses. At the other, we included two sessions targeted to instructors of large-enrollment courses. In the course of the workshop, we designed and presented sessions on nine different interactive strategies.

A session on **cooperative learning** was included in every workshop. The session helped participants to identify the elements of successful cooperative learning exercises, to understand how to match cooperative learning exercises with a variety of student learning objectives including problem solving, and to learn how to develop and implement a cooperative learning exercise. The session was hands on. During it, participants completed three cooperative learning exercises all designed to promote deeper understanding of the benefits of interactive learning.

A session on **classroom experiments** was also included in every workshop. The session had three parts. In the first, participants played the roles of students and completed a classroom experiment. At some workshops, participants completed a double-oral-auction experiment that investigates what happens when markets are opened to international trade. At some workshops, participants completed an asset trading experiment that investigates how asset-price bubbles inflate and pop. At the conclusion of the experiment, the workshop instructor explained to participants the importance of carefully debriefing experiments and outlined a number of debriefing strategies. Finally, the instructor explained logistical issues that teachers face when they use experiments.

A session on **interpretive questions and discussion** was part of every workshop and was typically held on Saturday so that participants would have ample opportunity to read a news

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<sup>5</sup> The importance to teaching of a focus on student learning was a recurrent theme throughout the workshop and throughout phase two of TIP.

article provided by the instructor<sup>6</sup>. The discussion session introduced participants to inquiry-based discussion and began by explaining the differences between inquiry-based discussion and common definitions of discussion. The instructor began the session by explaining why discussion helps students attain higher-cognitive mastery of economic concepts. Because the key to successful inquiry-based discussion is preparation of well-crafted discussion questions, the instructor then explained how to categorize questions by their type and their role in a discussion. Participants then wrote and revised discussion questions for the news article they had read. At the end of the session, participants compared their questions and explained how the questions they wrote were motivated by the learning objectives they had chosen.

The session on **assessment**<sup>7</sup> was also part of every workshop. Most instructors routinely use summative assessment strategies to judge and grade student work and to measure student achievement. Few instructors use formative assessment which is assessment designed to provide feedback to students in a way that shapes their learning and directs instruction. In the session, participants identified differences between formative and summative assessment and learned how instructors can use each type of assessment to enhance learning. Participants shared examples of different assessment techniques they have used and the instructor introduced them to a variety of new assessment techniques. Participants discussed the advantages and disadvantages of different assessment strategies and participated in an activity designed to help them prepare assessment activities for their own courses.

As mentioned earlier, some workshops included two sessions of interest to instructors of **large enrollment courses**. The first such session provided instructors with a variety of strategies that promote an active learning posture on the part of students in courses where lecture is the norm. In the session, participants identified the impediments to interactive learning in large enrollment courses and learned how master teachers of large enrollment courses overcame those impediments. The instructor provided participants with advice on how to create fertile ground for interactive learning by constructing a proper blend of course objectives, ground rules, classroom

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<sup>6</sup> We faced an important tradeoff in the design of the discussion session. Inquiry-based discussion works best when the target reading is very rich. However, we feared that workshop participants might not find the time to read a long reading prior to their arrival. We thus provided participants with a short but interesting news article on Friday and asked them to read the article carefully before the discussion session on Saturday. At several workshops, the reading was “More Kidneys for Transplants May Go to Young,” by Laura Meckler published in the *Wall Street Journal* on March 10, 2007.

<sup>7</sup> The assessment session of the TIP workshop was based in part on Walstad (2008) a copy of which was provided to participants as background reading.



atmosphere, incentives, instructional style and pedagogical technique. The instructor also demonstrated various techniques, including short writing assignments, think-pair-share activities, and participatory exercises that promote student engagement. The instructor finally provided examples of non-standard lecture materials that promote student interest such as the use of audio and video clips and animated power point graphs.

The second session targeted to instructors of large enrollment courses concerned the use of “**clickers**” to promote interactive learning. Clickers are radio senders that students use to respond to prompts given by the instructor. The instructor collects student responses with a radio receiver hooked to a computer through a USB port. The instructor can ask for anonymous responses as would be appropriate in a survey of student opinion or can enter student responses in an electronic record book as would be appropriate for a small stakes quiz. In the session, participants used clickers to record their responses to a variety of prompts. The instructor explained how each type of prompt could be used to promote student engagement and illustrated how the clicker system could be used in non-standard ways, for example to auction off an item or to record votes in a “town hall meeting.” The instructor closed the session by explaining the logistics of clicker use and by presenting evidence that clickers do enhance student engagement<sup>8</sup>.

In one workshop each year, we offered a program that substituted away from large enrollment course instruction and toward additional interactive strategies most appropriate in small enrollment courses.

In the **writing as interactive learning** session, participants reviewed types of writing assignments used in economics courses and learned why writing is a form of interactive learning. They reviewed ten in-class writing activities that promote interactive learning and discussed how to match those assignments to different learning objectives. Participants completed a writing activity designed to show how writing activities can be interactive. Finally, participants were guided in drawing conclusions about the kinds of writing activities that are best suited for their own classroom settings.

In the **case studies** session, participants discussed the similarities and differences between teaching with cases and other active learning strategies. They identified ways in which the case method helps students meet a variety of learning objectives. They learned that the best

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<sup>8</sup> For more about clickers, please see Salemi (2009) which was provided to workshop participants as a background reading.

cases pose problems with no obvious answers, identify actors who must solve a problem, require students to use the information in the case, include enough information for a substantial analysis of the target issues, and require students to work at the level of analysis and beyond. During the session, participants practiced using a case to teach an economic concept.

**Context rich problems** are problems that are more like the problems that decision makers encounter in the real world and less like the problems that economics instructors typically ask their students to solve. Context rich problems are short scenarios in which the student is the major character with a plausible motivation and a particular problem to solve. Context rich problems do not specify what rules or tools students are to use in solving the problem. Frequently, context rich problems provide more information than required to solve the problem, including some that is irrelevant, so that students must differentiate between information that is germane and information that is not. A traditional problem might ask students to compute the present value of a sum of money to be paid in the future. A context rich problem that targets the same skills might suggest that two brothers share an inheritance and that one brother wants his “fair” share of the inheritance immediately.

In the session on context rich problems, participants learned the defining characteristics of a context rich problem and then practiced writing and refining a context rich problem appropriate to one of their own courses. The session concluded with suggestions of how context rich problems might be incorporated within a variety of teaching formats.

The TIP workshop included three Sunday morning sessions. In one session, participants exchanged teaching ideas. The workshop staff asked participants to tell them by early Sunday morning whether they would like to make a brief presentation on their own interactive teaching innovations. The **participant teaching ideas** session was typically very lively and underscored the idea that TIP was at its core a collaborative effort to improve instruction.

In a second Sunday session, a TIP instructor explained to participants what they could expect by participating **in phase two of TIP**. The instructor explained how participants could preview phase two instructional modules, how they could enroll, and what sort of activities they would undertake as they completed their chosen module. Finally, the instructor logged on to the Blackboard site at the University of Nebraska—Lincoln where the modules are housed and navigated through one of the modules.

In the third Sunday session, participants completed a final and very important **team assignment** in which they made and discussed their preliminary choices to participate in phase two of TIP. They chose a course in which they would integrate interactive strategies, set out reasons for choosing that course, chose an interactive strategy that they wished to introduce, received feedback on their choices from their peers, and identified both potential barriers to success and strategies for overcoming those barriers. In our view, it was very important to close the TIP workshop with a session in which participants made specific plans about continued work to implement interactive teaching strategies.

The workshop ended with a 15 minute quiet period in which participants evaluated the workshop and an optional lunch. We provided box lunches for all participants so that those with early flights could leave as soon as they completed their evaluations.

Opportunities for socialization and networking have always been an important part of our teaching workshops. With that in mind, we scheduled a cash-bar reception before dinner on the first evening of each workshop. The reception allowed participants to relax and continue conversations that they had begun during the Friday afternoon sessions. We always followed the reception with a dinner. On Saturday evening, we provided dinner to participants when the workshop was held at a university conference center or at a hotel not close to restaurants. When the workshop was held within walking distance of a commercial area, we freed participants to have dinner on their own. We also provided participants with breakfast on Saturday and Sunday mornings and with lunch on Saturday and Sunday.

### **Workshop Staff**

The staff for the TIP workshops comprised three instructors. However, for the first two workshops, held in 2005, we increased the staff to five: Denise Hazlett of Whitman College, Mark Maier of Glendale Community College, KimMarie McGoldrick of the University of Richmond, William Walstad of the University of Nebraska-Lincoln, and me. Having a larger staff allowed us to obtain a wider set of opinions on the workshop curriculum, the success of initial presentations and the suitability of our hands-on activities. It also allowed us to discuss what combinations of presenters would make the best workshop teams. In 2006, we recruited Gail Hoyt of the University of Kentucky to join our instructional staff and taught the workshop

with two separate teams: Hoyt, McGoldrick and Salemi taught at Santa Fe while Hazlett, Maier and Walstad taught at Chicago.

One of the goals of TIP was recruitment of new entrepreneurs to the endeavor of teacher education in college level economics. Beginning in 2007, we began the process of recruiting new instructors for the TIP workshops by selecting Patrick Conway of the UNC-Chapel Hill. Conway is a recognized expert on teaching with cases and we added a session on teaching with cases to the workshops where Pat taught. In 2007, Maier, McGoldrick and I taught the Santa Barbara workshop and Conway, Hazlett, and McGoldrick taught the MIT Endicott House workshop<sup>9</sup>.

In 2008, we asked the first two TIP alumni to join the instructional staff. Tisha Emerson of Baylor University and Robert Rebelein of Vassar became our TIP specialists in classroom games and experiments. Conway<sup>10</sup>, Hoyt, Rebelein and I taught the Rizzo workshop while Conway, Emerson and McGoldrick taught in San Antonio. In 2009, we recruited another TIP alumna to our instructional staff—Kirsten Madden of Millersville University. Emerson, Hoyt and I taught the Santa Fe workshop while McGoldrick, Madden and Rebelein taught in Chicago.

Between 2005 and 2009, in sum, we recruited five new resource persons to the TIP program—Conway, Emerson, Hoyt, Madden, and Rebelein. In addition, William Walstad and I recruited and trained Mark Maier and KimMarie McGoldrick to perform several organizational functions that we had done ourselves in previous workshop programs. Mark Maier served as a TIP instructor and expert on teaching with context rich problems. He also oversaw our follow on instruction program. KimMarie McGoldrick served as a TIP instructor and expert in cooperative learning activities. She also became leader of one of our two teaching teams, overseer of our program to create opportunities for TIP participants to contribute to the scholarship of teaching and learning, and took over from me the task of vetting applications to participate in TIP.

In sum, the TIP workshop program created both new opportunities for instructors of college economics to learn about interactive teaching strategies and new opportunities for economic educators to take on responsibilities in the creation and administration of programs like TIP.

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<sup>9</sup> Gail Hoyt was scheduled to teach but was ill. KimMarie McGoldrick kindly agreed to replace her.

<sup>10</sup> Because Pat Conway is at UNC, holding the workshop at the Rizzo Center provided a low cost opportunity to add a session on teaching with cases to the curriculum.

## **Evaluation of Workshops**

On Sunday, participants evaluated the workshop. A copy of the evaluation appears in Appendix D. As has been our custom for many years, we ask workshop participants to use benefit-cost language to provide an overall evaluation of the workshop. When asked “What is your overall evaluation of the workshop compared to the opportunity cost of your time,” 258 (78%) of respondents said the workshop was “...a better use of my time than my next best alternative;” 64 (19%) said the workshop was “...as good a use of time as my next best alternative;” 7 (2%) said the workshop was “...of some value, but I could have put my time to better use;” and none responded that the workshop was “...almost a complete waste of time.”

We also asked participants to judge the quality of materials we provided them: 265 (81%) judged the materials to be high quality materials that should be used again; 62 (19%) judged the materials to be of good quality but needing some improvements and none judged the materials to be of poor quality. When asked about the workshop load, 31 (9%) of the participants said that the work load was too heavy and they should have had more time off; 293 (89%) judged that the workshop load was about right; and 5 (2%) said that the load was too light and that more sessions should have been scheduled.

Finally, we asked participants how likely they were to continue to phase two of the program and undertake follow-on instruction to help them implement their chosen interactive strategies: 297 (90%) said that it was “highly likely” that they would participate in follow on instruction; 29 (9%) said “fairly likely” and 3 (1%) said “unlikely.”

Participants were asked to evaluate individual workshop session using the scale “exceptional value” (5), “high value” (4), “solid value” (3), “some value” (2), “little value” (1), and “no value” (0). The results appear in Table 2. The number of responses varies because not every session was offered at every workshop and because not every participant evaluated every session. The results indicate that participants strongly approved of all the sessions offered. Averages scores for sessions (computed across all workshops) vary between 3.7 and 4.3 and the distribution of scores is strongly skewed to the “exceptional value” side of the distribution.

Overall, the evaluation data suggest strongly that participants judged the TIP workshops to be very valuable learning experiences and motivated them to participate in additional efforts to improve their teaching through implementation of interactive teaching strategies.

Session	Number	EV	HV	SV	V	LV	NV	Average
Introduction	324	31	34	24	8	2	0	3.8
Team Exercise One	323	30	38	20	9	2	1	3.8
Experiments	328	49	32	15	3	1	0	4.2
Cooperative Learning	329	53	34	10	2	1	0	4.3
Writing	101	42	40	11	5	3	0	4.1
Cases	131	45	34	17	4	0	0	4.2
Large Enrollment Courses	127	43	24	22	9	2	0	4.0
Clickers	65	31	35	29	5	0	0	3.9
Discussion	328	51	29	15	5	1	0	4.2
Context Rich Problems	196	46	34	16	3	2	0	4.2
Assessment	294	32	40	18	8	2	0	3.9
Team Exercise Two	267	34	36	22	7	1	0	3.9
Participant Ideas	189	35	39	16	8	1	1	4.0
Intro to Phase Two	317	28	34	25	9	2	2	3.7

The number cell reports the number of respondents. The EV, HV, SV, V, LV, and NV cells report the fraction of respondents who indicated that the session had exceptional value (EV), high value (HV), solid value (SV), some value (V), little value (LV), or no value (NV). The average column reports the average score with scores ranging from 5 for EV to 0 for NV.

The conclusions reached on the basis of the fixed response evaluations are confirmed by the open ended comments made by participants. Of course, participants are different and some liked some aspects of the workshops better than others. However, in reading through the open ended comments one quickly realizes that the great majority of participants left the workshop energized and believing that they the workshop had added substantial value to their understanding of teaching and interactive teaching and learning strategies.

### **Workshop Expenses**

Table 3 reports TIP workshop expenses covered by the grant from the National Science Foundation and administered by the program. It does not include amounts paid by participants for their transportation to and from the workshop venue or extra lodging and meal expenses that participants might have paid in order to arrive at the workshop venue on time.

Overall, the average cost of each workshop was \$31,922.42 which amounts to an average cost of \$944.45 per participant. Each participant was charged a fee of \$100 at the time of their workshop registration. On average, participation fees reduced the per-participant cost of the

workshop by slightly more than \$100 because a few participants cancelled their participation on a day later than the last day on which they could recoup the fee<sup>11</sup>. About 69 percent of per participant cost is accounted for by lodging and food and about 27 percent by payments for and travel of instructional staff.

There was not a lot of variation in expenses across workshops. The least expensive of the ten workshops cost \$24,042.35 while the most expensive cost \$34,280.23. Some of the variation

<b>Expense Category</b>	<b>Average Per Workshop</b>	<b>Average Per Participant</b>
Hotel and Food	\$ 21,879.02	\$ 647.31
Instructional Staff	\$ 6,909.81	\$ 204.43
Staff Travel	\$ 1,697.66	\$ 50.23
Minority Travel Support	\$ 895.41	\$ 26.50
Miscellaneous	\$ 540.22	\$ 15.98
Sub Total	\$ 31,922.42	\$ 944.45
Participation Fee	\$ -3,410.00	\$ -100.89
Total of Categories	\$ 28,512.42	\$ 843.56
<p>There were 10 TIP workshops attended by 338 participants. TIP provided travel support for instructors who taught at minority serving post-secondary institutions. The miscellaneous category includes primarily the costs of preparing and shipping participant material binders.</p>		

was due to enrollment, some due to the fact that Saturday night dinner was provided at some workshops and not at others, and the rest due to variation in prices charged by venues.

## **Conclusions**

The ten workshops offered by the Teaching Innovations Program are the most recent installments in a long tradition of providing college level instructors of economics with opportunities to improve their teaching. TIP provided a workshop experience to 338 clients many of whom, as another paper in this session will document, went on to complete phase two of the TIP program in which they implemented chosen interactive teaching and learning strategies in

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<sup>11</sup> A workshop application was not considered complete until we received a check for the participation fee. We refunded the fee if we could not accommodate the participant or if the participant cancelled by a date that varied by year but was always early in March.

their own courses. Some TIP participants did more. As a third session paper will document, took advantages of opportunities provided by TIP to write and present papers on the scholarship of teaching and learning. In addition, many of those participants will make presentations at the TIP conference that will be held at the end of these meetings.

Participants gave high ratings to TIP workshops and to all individual workshop sessions. A fourth session paper will report on participants' retrospective assessment of their workshop experience.

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# Appendix A

## TIP Brochure for 2009

### Teaching Innovations Program

#### Overview

The AEA Committee on Economic Education (CEE) is sponsoring a Teaching Innovations Program (TIP) for college and university economics instructors. TIP seeks to improve undergraduate education in economics by offering instructors an opportunity to expand their teaching skills and participate in the scholarship of teaching and learning. TIP is funded by a five-year grant from the National Science Foundation.

TIP builds on a long history of work by CEE to promote effective teaching of economics including national workshop programs, teaching sessions at the ASSA meetings, support for regional workshops, and publication of *Teaching Undergraduate Economics: A Handbook for Instructors* by Walstad and Saunders.

TIP will benefit participants and their home institutions. It will help instructors improve their teaching skills and document their commitment to teaching. It will help colleges and universities raise the quality of economics instruction.

#### Program Objectives

By participating in TIP, instructors should expect to:

- Understand why and how interactive teaching and learning benefit students.
- Translate knowledge about student learning into effective teaching strategies.
- Develop a plan for using interactive learning in their classrooms.
- Adapt teaching strategies presented in the program for use in their own courses.
- Assess student outcomes that result from using interactive learning.
- Prepare effective interactive exercises for student learning.
- Work in teams to enhance the benefits of the program.
- Engage in an on-going dialogue on teaching and learning with participants and program personnel.
- Participate in the scholarship of teaching and learning by preparing and presenting papers related to pedagogy and practice developed during the program.

### Who Should Apply

The program will help novice and experienced instructors introduce interactive teaching and learning into their courses. Preference will be given to applicants who:

- Describe a course in which they intend to implement interactive learning in the term following the workshop.
- Include a letter of support from their department chair indicating that their Department supports the efforts of the applicant and that the applicant is scheduled to teach the course they describe.
- Have not previously participated in a residential teaching workshop sponsored by CEE.
- Express an interest in participating in phases two and three of the program.

**Minority Recruitment:** TIP will actively recruit women and minority economists. Our budget includes funds to provide partial travel support for participants from U.S. DOE Accredited Post-Secondary Minority Institutions.

**Workshop Costs:** Program funds will pay for lodging on Friday and Saturday, meals except Saturday dinner, and for program materials. Participants pay a \$100.00 program fee and provide their own transportation.

**Application Process:** To apply, applicants must:

1. Complete and submit the application form available at [www.vanderbilt.edu/AEA/AEACEE/TIP.htm](http://www.vanderbilt.edu/AEA/AEACEE/TIP.htm).
2. Send an electronic copy of the department chair support letter described above (separately or with application).
3. Pay a \$100 program fee. (Send a check payable to *the University of Nebraska-Lincoln* to William Walstad, Department of Economics, University of Nebraska, Lincoln, NE 68588-0402.) We treat applications as incomplete until we receive the check. We will refund the fee if we do not accept you or if you withdraw before March 3, 2009. If you withdraw after March 3, you forfeit the fee.

**Acceptance:** Applications for the Program will be accepted between September 2, 2008 and January 16, 2009. A rolling admissions procedure will be used. Some slots will be held open until after the 2009 ASSA Meetings.

### Teaching Innovations Program Fifth and Final Year—2009

Workshops for Economics Faculty on  
Interactive Teaching in Undergraduate Economics



*Bridging the Gap between Current and Best Practice*

**2009 Workshop Locations**  
Hotel Santa Fe, Santa Fe, New Mexico  
June 5-7, 2009

Chicago Marriott Suites O'Hare, Rosemont, Illinois  
June 12-14, 2009

**Sponsored By**  
The Committee on Economic Education  
Of the American Economic Association

**Funded By**  
The National Science Foundation

**TIP Web Site**  
[www.vanderbilt.edu/AEA/AEACEE/TIP.htm](http://www.vanderbilt.edu/AEA/AEACEE/TIP.htm)

**ASSA Meetings**  
Program staff will report on TIP at the 2009 ASSA Meetings in San Francisco. Please consult the conference schedule to confirm the time and place.

**For More Information and to Complete an Application**  
Email [tipeson@unlnotes.unl.edu](mailto:tipeson@unlnotes.unl.edu) or visit the TIP Web Site.

## Teaching Innovations Program Particulars

**Phase One** is participation in a three-day workshop. At the workshop, participants are introduced to interactive teaching strategies and plan to implement them. Each workshop participant is invited to participate in phases two and three of the project. Although participation in phases two and three is not required, we give preference to applicants who indicate that they intend to participate in phases two and three.

**Phase Two** is participation in web-based instruction that occurs in the following academic year. Participants complete two modules that help them introduce interactive teaching strategies in a course they are teaching. They review instructional materials, prepare learning exercises for their courses, use their newly created materials in teaching, and complete an assessment designed to help them improve the new materials and their use. During phase two, participants communicate with teammates and program experts. Participants who attend the workshop and complete two follow-on modules receive from the Committee on Economic Education a Certificate of Achievement that they can use as tangible evidence of their dedication to teaching.

**Phase Three** is participation in the scholarship of teaching and learning. TIP organizes sessions at ASSA and regional association meetings devoted to papers on teaching prepared by program participants. TIP also creates opportunities for participants to share ideas and receive feedback about their papers and teaching strategies.

### Acclaim for TIP

Participants at eight earlier workshops rated them highly.

- Seventy-nine percent of participants rated the workshop a better use of their time than their next best alternative (and nineteen percent said it was at least as good a use of their time).
- One participant said that the workshop “was one of the TOP experiences that I have had in a conference in my professional career...a super learning environment.”
- Another said “I believe my time spent in these last two days was the best time invested in my teaching career.”
- Ninety-three percent of participants indicated that as a result of the TIP workshop, they were highly likely to participate in phase two of the program.

## Support from Economics Department Chairs

Department chairs believe that TIP and its Certificate of Achievement have high value.

- Sixty-eight percent said that receipt of the certificate would strengthen a candidate’s case for promotion and tenure.
- Eighty percent said they would recommend that young faculty participate in the workshop and follow through to earn a certificate of achievement.

## Typical Workshop Schedule

<b>Friday</b>	
1:00 – 1:45	Workshop Overview
1:45 – 2:30	Team Assignment
2:30 – 3:00	Break
3:00 – 4:15	Outcome Assessment
4:15 – 5:30	Experiments
5:30 – 6:30	Social Hour
6:30	Dinner
<b>Saturday</b>	
8:00 – 8:30	Breakfast
8:30 – 9:00	Team Reports
9:00 – 10:15	Interpretive Questions and Discussion
10:15 – 10:45	Break
10:45 – 12:00	Cooperative Learning
12:00 – 1:00	Lunch
1:00 – 2:15	Context Rich Problems <sup>Chicago</sup>
	Or
	Interactive Learning in Large Classes <sup>SFe</sup>
2:15 – 2:45	Break
2:45 – 4:00	Case Studies <sup>Chicago</sup>
	Or
	Teaching with Clickers <sup>Santa Fe</sup>
<b>Sunday</b>	
8:00 – 8:30	Breakfast
8:30 – 9:30	Phase Two and Blackboard
9:30 – 10:15	Participant Teaching Ideas
10:15 – 10:45	Break
10:45 – 11:45	Team Assignment
11:45 – 12:00	Workshop Evaluation
12:00 – 1:00	Optional Lunch

## Program Instructors

**Patrick Conway** is Bowman and Gordon Gray Professor of Economics and Director of the Center for Faculty Excellence at UNC-Chapel Hill. He is the TIP expert on case use.

**Tisha Emerson** is Associate Professor of Economics at Baylor University. She is a TIP expert on classroom games and participated in the 2007 TIP workshop in Santa Barbara.

**Denise Hazlett** is Professor of Economics at Whitman College. She is a TIP expert on classroom games and has received NSF funding to design classroom experiments.

**Gail Hoyt** is Professor of Economics at the University of Kentucky. She is a specialist in using interactive learning techniques in large lecture settings.

**Kirsten Madden** is Associate Professor of Economics at Millersville University. She is a TIP expert on discussion and participated in the 2006 TIP Workshop in Santa Fe.

**Mark Maier** is Professor of Economics at Glendale Community College. He is a TIP expert on context rich problems and author of *The Data Game*.

**KimMarie McGoldrick** is Professor of Economics at the University of Richmond, TIP expert on cooperative learning and recipient of the Virginia Outstanding Faculty Award.

**Robert Rebelein** is Assistant Professor of Economics at Vassar. He is a TIP expert on classroom games and participated in the 2005 TIP Workshop at Georgetown.

**Michael Salemi, TIP Co-PI**, is Bowman and Gordon Gray Professor of Economics at UNC-Chapel Hill and co-author of *Discussing Economics: A Classroom Guide*.

**William Walstad, TIP PI**, is Hay Professor of Economics at the University of Nebraska-Lincoln and co-editor, *Teaching Undergraduate Economics: A Handbook for Instructors*.

### Workshop Experience

All workshop staff have organized and presented at a wide variety of educational programs and conferences. Since 1990, Salemi and Walstad have directed Programs funded by the Lilly Foundation and the Calvin K. Kazanjian Economics Foundation, Inc.

**Appendix B  
Advertisement for the 2005 TIP Workshops**

**Announcing  
Interactive Teaching in Undergraduate Economics Course:  
Bridging the Gap between Current and Best Practices**

**Sponsored By  
The Committee on Economic Education of the American Economic Association  
And Funded By the National Science Foundation**

**The Program**

The program is an opportunity for college economics instructors to improve their teaching skills and participate in the scholarship of teaching economics. The program has three parts. The first is a series of three-day workshops that introduce participants to interactive teaching and learning. Workshops will be held each year starting in 2005 and concluding in 2009. The second is a program of web-based, follow-on instruction that will help participants introduce interactive teaching into their courses. The third is a set of opportunities to present papers on new teaching ideas that result from participation in the program.

**Application to Participate in the Project**

On behalf of the AEA Committee on Economic Education and the National Science Foundation, we invite prospective participants to learn more about the Program and to apply to participate in the workshops that will be held in 2005. To learn more about the program, workshops and the application process, please visit the program web site.

**2005 Workshops**

May 20-22, 2005: Rizzo Conference Center, University of North Carolina at Chapel Hill  
June 3-5, 2005: Georgetown Conference Center, Georgetown University

**Program Web Site**

**[www.vanderbilt.edu/AEA/AEACEE](http://www.vanderbilt.edu/AEA/AEACEE)**

**ASSA Meetings**

The Committee on Economic Education is sponsoring a session at the 2005 ASSA meetings in Philadelphia to introduce the Program. Please consult the conference schedule for the specific time and place of this session.

**Appendix C**  
**TIP Workshop Program, Hotel Santa Fe, June 5-7, 2009**

**Friday, June 5**

13:00-13:45	Workshop Overview & Case for Interactive Learning	Mike	Tab 1
13:45-14:30	Team Assignment One	Gail	Tab 9
14:30-15:00	Break		
15:00-16:15	Cooperative Learning	Gail	Tab 2
16:15-17:30	Experiments	Tisha	Tab 3
18:00	Cash Bar Reception followed by Dinner		

**Saturday, June 6**

07:30-08:30	Breakfast		
08:30-09:00	Team Reports	Gail	
09:00-10:15	Interpretive Questions and Discussion	Mike	Tab 4
10:15-10:45	Break		
10:45-12:00	Assessment	Tisha	Tab 5
12:00-13:00	Lunch		
13:00-14:15	Interactive Learning in Large Enrollment Courses	Gail	Tab 6
14:15-14:45	Break		
14:45-16:00	Using Clickers to Promote Active Learning	Mike	Tab 7
	Participants are on their own for dinner.		

**Sunday, June 7**

07:30-08:30	Breakfast		
08:30-9:30	Phase Two and Bb Technology	Tisha	Tab 8
9:30-10:15	Participant Teaching Ideas	Mike	
10:15-10:45	Break		
10:45-11:45	Team Assignment	Gail	Tab 9
11:45-12:00	Workshop Evaluation	All	Tab 10
12:00	Optional Lunch		

**Appendix D**  
**AEA-NSF Teaching Innovations Program Workshop Evaluation**

Please assist us in making revisions to the TIP Workshops by completing this survey. We respect your opinion and would be especially grateful for your suggestions and constructive criticism.

1. Please check one. My institution is a:

- Research University.
- University.
- Four-year College.
- Two-year College.
- Other.

Specify \_\_\_\_\_

2. The number of years I have been teaching undergraduate economics is: \_\_\_\_\_

3. Please rate the workshop sessions using the scale: 5=Exceptional Value, 4=High Value, 3=Solid Value, 2=Some Value, 1=Little Value, 0=No Value.

A list of sessions appeared here.

4. As a result of my participation in the TIP Workshop, it is \_\_\_\_\_ likely that I will participate in the follow-on instruction portion of the TIP program.

Highly                       Fairly                       Not

5. What is your overall evaluation of the Workshop compared to the opportunity costs of your time? The TIP Workshop was:

- a better use of my time than my next best alternative.
- as good a use of my time as my best alternative.
- of some value, but I could have put my time to better use.
- almost a complete waste of my time.

6. What is your reaction to the quality of materials we provided?

- High Quality. The same materials should be used for future workshops.
- Good Quality, but some improvements should be made.
- Poor Quality.

7. What is your reaction to the workload during the workshop itself?

- Too Heavy. We should have had more time off.
- About Right. I was still alert for the afternoon sessions.
- Too Light. We should have scheduled more sessions and covered additional topics.

8. What was the greatest strength of the workshop?

9. What was the greatest weakness of the workshop?

10. What suggestions do you have for including new topics in future workshops? How should we make time for them?

11. What other suggestions would you make for improving the workshop?

12. Were you satisfied with the facilities? Were you able to get the help you needed to make your stay comfortable and enjoyable?

All of the questions that asked participants to choose a response from a list also invited them to make additional comments and allowed space for those comments.