

Interactive Theater Program

*Final Report for Grant # EiF98.5
of the Engineering Information Foundation*

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This report is a summary of the Interactive Theater Program that was instituted in the College of Engineering at the University of California at Berkeley with the critical support of a grant from the Engineering Information Foundation.

Interactive theater — theater that combines live performance and audience participation – has been successfully used to improve the educational and professional climate in academe and industry. This report describes an adaptation of this concept to improve the climate for diversity and difference; counteract recent degradations of campus climate due to anti-affirmative action legislation in the State of California; improve the quality of teaching; and build a more tolerant community among a diverse student body, staff and faculty. It identifies ways the program increased awareness and empathy, promoted positive new behaviors, and provided significant data, suggestions and support for change.

This report includes:

- I. A narrative account of what was accomplished by expenditure of the funds, including a description of progress made toward achieving the goals of the grant
- II. A financial accounting, according to the line item categories of the approved budget
- III. Information about publications
- IV. Appendices

I. Summary of the Interactive Theater Program

In Spring semester of 2000 the efforts of a cross-campus collaboration of faculty and staff culminated in the implementation of the Interactive Theater Program (ITP) in the UC Berkeley College of Engineering. A series of Interactive Theater workshops were held for Engineering faculty to create a positive and fair teaching environment in the College of Engineering (COE). The goals of the program are to create campus climate change, improve the quality of teaching, enhance fairness in the workplace through increased awareness and behavior change among individuals, and build a more tolerant community among a diverse student body, staff and faculty.

With the critical support of the two-year matching grant from the Engineering Information Foundation, this program was created in a collaborative partnership between the College of Engineering, the Staff Affirmative Action Office and the Department of Dramatic Arts and Music. The leadership team consisted of College of Engineering Professor Alice Agogino, as the principal investigator, Carla Trujillo, Director of Higher Education in the Center for Underrepresented Engineering Students and Edith Ng, Director of Staff Affirmative Action and Diversity Programs as the co-coordinators of the program and Mark Griffith, Chair of the Department of Dramatic Art and Music, as the theatrical coordinator. A campus-wide Advisory Group, consisting of faculty and members of university administration (as detailed in the grant proposal) supported the implementation of the program.

The program met all of its proposed goals. Observations of the program and written evaluations from faculty demonstrate that the program increased awareness and empathy, promoted positive new behaviors, and provided significant data, suggestions and support. Four workshops were held for COE faculty to meet these goals. Our goals also included providing on-going programs in the College of Engineering as well as replication of the program in other divisions of the university. A fifth, demonstration workshop was held for leaders in the wider campus community, which introduced the program, demonstrated the effectiveness of its methods and initiated collaboration with other campus units to begin the expansion of the Interactive Theater Program.

1.0 Program Description

Interactive Theater workshops combine live performance and audience participation to help people examine complex human issues^{3,7,10}. “Interactive theater is a great way for people to confront sensitive issues in a non-threatening atmosphere. It touches them where they live. They see themselves and their responsibilities in the characters⁴” (Robert Young, Director of Diversity Initiatives, Eastman Kodak Company).

In Spring 2000, four Interactive Theater workshops were offered to faculty in the UC Berkeley College of Engineering and one demonstration workshop was conducted for the general campus community. A Dramatic Arts faculty member served as the theatrical director and taught Dramatic Art 166, an experimental class in which the students and staff who enrolled in this course received acting instruction along with readings associated with social change processes.^{2,5,8,9} During the workshops held in the College of Engineering, these actors performed scenes that vividly illustrated problematic encounters between students and between students and faculty with diversity themes. At the end of each scene, the actors remained in character as the faculty audience, with the assistance of the facilitators, had the opportunity to ask them any questions about their behavior, feelings, and motivations.

At the end of this question and answer period, the actors stepped down and facilitators asked the audience members to imagine stepping into the shoes of each character and discuss among themselves the causes, consequences and possible solutions to the problematic attitudes and behaviors represented in the scene. The process allowed participants to experience empathy for all of the characters, think through what actually happened, identify problems, and consider solutions and strategies for prevention. Audience members experienced a variety of emotions as they interacted with the characters. The responses ranged from sympathy or amusement to frustration and anger. Once the audience made that connection to the issues presented, they began a joint problem solving process. One of the participating Engineering faculty said of the workshops, "I found the guided discussions among the faculty members to be very effective. I benefited from listening to various approaches that faculty members have taken regarding issues in the classroom."

For more information about the workshops see Appendix A, which gives a plot synopsis of the four scenarios: "A Little Extra Time," "But I'm Here Now", "Faces of the Future", and "The Invisible Woman". Each workshop included a combination of two of the four scenarios. In demonstrating how the program met its goals, we refer to examples from the workshops. Appendix B gives the format of a two hour workshop. Appendix C is an example of a guide that the facilitators used to deliver and lead the workshops. The facilitator guide provides a thorough description of the objectives and methods of each portion of an ITP workshop. A Sample Playbill is provided in Appendix D and news articles are provided in Appendix G. Evaluations of the workshops are summarized in Appendix E and faculty attendance by department is given in Appendix F. A videotape of the demonstration workshop is available upon request.

2.0 How the Interactive Theater Program Met its Goals

The goals of the UC Berkeley Interactive Theater Program were:

1. To identify and promote new behaviors conducive to eliminating bias and increasing equity
2. To increase awareness about issues of gender and racial equity and other dimensions of diversity
3. To increase empathy for different points of view
4. To provide data on relevant issues and suggestions for creating an equitable learning environment
5. To promote on-going dialogue and support for program participants
6. To build a model in engineering that can be transferred elsewhere on campus

Goal 1: The ITP will identify and promote new behaviors conducive to eliminating bias and increasing equity

Identifying needed new behavior

Research conducted in the College of Engineering on the experience of diverse graduate and undergraduate students and faculty provided the foundation for the workshop content. To ensure that the program dealt with the most pressing and relevant issues in the College of Engineering, the initial phase of the program included extensive research within the College. A graduate student from the social sciences and Lura Dolas, the theatrical director, conducted 100 hours of interviews with graduate and undergraduate students as well as with faculty in the College. This research identified the kinds of behavioral change that was needed in particular areas. Synopses of the four scenarios are provided in Appendix A.

In addition, a student climate questionnaire (<http://www.ce.berkeley.edu/~ccytsao/itp.html>) was conducted in Spring 2000 in order to get a broad base understanding of student perceptions of diversity and difference. The demographics of the respondents were as follows: 53% of survey respondents were undergraduates and 35% were female; 39% of the respondents were Asian or Asian-American; 3% reported they had a disability;

English was a second language for 24% of the students; 14% were international students and 6% were re-entry students. It was disturbing to find that 19% of the students reported difficulty in response to question #30: “My experience in the COE has been much more difficult than other students because of...” By far the most common attribution was “negative expectation” (66% of total with difficulties), whereas “stereotyping” (48% of total with difficulties) and “prejudice” (22% of total with difficulties) were also significant as factors. Women were more likely to report these difficulties than were men (25% versus 17%). 17% of the students said that they experienced inappropriate comments by engineering faculty in class. Female students were more likely to feel isolated in class than male students.

A significant portion of both female and male students wanted to see more women in the College of Engineering. 59% of the students wanted to see more female student colleagues (Fig. 1) and 48% wanted more female faculty.

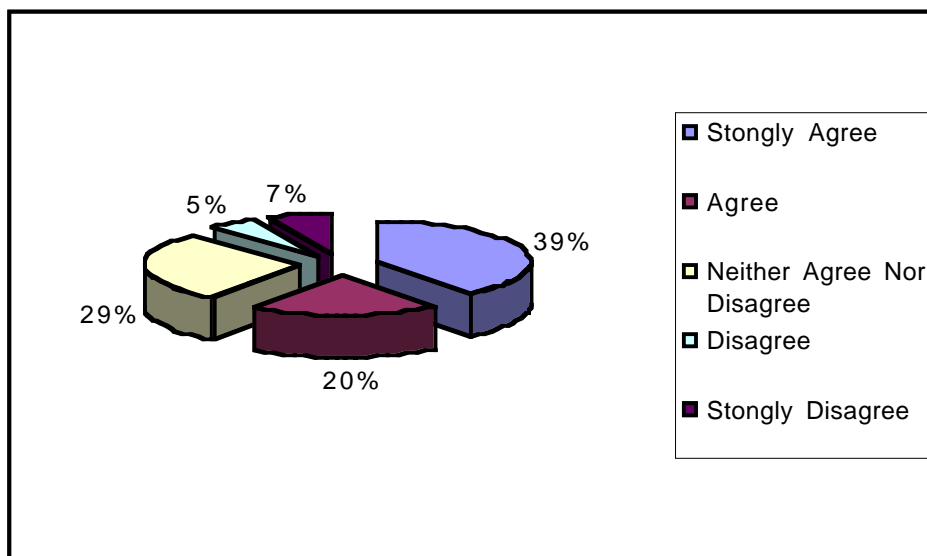


Fig. 1: Question #23, “I wish there were more female students”.

Promoting behavior conducive to eliminating bias and increasing equity

The Interactive Theater Program promoted new behavior by increasing awareness of the presence and the impact of bias and inequity, developing empathy for the affected students, and by providing data that corrects harmful myths and suggestions for new ways of teaching and mentoring students. The following three goals cover these aspects of the program.

Goal 2: To increase awareness about issues of gender and racial equity and other dimensions of diversity

The medium of Interactive Theater effectively increased awareness of both the personal and the institutional aspects of bias and inequity. The four scenarios that comprised the program address issues of gender, race, age, and disability. In each scene, and in the question and answer period that follows, the audience witnesses the deeper impact of the inappropriate treatment that the student or faculty characters demonstrate.

The audience becomes more aware of the impact of differential treatment on individuals, and they receive a glimpse into the life and academic experience of diverse students. The characters show both the emotional

impact of prejudice, and the practical impact that an unsupportive academic environment has on students' opportunities to succeed. The audience could not dismiss what they witnessed, since the research-based scenes vividly address issues of current concern in the College of Engineering.

The audience has the opportunity to widen their awareness through asking the characters probing, poignant and tough questions after each scene that would be too uncomfortable or difficult to ask in every day situations. Here are some examples of the questions faculty asked:

After the scene, "But I'm Here Now"

Of Professor James:

"Is the issue of sexual harassment on your mind as you deal with students?"

"How do you deal with tension between male and female students?"

Of Rosa, a Latina student:

"Would this situation feel any different to you if the professor were Latino?"

"Have you experienced the same difficulties before?"

After the scene, "Faces of the Future"

Of Mary and Fred:

"Do you have any positive vibes towards these old white guys in terms of their accomplishments, ignoring race and gender?"

"Do you want role models for your benefit, or for the white men to see that women can succeed?"

Of Ted:

"How do you know which students were admitted under affirmative action?"

"When you see a fellow student, he/she is a minority, do you see this student as not as good as someone else?"

Finally, program evaluations also indicated that the workshops were successful in increasing awareness. When asked to rate whether the workshop "increased my understanding of the experience of students of color (older/re-entry students, students with disabilities, and women students)" faculty rated the workshops on average as "very successful" (Appendix E).

Goal 3: To increase empathy for different points of view

The Interactive Theater method is designed to be non-threatening to the participants. This approach shifts the focus from blaming and finger-pointing which creates distance and alienation, to empathetic understanding. This fosters deeper awareness and the desire to address underlying causes.

When participating faculty were asked to rate how well they could empathize with the characters, the average response was 4.36 on a five point scale. See Appendix E for the complete evaluation.

The Interactive Theater model has several inherent advantages for developing empathy for diverse experiences and perspectives. The three key points in building empathy are the scenes, the actors, and the facilitators. Each scene was written to portray realistic, complex situations. The scenes represent multiple points of view, and show the audience behind the scenes thoughts and motivations of the characters. Each character is a realistic human being with understandable reasons for being the way s/he is. Each character does some things well and could do some things better. Describing this balance of feelings and perspectives gives characters depth and helps the audience identify with her/him. Knowing the life experience, emotion and logic that shape a character can help the audience identify with a person that could on the surface seem

disagreeable or irresponsible. Then, even if the observer disagrees with an action, s/he can still empathize with how the character got there.

The actors also play a key role in developing audience empathy. The student and staff actors had the unique opportunity of receiving training in acting, as well as in the techniques of creating social change. In their preparation for the Question and Answer period in particular, the actors learned to remain connected to the audience by presenting their characters in a balanced way. In presenting a somewhat balanced character (e.g., prejudiced but also a little concerned), the actors hint at and reveal areas where change is possible.

At times, during the workshops, the faculty audience empathized so strongly with the characters, that they would try to influence the characters to act with more sensitivity towards each other. For example, after the scene “A Little Extra Time” in which the faculty character, Professor Jamison, was dismissive and skeptical of a student that came to ask her to comply with his learning disability accommodations, the audience asked Professor Jamison: “If your child was in a similar situation, how would you want them to be treated?” and “What would you say is the best way to deal with your skepticism?” The audience asked the student character, David: “Is there anything that could have been done to make it easier for you?” and “After this experience, how will you feel approaching other professors?”

Facilitators ensure that no one character is attacked or blamed, which also contributes to allowing the audience to connect with both sides of the issue presented, often in a significant and new way. Once that connection is in place, the facilitators then direct the dialogue to the problem-solving portion of the discussion.

Goal 4: To provide data on relevant issues, and to provide suggestions for creating an equitable learning environment

The ITP provided participating faculty with a variety of information and resources. There were four main data points regarding relevant issues and suggestions for inclusive and effective teaching:

- a) a packet of information given to each participant,
- b) the information exchange that occurred between faculty members,
- c) actors and facilitators, and
- d) subject experts.

Information Packets

The first source was a packet of information that each person who attended a workshop received. This packet included information on all of the dimensions of diversity that the scenarios addressed, including gender, disability, race, and re-entry students. The resource related contents included:

- a list of on campus resources available to faculty,
- a booklet from the Disabled Students Program with information on mandatory accommodations and suggestions on inclusive teaching by category of disability (such as learning disabilities, mobility impairments, etc.)
- an article defining learning disability, with information on the testing/diagnostic procedure
- a copy of the campus policy on sexual harassment
- articles on creating gender equity in the classroom, with a six year analysis of the status of women students in the Electrical Engineering and Computer Science department
- an article on affirmative action and racial diversity in higher education
- contact information for the ITP coordinators and subject experts

Information Exchange among Faculty

The second valuable source of information consisted of suggestions from the faculty themselves. During the problem solving/discussion periods that followed each scene, faculty told stories that illuminated the problems at hand and shared ways in which they had successfully dealt with similar situations. For example: following Scene 4, which depicts a problematic group project interaction, one faculty person described how he had observed similar situations in his teaching experience and that one method he had used successfully dealt with gender discrimination among students: He ensures that every project team that includes women, has at least two women. He noticed that the presence of more than one female student significantly decreased mistreatment by male students. Other audience generated suggestions included: developing incentives for successful teamwork, considering group dynamics as a more important focus of teaching, and instituting new ways of getting feedback from students to faculty. *Listening to their colleagues was perhaps the most valuable source of new ideas for the faculty present, since their peers are often times the most credible experts.* Faculty commented in the evaluations that “I found hearing other faculty experiences, approaches and options very useful.” They also found the discussion portions of the program too short and wanted to spend more time developing deeper solutions. This is something we can develop further in the future.

Actors and Facilitators

Third, both actors and facilitators suggested possible solutions. While the primary role of the actors was to present a realistic situation and elicit empathy from the audience, when asked, their characters also presented ways to address the problems depicted in the scenes. Since facilitators were Berkeley Engineering faculty and staff who work on diversity issues on campus, they too were a source of information and suggestions.

Subject Experts

Finally, there were knowledgeable subject experts present to provide information during the discussions. Each of the scenes addressed persistent myths about women, people of color, people with disabilities, and re-entry students. For example, in the scene, “A Little Extra Time” described above, many in the audience shared the same misperceptions as the faculty person in the scene, namely, that learning disabilities are not legitimate, students are cheating the system, and learning disabilities are a growing fad among students. These harmful beliefs were addressed by Dr. Connie Chiba, a representative from the Disabled Students Program, who presented factual information about the rigorous diagnostic testing required to receive accommodations and about the number of students on campus with learning disabilities. Faculty showed great interest in this concrete information and suggestions given by Dr. Chiba on accommodating students with disabilities. Faculty also expressed interest in follow-up programs dealing specifically with disability issues.

Goal 5: To promote on-going dialogue and support for program participants

On-going efforts

When asked to rate whether the program “gave me the opportunity to have some valuable dialogue with other colleagues about diversity issues in the College of Engineering” the average response from faculty participants was that the program had been “very successful.” Faculty had a rare opportunity to discuss issues of concern around effectively teaching and interacting with diverse students during the ITP workshops. The specific topics the faculty wanted to see addressed in follow-up programming included: supporting the self-esteem of underrepresented groups, dealing with stereotypes among students, more support for effective teaching, disability issues, and bringing the workshops to junior faculty and the retreat for department chairs.

The workshops generated a great deal of momentum in the College of Engineering in addressing aspects of diversity and it will be key to the success of the program to continue our efforts and to develop follow-up programming. On-going engagement with the issues brought forward is crucial to the process of effective change. We are in the process of developing such programming, and plan to collaborate with Richard Newton, the Dean of Engineering and the Chairpersons of individual departments to meet the need for additional information and education that the faculty expressed. The remainder of the grant funds will go towards developing this programming.

Currently, we plan to present a discussion for faculty with a panel of graduated students with disabilities, women and minority students. Given that the students will already be graduated, we anticipate that they will be able to discuss their experiences at Berkeley more openly. They will also talk about their current career activities, which will serve to dispel the myths that these categories of students are unqualified and unable to find employment. This myth is applied to all of these groups, but is a particular obstacle for students with disabilities.

Support

During the discussions, faculty expressed frustration with the lack of guidance and support for developing teaching abilities and for dealing with the interpersonal aspects of effective teaching. The workshops provided relief from this experience of isolation by allowing faculty to exchange ideas and to hear their colleagues discuss that they too shared similar experiences. Some women and minority faculty who attended had felt like the lone crusaders for equity in their fields, and may have felt alienated from the “norm” among their colleagues. These faculty experienced having allies in the facilitators and the actors who shouldered the burden of raising difficult questions. Also, they could experience their colleagues as allies, who were wrestling with important issues that may have been sidelined at other times. There were moments when participants were visibly affected by finally being able to discuss issues that they had struggled with in their departments for years.

The program also provided support to faculty in providing them with information about resources on campus that they may draw upon and utilize in their teaching and mentoring of a diverse student body. While these campus resources have existed previously, the workshops created a direct link and relationship between faculty and offices such as the Title IX Office and the Center for Underrepresented Engineering Students.

Goal 6: To build a model in engineering that can be transferred elsewhere on campus

As part of the original goals of the program, the interactive theater model that was developed in the School of Engineering will be revised, replicated and expanded. To make replication possible, each phase of the program is being documented and evaluated for future development.

In addition to the School of Engineering workshops, a fifth workshop was held as a demonstration for the wider campus community. Executive-level campus administrators, academic department chairs, student services managers and professionals, educational program professionals, HR managers, and professionals from other UC campuses and state universities attended. Response to the workshop was almost entirely positive. When asked on the evaluations what they found most useful, the audience responded with comments such as: "What I found most useful was": *‘the quality of acting leading to an authentic experience,’ ‘the Q&A sessions - there were no villains in the scenes... it allowed us to focus on the humanity of each character and addressed the heart of the matter,’ ‘the approach to the problems, the fact that everyone’s perspective was addressed.’* When asked “what needs to be improved”, responses included: *‘more interaction amongst audience members during discussion,’ ‘more time for discussion’* and *‘deal with*

solutions the problems presented' (which was not done much in the demonstration workshop).

Along with this positive response to the program demonstration, the campus has expressed interest in supporting the expansion of this program. Several units on campus are interested in replicating the program, including representatives of the Graduate Student Instructor Teaching and Resource Center, the Graduate Fellowships Office, Campus Personnel, the Re-entry Student Program, Division of Physical Sciences, the Lawrence Hall of Science, and the University of California, San Francisco. Funding sources are currently being sought out for further development of the ITP program. It is anticipated that the next phase of development will seek funding to support ITP workshops in the academic arena (faculty and graduate student instructor development), student life issues (such as retention, diversity awareness and education), and campus personnel (such as management-staff interactions and concerns).

Along with expanding the implementation of the program, development of the Berkeley Interactive Theater Model of diversity education and organizational development will also continue. Building on the theoretical foundations of the Cornell Interactive Theater Model, the key additional components of the model we developed include research-based programming, “grow-your-own” internal professional development philosophy, cross-campus support, evaluation mechanisms, replicability, and research partnerships with other intra-campus units and with Cornell and other university based interactive theater programs. These components will be applied to future programming and will serve to keep the program model itself responsive and developing.

4.0 Conclusions

The Interactive Theater program at UC Berkeley met all of its proposed goals. Observations of the program and written evaluations from faculty demonstrated that the program increased awareness and empathy, promoted positive new behaviors, and provided significant data, suggestions and support. As part of the overall evaluation process, faculty and department chairs were asked to describe specific changes they made as a result of the workshops. One dramatic example of change has been to remove photographs of male faculty from a seminar room that had been dominated by over fifty such photographs. Female faculty and students had been trying to renovate the room for over a decade, with limited success and the “faces of the future” scenario was built around these complaints. The department is now moving the photographs to a website and a flat screen display that will provide a history of the department and highlight the achievements of the Emeritus faculty. The walls in the seminar room will have displays of student teams and their class projects, undergraduate research and cutting edge research. All will be designed to communicate the “faces of the future in engineering”. Other examples of changed behavior reported include: increased sensitivity to disability issues, more care with gender/ethnic issues in group projects, use of role-playing exercises in class, introduction of examples of women and minority contributions to history of science and technology, and increased efforts to draw out discussions with female students. Next steps for Interactive Theater at UC Berkeley include providing on-going programs in the College of Engineering as well as replication of the program in other divisions of the university.

5.0 Acknowledgements

In addition to the critical support of the Engineering Information Foundation, we wish to acknowledge the matching support from the College of Engineering, the Staff Affirmative Action Office and the Department of Dramatic Arts and Music. The leadership team consisted of Dr. Alice Agogino, Professor of Mechanical Engineering, (principal investigator); Dr. Carla Trujillo, Director of Higher Education in the Center for Underrepresented Engineering Students, (co-coordinator); Edith Ng, Director of Staff Affirmative Action and Diversity Programs (co-coordinator); and Dr. Mark Griffith, Chair of the Department of Dramatic Art

and Music, (theatrical coordinator). A campus-wide Advisory Group consisting of faculty and members of university administration, supported the implementation of the program. Facilitators were Dr. Alice Agogino, Dr. William Kastenberg, Dr. John Matsui, Carmen McKines, Edith Ng and Maria Padilla. Dr. Connie Chiba, a representative from the Disabled Students Program, served as a subject expert as did Carmen McKinnes, the campus Title IX officer. Ms. Lura Dolas, a Dramatic Arts faculty member, completed the interviews and used the accumulated results to write the Interactive Theater scenarios, teach a class dedicated to the program, and direct the implementation of the scenarios. Eileen Mears and Katy Curtis provided project management and administrative support. Finally, the PI wishes to personally thank Dr. Anita Borg, founder and president of the Institute for Women in Technology^{1,6}, for her leadership for women in engineering. Her *60 Minutes* CBS broadcast (“Women on the Web”, March 19, 2000) had an inspirational segment that paralleled the “Faces of the Future” scene.

6.0 References:

1. Bentsen, Cheryl, “Why Women Hate I.T.”, *CIO Magazine*, Sept. 1, 2000, pp. 80-92.
2. Brown, Shirley Vining (2000). “The preparation of minorities for academic careers in science and engineering: How well are we doing?” *In Access Denied: Race, Ethnicity, And The Scientific Enterprise*. (George Campbell, Jr., Ronni Denes, & Catherine Morrison (Eds.). NY: Oxford U Press
3. Butterwick, Shauna and Jan Selman, “Deep Listening in a Feminist Popular Theatre Project”, *Proceedings of the Adult Education Research Conference (AERC 2000)*.
<http://www.edst.educ.ubc.ca/aerc/2000/butterwicksselmanj-web.htm>
4. Cornell University, The Cornell Interactive Theater Ensemble, Interactive Theater brochure.
5. Ginorio, A. B., Marshall, T., & Breckenridge, L. (2000). “The feminist and the scientist: One and the same.” *Women's Studies Quarterly*, XXVIII (1 & 2), 271-295.
6. Institute for Women and Technology: <http://www.iwt.org/>.
7. New York University, “Applied and Interactive Theater Guide,” <http://pages.nyu.edu/~as245/AITG/>.
8. Rains, Frances V. (1995). “Views from within: Women faculty of color in a research university.” Ph.D. Dissertation, Indiana University.
9. Subramaniam, B., Ginorio, A. B., & Yee, S. (2001). “Feminism, women's studies and engineering: Opportunities and obstacles.” (Accepted to the special issue on "Women and Engineering" of the *Journal Of Women And Minorities In Science And Engineering*).
10. The Workplace Diversity Network:
http://www.ilr.cornell.edu/depts/WDN/NetNews/1_1/ResourcesReviews.html.

II. Financial Accounting Report

Comparison of the proposed grant vs. accounting of funds used

Cost Description	Proposed Amount from Grant	Amount Spent	Proposed Matching Donation	Amount Spent
A. Compensation				
1. Engineering Staff				
Principal Investigator, .10 FTE			7,000	7,000
Program Administrator, .15 FTE			10,000	10,000
Technical Support Specialist .5 FTE	25,000	15,896		
Graduate Student Assistant .25 FTE	8,500	6,000		
Student Coders, 80 Hrs	720	0		
2. Dramatic Arts Staff				
Coordinator, .10 FTE			7,000	7,000
Professional Script Writing Instructor	5,000	8,750		
Interactive Theater Director	12,000	15,000		
Graduate Student Assistant, .50 FTE	17,000	11,500		
Interactive Theater Cast Member Stipends	2,000	1,100		
Understudies (80 Hours)	800	100		
3. Facilitators				
Faculty Member Facilitators			14,000	14,000
Staff Member Facilitators			12,000	12,000
B. Benefits				
Engineering Staff Fringe Benefits			13,860	13,860
Liberal Arts Staff Fringe Benefits			6,270	6,270
Total Compensation and Benefits	71,020	58,346	70,130	70,130
C. Miscellaneous Costs				
Program Activities			1,600	1,905.93
Program Supplies			1,300	1,077.69
Facilitator Professional Development Stipends	2,000	1,050		
Total Miscellaneous Costs	2,000	1,050	2,900	2,983.62
Grand Total UCB Donated Funds			73,030	73,113.62
Grand Total Grant Funds	73,020	59,396		

Note: There were several areas where unexpected savings occurred. The most significant of these was under the Technical Support Specialist and Dramatic Arts Graduate Student Assistant. The costs of these support staff were less than anticipated. As we develop additional follow-up programming, we will draw from these funds to meet the proposed goal of providing on-going dialogue and support for Engineering faculty around diversity issues. (See pg. 9 - 10 for a more detailed description.)

III. Publications and Presentations

Since the Interactive Theater Program took place in Spring 2000, the following publications have resulted from the information gathered during the program:

1. Agogino, Alice, Edith Ng, and Carla Trujillo, "Using Interactive Theater to Enhance Classroom Climate," *Proceedings of WEPAN/NAMEPA '01* (April 21 - 24, 2001, Alexandria, Virginia 2001), pp. 67-71.
http://best.me.berkeley.edu/~aagogino/papers/WEPAN_2001.pdf
2. Agogino, Alice, Edith Ng, and Carla Trujillo "Theater Class Helps Transform the Climate for Diversity in Engineering," *Proceedings of ASEE '01* (Session 2592), June 2001.
http://best.me.berkeley.edu/~aagogino/papers/ASEE_2140.pdf

Additional presentations include:

3. AAAS National Conference, Presented April 2001, Albuquerque N.M.
4. The National Conference on Race in Higher Education, Presented May 2000, Santa Fe, N.M.
5. Women Engineering Program Advocates Network National Conference, Presented April 21-24, 2001, Alexandria Virginia.

IV. Index of Appendices

Appendix A - Plot Synopsis of Scenarios

This is a summary of the four scenes that the actors presented during the workshops. Each workshop included a combination of two of these scenes.

Appendix B – Two Hour Workshop Format

Appendix C - Sample Facilitator Guide

This is a guide provided to the facilitators in advance of a workshop which includes the schedule within a workshop, the objectives of each scene, and suggestions on how to best guide the discussion to meet those objectives. This was the guide for the workshop on Wednesday, April 12, which included the scenes “The Invisible Woman” and “Faces of the Future.”

Appendix D - Playbill Sample

Appendix E - Combined Summary of Evaluations of all Faculty Workshops

Appendix F – Faculty Attendance at ITP Workshops by department

Appendix G – Engineering News and Berkeleyan articles on the Interactive Theater Program

These articles are from campus publications.

Appendix A

PLOT SYNOPSES OF SCENARIOS

Scene 1, A Little Extra Time

In this scene, we meet David as he visits Professor Jamison during her office hours. He is there to ask for classroom accommodations for a learning disability for which he has been recently diagnosed. Professor Jamison appears to be busy and impatient but accommodates his request. As David prepares to leave, he overhears something condescending she says under her breath and he confronts her. She apologizes but proceeds to diminish the legitimacy of his disability, tell him he won't be able to compete in the real world in engineering, and ignore his strong academic record. He leaves feeling he has inconvenienced her.

Scene 2, The Invisible Woman

In this scene, we meet Wendy, an African-American female re-entry undergraduate student who is new to the College of Engineering. The scene starts with Wendy and another younger student trying to catch Professor Jamison, who rushes off, leaving her office hours early. The students speak briefly, and Wendy is asked if she is a T.A. On her way to class, Wendy calls her husband and tells him she feels a little apprehensive about the young, tech-savvy students, frustrated with the way women are ignored, and frustrated that she can't penetrate the ethnic "clumps" of students who study together. Later, as class begins, she meets Po, a young Asian American student. They have a brief, awkward conversation. Po also asks if Wendy is the T.A.. As the class begins, Professor Q teaches without facing the class and interacts only with the male students who jump in to have their questions answered. Po and Wendy are the only women in the class. Both are isolated from the classroom conversation but each deals with the issue differently. Po uses one of her male classmates, John, to get her questions and points across to Professor Q, even though Po is a better student. Wendy is observing the interactions and is getting more upset. By the time the scene ends, Wendy is feeling bewildered and invisible.

Scene 3, Faces of the Future

In this scene, we meet three undergraduate students in Engineering who have decided to remove the pictures of Engineering faculty off the wall of a freshman seminar room in one of the Engineering buildings in the middle of the night. Ted, a white male, Fred, an Asian male and Mary, a white woman are friends and are doing this as a surprise birthday present for their friend Padma. She is also a student in Engineering. In the course of their work, they get into a heated discussion over the symbolism of what they are doing, the environment for women and minorities in Engineering, and finally, the merits of affirmative action. At the close of the scene, Ted feels he can no longer be a part of this and leaves.

Scene 4, But I'm Here Now

Rosa is part of a study group with three other males in a COE course. She has difficulty getting her ideas accepted by the group and the men make inappropriate sexual remarks. She conveys her concerns to her friend Anna who gives her some advice. Rosa finds herself increasingly alienated from the study group. In a meeting with the group and the professor where she expresses her viewpoints, she is challenged by the others in her group.

Appendix B

2-HOUR FORMAT FOR INTERACTIVE THEATER WORKSHOPS

3:30-4:00	(30 min.)	Room and materials set-up
4:10-4:15	(5 min.)	Introduction Present background and goals
4:15-4:25	(10 min.)	Scene 1 Actors
4:25-4:40	(15 min.)	Q&A (Actors in character) Audience asks actors Actors and Facilitators questions
4:40-5:05	(25 min.)	Discussion & Problem Solving Facilitators ask questions of audience Subject Experts are available to respond to audience questions
5:05-5:15	(10 min.)	Scene 2 Actors
5:15-5:30	(15 min.)	Q&A (Actors in character) Audience asks Actors and Facilitators questions
5:30-5:55	(25 min.)	Discussion & Problem Solving Facilitators ask questions of audience Subject Experts are available to respond to audience questions
5:55-6:00	(5 min.)	Closing Summary remarks/next steps Program evaluations
6:00-6:20	(20 min.)	Debrief program with Actors and Facilitators

Appendix C

INTERACTIVE THEATER PROGRAM SAMPLE FACILITATOR'S GUIDE

Scenes: #2 “The Invisible Woman” and #3 “Faces of the Future”

Objectives for Script #2:

- To unveil commonly held beliefs and assumptions regarding re-entry students and their implications for student success; to provide realistic information about re-entry students' experiences
- To explore the differential impact of a faculty member's attitude/behavior and teaching style on men and women students
- To discuss what responsibilities faculty and students have for the classroom climate; and to explore ways for faculty to create a more inclusive and effective learning environment
- To discuss how the sink-or-swim culture in Engineering and students' ways of coping with it (such as finding comfort and strategic advantage in forming ethnic/gender cliques) impacts students such as Wendy (who have race, gender, and age differences)

Objectives for Script #3:

- To understand the implications and the impact of visual symbols on minorities and women (how culture conveys who matters, who belongs, and how that affects retention of diverse students, as one example)
- To explore ways to create a more inclusive environment for women and minority students and faculty in College
- To discuss ways to recognize both the history/legacy of engineering departments as well as the people and the work that are present now
- To expose myths about affirmative action (such as: women and minority students are not qualified to be here; affirmative action makes white males “yesterday's meatloaf”)

Subject Expert:

- To provide faculty with some factual information about affirmative action in the post Proposition 209 era.

I. Welcome (2 min.)

- Welcome faculty
- Introduce facilitators

II. Introduce Program (3 min.) Facilitators

- *Set context. Let faculty understand that this is a different kind of program.*
“In this workshop, we'll be examining problematic situations encountered in the teaching environment. We'll have an opportunity to examine these situations from multiple points of view, discuss their impact, and how to address them effectively. The scenarios you see here today are based on recent interviews of faculty and students in the College of Engineering.”
- *Explain what they'll be doing.*
“In a few moments, you'll be watching a problematic situation. At the end of the scene, you'll have an opportunity to talk to the characters. You may ask them any questions you like to better understand the situation. At the end of the Q&A, we'll talk about what happened and explore ways to address the situation more effectively. We'll also have a subject expert on hand to answer any questions. We'll repeat the same process for the second scenario. Any questions before we begin?”
“The first scene is entitled ‘The Invisible Woman’.”

III. Scene #2 The Invisible Woman (10 min.) Actors

Characters

Professor Jamison:	professor of Engineering
Wendy:	new undergraduate re-entry student in Engineering
Po:	female undergraduate student in Engineering
David	male undergraduate student in Engineering
John	male undergraduate student in Engineering
Professor Q	professor of Engineering, teaching in this scene

Student 1 (need name) male undergraduate student in Engineering
Student 2 (need name) male undergraduate student in Engineering

(Try to use character's names and refer to them as characters, not actors, to support the realism of the scene.)

Synopsis

In this scene, we meet Wendy, an African-American female re-entry undergraduate student who is new to the College of Engineering. The scene starts with Wendy and another younger student trying to catch Professor Jamison, who rushes off, leaving her office hours early. The students speak briefly, and Wendy is asked if she is a T.A. On her way to class, Wendy calls her husband and tells him she feels a little apprehensive about the young, tech-savvy students, frustrated with the way women are ignored, and frustrated that she can't penetrate the ethnic "clumps" of students who study together. Later, as class begins, she meets Po, a young Asian American student. They have a brief, awkward conversation. Po also asks if Wendy is the T.A.. As the class begins, Professor Q teaches without facing the class and interacts only with the male students who jump in to have their questions answered. Po and Wendy are the only women in the class. Both are isolated from the classroom conversation but each deals with the issue differently. Po uses one of her male classmates, John, to get her questions and points across to Professor Q, even though Po is a better student. Wendy is observing the interactions and is getting more upset. By the time the scene ends, Wendy is feeling bewildered and invisible.

IV. Q&A between Characters and Audience (15 min.) Facilitators

- *Provide instructions to the audience.*
"Now you'll have an opportunity to ask the characters questions about what just happened. "
- *Have characters introduce themselves again.*
"I'd like to ask the characters to introduce themselves again."
- *Solicit questions from the audience.*
See Facilitator tips below. When time is almost up you can say "Let's have one more question."
- *When time is up, excuse the actors*
"Actors, you are now out of character. Thank you."

Facilitator Tips during Q & A:

Keep in mind goals: Audience will **identify with all characters** – multiple perspectives, **get the facts** about the situation, **understand the impact** of the problem.

How facilitators can lead the discussion to realize those goals:

While the audience will have freedom to ask what they are curious about, facilitators will also gently guide the discussion *if it is needed*. If the audience questions *or the characters' answers* do not meet the above goals facilitators can supplement with additional questions.

If questions from the audience or characters' answers do not elicit empathy:

- ask characters questions about their feelings, what caused them to act/think as they did – knowing the deeper life experience that shapes a character can help the audience identify with an otherwise disagreeable/ineffective character. (i.e. Wendy's life experiences of exclusion can help make her anger understandable and valid; Prof. Q's lack of experience/lack of available guidance for teaching female students may explain his behavior as less intentionally discriminatory)

If one character is coming across in a one-dimensional way (possibly – Prof. Q as inconsiderate villain, Wendy as down-trodden victim), to reveal that each character has both strengths and weaknesses:

- ask questions about the other side – (Ex.: for Wendy: "What strategies do you use to succeed at Berkeley? What power do you have to affect this situation?")
Balanced view would be more like:
 - Prof. Q is comfortable with the teaching style he is accustomed to and may not be aware of how his style affects students; he has not been encouraged to re-evaluate his style given changing student demographics – yet he is responsible for the impact of his behavior.
 - Wendy is upset and frustrated about the ways she and other women are excluded and disregarded - yet she understand why undergrads naturally clump together and that she may have to learn new strategies to succeed. in dealing with student group dynamics.

If there is no focus on the impact on the student and the institution if nothing is done to address this problem:

- ask what the characters will do next, how the situation will affect them going forward (Wendy’s assessment of her chances, Dr. Q’s treatment of other diverse students). Motivate the audience to begin assessing things Prof. J can do better, anticipating further discussion in the next section.

If the interaction between the audience and the characters goes awry –

- Support the actors in staying in character, diffuse prolonged arguments between characters, diffuse prolonged hostility between character/audience

If questions from the audience or characters’ answers focus only on one person’s experience:

- ask other characters questions about their perspective/feelings/experience

(Also see possible questions from the audience – attached at the end of guide)

V. Discussion and Problem Solving (25 min.) Facilitators

Goals: (The first two goals are a supplement to the scene and the Q & A portions. *Discussing solutions and prevention strategies is new to this portion of the workshop.*) Audience will

- continue to develop **empathy for all characters** – multiple perspectives,
- build their **understanding of the impact** and **consequences** of the problem.
- discuss possible **solutions**
- discuss possible **prevention** strategies
- Introduce this section.*
“Now let’s talk about what happened.”
- Start with questions for the audience, from within each character’s perspective: (checking in for empathy)*
 - Let’s step into the shoes of Wendy for a bit: how do you feel about what just took place?
 - Let’s step into the shoes of Professor Q for a few moments: how are you feeling at this point?
- Questions for the audience, from their own perspectives: (examining impact and problem-solving)*
 - What kinds of strategies do the students use (such as Po and John) to cope? (ethnic clumping, using a male to get to the professor) What affect do these strategies have? (exclude Wendy, Po remains invisible)
 - Suppose Wendy came to you for help, and shared with you this situation. As a faculty advisor, what would you say to her?
 - How do you think Professor Q’s teaching style affects his students, especially students like Wendy and Po?
 - Let’s examine Professor Q’s behavior as an instructor. What did he do well and what would you have liked to see him do differently?
 - We’ve observed this situation and heard the perspectives of Wendy, Po, John and Professor Q. Is this a familiar scene to you on this campus?
 - What can individual faculty members do to ensure that the classroom climate is welcome to both women and men, what can the departments?

VI. Scene #3 Faces of the Future (10 min.) Actors

Characters

Ted: White male undergraduate student in Engineering
 Mary: White female undergraduate student in Engineering
 Fred: Asian male undergraduate student in Engineering

(Try to use character’s names and refer to them as characters, not actors, to support the realism of the scene.)

Synopsis

In this scene, we meet three undergraduate students in Engineering who have decided to remove the pictures of Engineering faculty off the wall of a freshman seminar room in one of the Engineering buildings in the middle of the night. Ted, a white male, Fred, an Asian male and Mary, a white woman are friends and are doing this as a surprise birthday present for their friend Padma. She is also a student in Engineering. In the course of their work, they get into a heated discussion over the symbolism of what they are doing, the environment for women and minorities in Engineering, and finally, the merits of affirmative action. At the close of the scene, Ted feels he can no longer be a part of this and leaves.

VII. Q&A between Characters and Audience (15 min.) Facilitators

- *Provide instructions to the audience.*
“Now you’ll have an opportunity to ask the characters questions about what just happened.”
- *Have characters introduce themselves again.*
“I’d like to ask the characters to introduce themselves again.”
- *Solicit questions from the audience.*
See Facilitator tips below. When time is almost up you can say “Let’s have one more question.”
- *When time is up, excuse the actors*
“Actors, you are now out of character. Thank you.”

Facilitator Tips during Q & A:

Keep in mind goals: Audience will **identify with all characters** – multiple perspectives, **get the facts** about the situation, **understand the impact** of the problem.

How facilitators can lead the discussion to realize those goals:

While the audience will have freedom to ask what they are curious about, facilitators will also gently guide the discussion *if it is needed*. If the audience questions *or the characters’ answers* do not meet the above goals facilitators can supplement with additional questions.

If questions from the audience or characters’ answers do not elicit empathy:

- ask characters questions about their feelings, what caused them to act/think as they did – knowing the deeper life experience that shapes a character can help the audience identify with an otherwise disagreeable/ineffective character. In this scene, in which the actors portray very polarized attitudes, developing empathy for the other side may be especially important. (i.e. Ted may have experienced “white male bashing” and feel defensive about race issues because of hearing things like “you’re part of what we’re taking down” from Fred)

If one character is coming across in a one-dimensional way (possibly – Ted as racist, Mary and Fred as disrespectful of history), to reveal that each character has both strengths and weaknesses:

- ask questions about the other side – (Ex.: for Ted: “Could you understand why Padma feels uncomfortable looking at a wall of only older white men?”)

Balanced view would be more like:

- Ted is biased against women and minorities whom he sees as unqualified and he is angry about the taboo nature of discussions about race, yet he probably could relate to other’s frustrations about being excluded since he seems to experience “celebrate diversity” efforts/rhetoric as “let’s put down white men”.
- Mary and Fred (and Padma) are tired of the exclusionary nature of the older academic culture, yet they too could be more inclusive – maybe adding a more diverse representation of photos, instead of sending the message to the older generation that they’re not welcome anymore.

If there is no focus on the impact on the student and the institution if nothing is done to address this problem:

- ask what the characters will do next, how the situation will affect them going forward (Mary’s feeling of how welcome she would be in the engineering field, the hardening of Ted’s attitudes towards women and people of color). This is part of motivating the audience to begin assessing things that could be done better, anticipating further discussion in the next section.

If the interaction between the audience and the characters goes awry –

- Support the actors in staying in character, diffuse prolonged arguments between characters, diffuse prolonged hostility between character/audience

If questions from the audience or characters’ answers focus only on one person’s experience:

- ask other characters questions about their perspective/feelings/experience

(Also see possible questions from the audience – attached at the end of guide)

VIII. Discussion and Problem Solving (25 min.) Bill/Carmen/Carla

Goals: (The first two goals are a supplement to the scene and the Q & A portions. *Discussing solutions and prevention strategies is new to this portion of the workshop.*) Audience will

- continue to develop **empathy for all characters** – multiple perspectives,
- build their **understanding of the impact** and **consequences** of the problem.
- discuss possible **solutions**

- discuss possible **prevention** strategies
- *Introduce this section.*
“Now let’s talk about what happened.”
- *Start with questions for the audience, from within each character’s perspective: (checking in for empathy)*
 1. Let’s step into the shoes of Ted for a bit: how do you feel about what just took place?
 2. Let’s step into the shoes of Mary for a few moments: how are you feeling at this point?
 3. Let’s step into the shoes of Fred for a few moments: how are you feeling at this point?
- *Questions for the audience, from their own perspectives: (examining impact and problem-solving)*
 1. What do you think of the pictures on the wall? What impact do you think they and other visual symbols have on women and minority students and faculty?
 2. When students don’t feel like they belong here, how does that affect retention and students’ future career goals?
 3. As we start our problem-solving, let’s look at the layers of this situation. What are some of the layers?
 4. In this scene most of the characters’ actions and attitudes demonstrated a kind of either/or thinking. What are some ways that we can recognize both the history/legacy of our departments as well as the people and the work being done here now?
 5. What can your department do to have a more inclusive environment?
- *Weave in subject expert only as needed (for this scene).*
Depending on the audience, if questions come up about affirmative action, the subject expert (Carla) can be called upon to clarify what remains after Prop 209 and provide other information. “Our subject expert, Carla Trujillo, is here to answer that question..”

IX. Wrap-up (5 min.) Facilitators

- *Summarize main discussion points/learning for group.*
- *Refer them to packet of materials.*
- *Invite actors back to introduce themselves.*
"Now I want to take this opportunity to thank the actors. These are the real people behind the characters. Actors, please come to the front and introduce yourselves. I especially want to thank our theatrical director, Lura Dolas for her work as well as our staff,
*Thank them for coming and ask them to **complete evaluations.** I*
If they feel this workshop was useful, ask them to encourage their colleagues to attend future (upcoming) workshops.
- *Do raffle.*

Appendix D

HARD COPY OF PLAYBILL

Appendix E

INTERACTIVE THEATER WORKSHOPS, SUMMARY OF EVALUATIONS

<i>Please respond to the following statements by circling the appropriate number on the right. Some statements may apply to workshops on other dates. Mark "Not Applicable" as needed.</i>	<i>NUMBER RESPONDENTS</i>								
								<i>AVERAGE</i>	
	Not Applicable								
	Not at all Successful								
	Not Very Successful								
	Somewhat Successful								
	Very Successful								
	Extremely Successful								
1. This workshop increased my understanding of the experience of women students in the classroom/at the university.	5	4	3	2	1	NA	3.73	52	
2. This workshop increased my understanding of the experience of students of color in the classroom/at the university.	5	4	3	2	1	NA	3.27	48	
3. This workshop increased my understanding of the experience of older/re-entry students in the classroom/at the university.	5	4	3	2	1	NA	4.00	12	
4. This workshop increased my understanding of the experience of students with disabilities in the classroom/at the university.	5	4	3	2	1	NA	4.27	41	
5. I could empathize with some of the characters' concerns and perspectives.	5	4	3	2	1	NA	4.36	55	
6. This workshop gave me the opportunity to reflect on how to foster an effective and inclusive learning environment.	5	4	3	2	1	NA	4.13	53	
7. This workshop gave me the opportunity to have some valuable dialogue with other colleagues about diversity issues in the College.	5	4	3	2	1	NA	4.06	52	
8. The interactive theater method is an effective learning technique.	5	4	3	2	1	NA	4.38	55	
9. The scenarios were effective in initiating discussion on the topics.	5	4	3	2	1	NA	4.52	29	
10. The segment of the program that I found most useful was: (space to respond was larger on the actual evaluation)									
11. Follow-up questions or topics I would like to see addressed are:									
12. I would recommend this workshop to a colleague. YES 91% (50) NO 5% (3) No Answer 4% (2)									

Appendix F

FACULTY ATTENDANCE AT ITP WORKSHOPS BY DEPARTMENT

Engineering Department	Number of Faculty ¹	Attendance	
Bio Engineering	4 ²	4	100%
Civil Engineering	37	11	30%
Electrical Engineering/ Computer Science	70	15	21%
Industrial Engineering & Operations Research	9	6	67%
Materials Science & Mineral Engineering	19	3	16%
Mechanical Engineering	40	19	46%
Nuclear Engineering	6	5	83%
Total ³	185	63	34%

¹ The number of faculty per department is the number of active faculty minus the number of faculty on sabbatical in Spring 2000.

² Since Bio E consists primarily of affiliated faculty, this number represents a total of 3.99 FTE faculty.

³ One additional faculty person from the Math department attended.

Appendix F

ENGINEERING NEWS AND BERKELEYAN ARTICLES ON THE INTERACTIVE THEATER PROGRAM

Copies of news articles are included in the hard copy version of this report. Those accessible by the Internet are listed below:

1. “Interactive Theater program uses drama to address diversity in the classroom”, *Engineering News*, January 24, 2000, Vol. 70, No. 2S.
<http://quartz.coe.berkeley.edu/EPA/EngNews/00S/EN2S/interactive.theater.html>
2. “Interactive Theater workshops for faculty begin this week”, *Engineering News*, April 10, 2000, Vol. 70, No. 12S.
<http://quartz.coe.berkeley.edu/EPA/EngNews/00S/EN12S/int.theater.html>
3. “Dramatic scenarios help engineering faculty explore diversity issues”, *Berkeleyan*, April 26 - May 3, 2000 (Vol. 28, No. 30).
<http://www.berkeley.edu/news/berkeleyan/2000/04/26/clash.html>
4. “Big faculty turnout for for workshops on diversity”, *Engineering News*, May 1, 2000, Vol. 70, No. 15S.
<http://quartz.coe.berkeley.edu/EPA/EngNews/00S/EN15S/intract.theater.html>