

CLASSROOM CLIMATE WORKSHOPS FOR GRADUATE TEACHING ASSISTANTS: TWO YEARS OF RESULTS

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ABSTRACT

This paper introduces results of the Classroom Climate Workshops for Graduate Teaching Assistants offered at Purdue University in 1995 and 1996 under a grant from the Alfred P. Sloan Foundation. Analyses of pre-questionnaires for both years indicated that female engineering and science graduate teaching assistants had a more accurate awareness of gender equity than male engineering and science graduate teaching assistants. Findings from post-questionnaires for 1995 and 1996 revealed that use of dramas was the workshop component of greatest value and quality to participants, followed by discussion of dramas, facilitators, advice and suggestions, and statistics. Follow-up surveys for both years showed that workshop participants felt that treating all students fairly was important, they implemented this action step during the fall semesters and it consequently had a positive impact on their classroom climates. Dissemination of workshops through program materials, a videotape, facilitation guide, and professional presentations are documented. Future plans for pilot faculty workshops, continuation of graduate teaching assistant workshops, a proposal to institutionalize workshops across all schools at Purdue University, and training at other institutions are included.

INTRODUCTION

In college classrooms today we truly need a climate where all students are treated equitably.¹⁰ Classrooms characterized by gender **equity** are ones in which all students, regardless of gender, have an equal opportunity to learn and master course content.⁷ However, gender **inequity** is currently found throughout the educational system.^{5,9} This problem is particularly acute in fields like engineering and science where the majority of faculty members, graduate teaching assistants, and undergraduate students are male.^{4,11} Examples of inequity are differential treatment of students based on gender, use of gendered language, and teaching styles more appropriate for males.⁵ Classrooms with these characteristics hinder learning, lower self-esteem, and adversely affect retention of students.^{1,6,10,12} Challenges for educators include these: creating a comfortable environment through setting the classroom tone;⁴ fostering learning of all students by establishing classroom management;⁸ and promoting interactions between students through encouraging classroom participation.³ Most educators do not intentionally create climates that are inequitable. Rather, gender inequity often results from a lack of awareness, unexamined assumptions, and inadvertent actions.⁷ One means of raising awareness of particular

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problems in education, dealing with a sensitive issue like gender equity, and considering behaviors to improve the climate for learning, is through workshops utilizing interactive theatre as a medium.² Three major objectives of these workshops are to increase awareness of gender equity issues, to explore needs for attitudinal changes in relation to gender equity, and to consider a variety of actions to take to achieve gender equity in the classroom.

WORKSHOP PROCESS

The process of creating Classroom Climate Workshops for graduate teaching assistants began in January, 1995 under a grant from the Alfred P. Sloan Foundation. This effort was a collaboration involving the Schools of Engineering, Science, and Liberal Arts at Purdue University.

A Leadership Team was formed which consisted of the following members: three Coordinators, one each from Engineering, Science, and Liberal Arts; two Facilitators; six graduate teaching assistants equally representing Science and Engineering; one graduate teaching assistant from the Division of Theatre to write scripts and direct cast members; and an administrative assistant. Team members collectively conducted a review of the literature and distributed a survey to female engineering and science students. Next, members were divided into three task groups: drama; discussion; and evaluation. The drama group produced vignettes portraying classroom climate issues that were representative of actual student experiences that were reported in returned surveys. The discussion group developed the workshop format and handled logistics of scheduling workshops such as finding a setting and ordering food. The evaluation group constructed three workshop measures and pilot tested them with a representative group of graduate teaching assistants.

Nine two hour workshops were offered in August and September of 1995 for 266 engineering and science graduate teaching assistants. Workshops were planned for groups of 50 participants and they were held in the morning, during the lunch hour, or in the early afternoon. Food was provided as an added incentive for attending. Folders were given to each participant and they included a workshop program, statistical information, a booklet on gender equity, and pre- and post-questionnaires. Follow-up surveys were sent to workshop participants in November, 1995. Modifications were made to the workshops based on feedback from 1995 participants. A second set of nine two hour workshops for 264 engineering and science graduate teaching assistants were presented in August and September of 1996 and follow-up surveys were mailed to these participants in November of 1996.

MEASURES AND RESULTS

Measures

Three measures were constructed and used to evaluate the 1995 and 1996 workshops: a pre-questionnaire; a post-questionnaire; and a follow-up survey. Pre-questionnaires were completed during the early part of the workshops and post-questionnaires at the end of the workshops. Follow-up surveys were later mailed to participants.

Descriptive Statistics

Considering gender, in 1995, 71% (N=188) of participants were male while 29% (N=78) were female. In 1996, 71% (N=188) of participants were male and 29% (N=76) were female.

Pre-Questionnaires

The pre-questionnaire contained nine statements, each of which examined initial awareness of gender equity issues that had been identified as important in a review of literature. Since each statement was true according to research results, higher agreement with statements indicated a more accurate awareness of gender equity issues. Analysis of pre-questionnaires was performed by creating a composite score through summation of responses. Each statement was rated on a seven-point scale with one indicating strong disagreement and seven indicating strong agreement. This composite score, for each participant, was then subjected to a form of grouping analysis using defined cutoffs of 0 to 20 for low agreement, 21 to 40 for medium agreement, and 41 to 63 for high agreement. The analysis was examined with respect to gender. Findings for both years are illustrated in Figures 1 and 2.

Figure 1. 1995 Pre-Questionnaire:
Gender Awareness
Males vs. Females

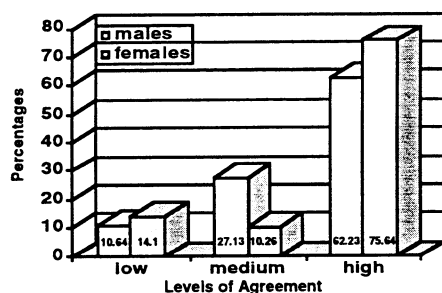
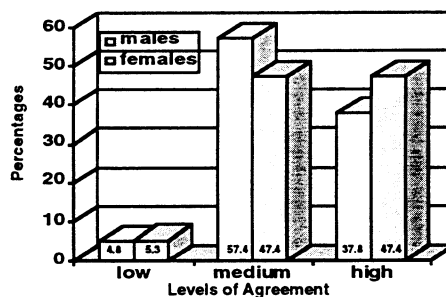


Figure 2. 1996 Pre-Questionnaire:
Gender Awareness
Males vs. Females



Results for both years indicated that more females than males were in the high agreement group.

Post-Questionnaires

A post-questionnaire was used to assess perceptions of participants in regards to various workshop components (dramas, discussions, facilitators, advice/suggestions and statistics). A two-dimensional measure was used to separate the value from the quality of a workshop component. Value represented the importance of a component while quality was the presentation of a component. Once again, a seven-point scale was used with one indicating strong disagreement and seven indicating strong agreement. Mean responses for value and quality of each workshop component in 1995 and 1996 are shown in Tables 1 and 2.

Table 1. 1995 and 1996 Post-Questionnaires:
Mean Responses for Value of
Workshop Components

Components	1996		1995	
	Males	Females	Males	Females
1. Use of Drama	5.90*	6.21*	6.04*	6.47*
2. Discussion of Dramas	5.71*	6.04*	5.72*	6.32*
3. Facilitators	5.60*	5.97*	5.79*	6.18*
4. Advice and Suggestions	5.45*	5.89*	5.54*	6.12*
5. Introductory Statistics	4.99	5.29	5.02*	5.52*

Table 2. 1995 and 1996 Post-Questionnaires:
Mean Responses for Quality of
Workshop Components

Components	1996		1995	
	Males	Females	Males	Females
1. Use of Drama	6.15*	6.46*	6.33*	6.56*
2. Discussion of Dramas	5.70*	6.21*	5.76*	6.25*
3. Facilitators	5.65*	6.04*	5.86	6.07
4. Advice and Suggestions	5.41*	5.94*	5.44*	5.74*
5. Introductory Statistics	5.13*	5.50*	5.16	5.41

* Statistically significant different means at 95% confidence level for males and females.

Overall, use of dramas was of greatest value and quality to participants followed by discussion of dramas, facilitators, advice and suggestions, and introductory statistics.

Follow-Up Surveys

Follow-up surveys were sent to workshop participants in November of 1995 and 1996. An ice cream certificate was offered to all students returning the survey. This was done in an effort to increase the overall response rate which ended up being over 50% for both years. The survey examined three categories, importance, implementation, and impact of action steps that graduate teaching assistants had committed to at the end of the workshops and had then taken in their classrooms. Average or mean scores for each action step and for all three categories were examined in 1995 and 1996. The first year of the workshops, the follow-up survey had a five-point scale with one indicating strongly agree and five indicating strongly disagree. Thus, the lower the mean response, the higher the agreement with the three categories. One year later, the 1996 follow-up survey had a seven-point scale with one indicating strongly disagree and seven indicating strongly agree. Therefore, the higher the mean response, the higher the agreement with these categories. Mean responses for each of the three categories and all action steps are contained in Tables 3 and 4.

Table 3. 1995 Follow-Up Survey:
Mean Responses for Action Steps

ACTION STEPS	IMPORTANT		IMPLEMENTED		POSITIVE IMPACT	
	Males	Females	Males	Females	Males	Females
Treat all Students Fairly	1.10	1.04	1.35	1.40	1.56	1.53
Be Aware of My Behavior as a TA	1.39	1.31	1.77	1.66	2.02	1.81
Set Classroom Tone and Have Control	1.42	1.29	1.86	1.79	1.89	1.79
Encourage Class Participation	1.41	1.25	1.89	1.69	2.19	1.79
Make Equal Eye Contact With All	1.54	1.33	1.81	1.65	2.23	2.00
Use Effective Classroom Management	1.71	1.52	2.33	2.31	2.31	2.32
Use Gender Neutral Language	1.79	1.67	2.03	2.22	2.48	2.33

Table 4. 1996 Follow-Up Survey:
Mean Responses for Action Steps

ACTION STEPS	IMPORTANT		IMPLEMENTED		POSITIVE IMPACT	
	Males	Females	Males	Females	Males	Females
Treat all Students Fairly	6.73	6.87	6.38	6.42	6.18	6.38
Encourage Class Participation	6.36	6.67	5.68	6.00	5.63	6.04
Be Aware of My Behavior as a TA	6.31	6.30	5.95	6.00	5.76	5.62
Set Classroom Tone and Have Control	6.19	6.40	5.74	5.85	5.63	5.62
Use Effective Classroom Management	6.03	6.30	5.49	5.54	5.39	5.56
Make Equal Eye Contact With All	5.98	6.10	5.57	5.96	5.30	5.31
Use Gender Neutral Language	5.64	5.57	5.46	5.29	4.93	4.75

Treating all students fairly received highest ratings in 1995 and 1996 from both males and females in regards to importance, implementation, and impact of an action step.

The Evaluation Task Group is currently in the process of completing analyses of data from pre-questionnaires, post-questionnaires, and follow-up surveys distributed to participants who attended the 1996 Classroom Climate Workshops for graduate teaching assistants.

DISCUSSION AND CONCLUSIONS

The same proportion of females and males existed in sample groups for 1995 and 1996 that were essentially the same size both years. Therefore, members of the Evaluation Task Group decided to focus on gender comparisons for each of the workshop measures. Females who attended the 1995 and 1996 workshops had a more accurate awareness of gender equity issues than males. This may be due to the fact that they have had more experience with such issues during their years of education. Interactive theatre, involving both use and discussion of dramas, was of greatest value and quality in terms of workshop components for 1995 and 1996 participants. Obviously, this was a very effective medium to use in gender equity training for dramas are non-threatening and they provide a common ground for discussions. Treating all students fairly was of highest importance, this action step was implemented, and it had a positive impact in the college classrooms of graduate teaching assistants who attended the 1995 and 1996 workshops. Since gender equity was the focus of the workshops and involves treating females and males equitably, it is not surprising that this particular action step became of greatest importance in terms of implementing, impacting, and having a positive impact on classroom climates at Purdue University.

WORKSHOP DISSEMINATION

Program materials (e.g. participant letters and reply cards, workshop hand-outs, evaluation measures, and annual reports) have been sent to ten institutions and four professional organizations in 1996. A Classroom Climate Workshops Gender Equity Video and Facilitation Guide have been distributed to 99 institutions. Professional presentations related to the Classroom Climate Workshop Program were given in 1996 at the National Association for Women in Education 80th Anniversary Conference, the Ninth International Conference on the First Year Experience, and the 20th National Conference on Academic Advising.

FUTURE PLANS

Pilot Workshops for faculty members in the Schools of Engineering and the School of Science at Purdue University are being presented during the Spring Semester of 1997. One week before Fall Semester of 1997, for the third year in a row, workshops for engineering and science graduate teaching assistants will be offered. A proposal to institutionalize Classroom Climate Workshops for Graduate Assistants across all schools at Purdue University is nearing completion. Finally, plans are being made to take workshops to two other engineering institutions in the United States in the hope of training other academicians to provide programs that will improve college classroom climates.

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