

## **Math Tutoring Report - Spring 2009**

### **1. The goals for in-class tutoring are:**

- 1 To promote students' independence in learning by using the Socratic method, by teaching the underlying processes, and by providing information about study skills.
- 2 Improving students' attitudes and confidence in their ability to do math.
- 3 Facilitate tutor insights into the learning process.
- 4 Provide a student perspective on learning and school success.
- 5 Follow a job description.
- 6 Respect individual differences.
- 7 Assist the professor in the smooth administration of the PSI environment.

### **2. What are the SLO's for in-class tutoring?**

- 1 Ability to communicate mathematically.
- 2 Ability to solve problems presented in their current course work with the appropriate depth, breath, and rigor.
- 3 Develop the skill to use multiple representations to solve problems.
- 4 Become an effective learner by becoming independent, learning "how to learn", and increasing confidence and attitude toward math.
- 5 Learn the underlying concepts and procedures connected to course work.
- 6 Demonstrate information competency skills needed to meet the math problem solving demands of academic course work and life long learning.

### **3. I - What do student evaluations of tutors have to say about whether our program is achieving the goals for tutoring?**

*See Attachment*

### **II - What do the surveys of tutors about their experience have to say about this issue?**

*See Attachment*

## Math Tutoring Report - Spring 2009

Tutors were asked to respond to questions using a scale ranging from 1 - 7. An answer of 1 corresponds to total agreement whereas a response of 7 indicates total disagreement.

### Tutor Self Evaluation Data

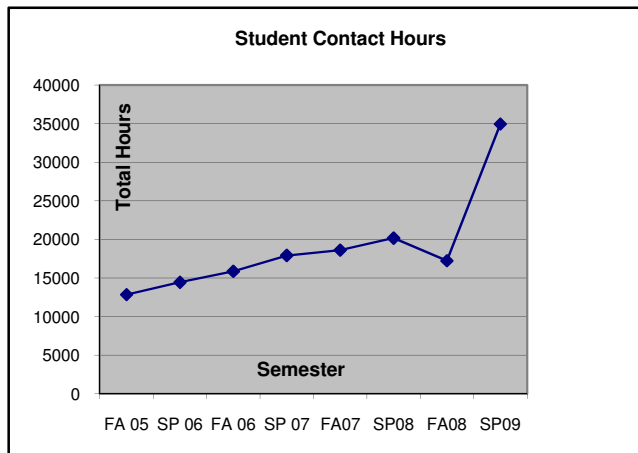
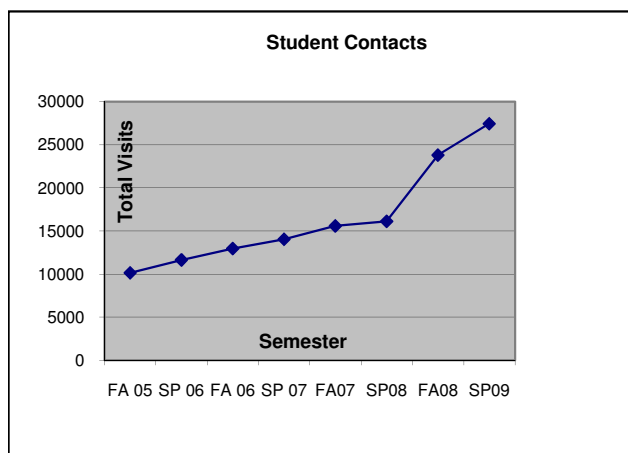
Question #	Responses	1 or 2	3 or 4
1	I am conscientious in the performance of my duties.	11	1
2	Through my tutoring, I promote students' independence in learning.	12	
3	I adapt to students' immediate needs and am culturally sensitive to their needs.	12	
4	I facilitate student insights into how to learn.	11	1
5	I help students improve in their confidence and attitudes toward math.	12	
6	I understand how to tutor students in communicating mathematically, using the problem solving processes and multiple representations of data, understanding basic mathematical skills and adopting good study habits.	12	
7	I am a better tutor because of the training I received.	12	

#### 4. What do the student evaluations of tutors and the surveys of tutors have to say about whether the students are attaining the SLO's for the tutoring program?

*See Attachment*

#### 5. Summary: Effectiveness of the math tutoring program.

*See Attachment*



## Math Tutoring Report - Spring 2009

#### 6. Recommendations for Improving In-class Tutoring or Other Aspects of the Tutoring Program

- \* Continue joint trainings with general tutoring, and department trainings with inquiry based tutor role playing.
- \* Continue to include trainings involving department curriculum and pedagogy.
- \* Include a group activity in training that focuses on circulating among the students.
- \* Include activities that illustrate more than one way to solve a problem
- \* Work with faculty in orienting instructors using in class tutors on the tutor roles in the classroom.

7.

Course #	Instructors Using an In-class Tutor By Course	Total # of Instructors for Course
7	2	2
12	4	9
25	3	11
26	0	1
30	3	9

Course #	Sections Using an In-class Tutor By Course	Total # of Sections for Course
7	2	2
12	5	11
25	3	11
26	0	1
30	3	12

Ethnic Group	Percent of Student Population	# of Tutors in Ethnic Group	Total # of Tutors	% in Group
(Based on fall 2008 research data)				
White	35%	1	12	8.33%
Hispanic	27%	4	12	33.33%
Asian	5%	2	12	16.67%
Black	17%	4	12	33.33%
Other	15%	1	12	8.33%

**3) I** - Analysis of the evaluations show that the tutors are leading above 90% in being friendly and eager to help, and treating our students as an important individual. Achievement of these goals reflect off each other and show that our tutors are creating a welcoming and nurturing learning environment. In addition, 92% of students felt that the tutors explained problems and concepts in terms they could understand. This further indicates that our tutors are connecting with our students and talking to them in a language they can understand. These are a general increase from last semester's outcome. In association, a 10% increase to 89% is seen from last semester's rating on increasing students' problem solving abilities. In conjunction, an 8% increase to 89% is seen from last semester's rating on students being able to understand similar problems.

The general rating in the other categories are above 80% showing satisfactory ratings. This includes encouragement in communication of thinking, guiding by asking questions, helping in understanding similar problems, improved attitude towards Math, and learning skills that will help them be successful in other courses.

This increase in rating shows the joint efforts in training with the general tutors, and department trainings need to be continued, stressing our goals and continued trend in success.

**II** - The survey of the student tutors is reflective of the evaluation by students. The tutors felt that they have been conscious of attempting to gauge a student's understanding by use of the Socratic Method, and felt they have encouraged students to ask questions by being patient with students. They have indicated the trainings in the Math Department and trainings with general tutoring have helped them be more conscious of meeting our tutoring goals. In addition, the Math department trainings have made students aware of the curriculum and pedagogy used to solve problems. The tutors have said they would like to continue to have more of these trainings to get more practice with use of the Socratic Method and additional methods used in solving various problems. Since, last semester the concern of working with instructors has come up again. At times, the tutors felt that some instructors are not clear with giving directions and delegating tasks. This indicates the department should work with the coordinators on letting adjuncts be aware of the tutor's role in the classroom.

4) The data indicate that SLO's are being met at satisfactory and above satisfactory levels. Both evaluations by students and tutors are reflective of each other. The tutors are eager to do well and help students with their Math. We still need to work more on communication of the tutor's role in the smooth administration of the PSI environment.

5) The tutors are pleased with the training they have received. They feel the incorporation of the department curriculum has prepared them for the questions they have received from students. Additionally, the trainings have helped keep them conscious of the SLO's and use of the Socratic Method. Evaluations by instructors show that they would like students to make use of the inquiry method more, and offer more than one way to solve a problem. That said, most are aware that our new student tutors will get better at this with each semester they work. Also, instructors would like tutors to circulate more, rather than wait for questions to be asked.