

Math Tutoring Report - Fall 2008

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

Evaluations continue to indicate that tutor training must include additional training in the development of two critical skill sets needed by students for optimal learning to occur. One is the development of communication skills, both written and oral; the other skill set involves the use of multiple strategies to solve math problems. Other areas of focus should center on use of Socratic questioning during tutoring (this is a skill that must be practiced and continues to be a challenge for new and inexperienced tutors), improving students' attitude and confidence towards math, as well as the development of study skills that tutees can use to be successful in other courses.

What do the surveys of tutors about their experience have to say about this issue?

Ninety percent of the tutors responded that through their work as tutors students' attitudes towards math and students' confidence in their ability to perform math had increased. Ninety percent of tutors also feel that they are culturally sensitive. The two areas of weakness, according to the tutors, are in promoting students' independence, and in the facilitation of insights into the learning process. In addition, tutors responded that it would be helpful to have more interaction with the instructors they are assigned to work with. One tutor stated, "It sometimes feels as though we are working next to the teachers instead of with them."

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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

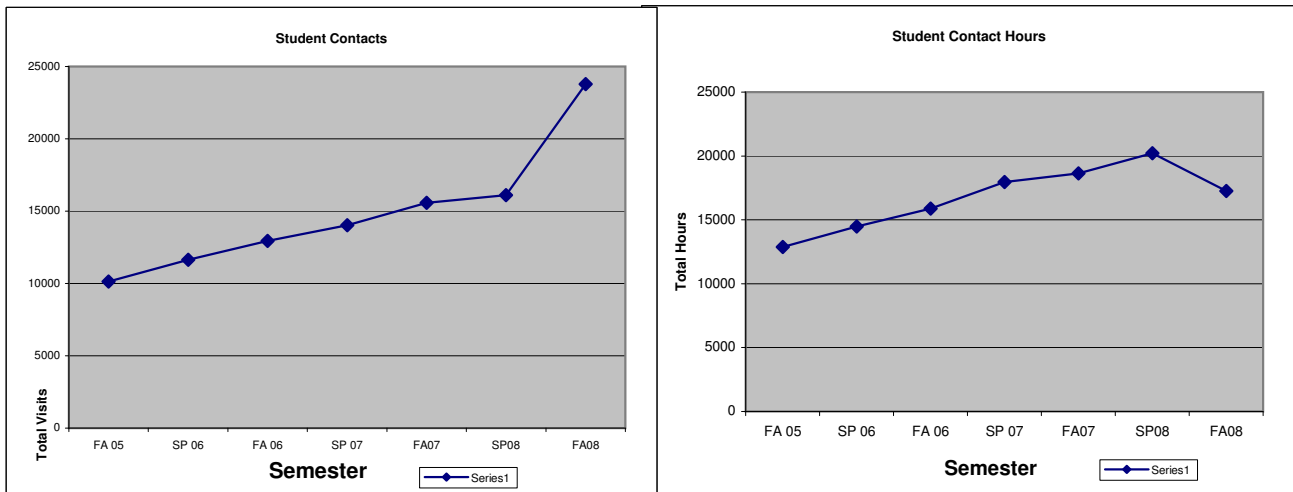
Question #	Responses	1 or 2	3 or 4
1	I am conscientious in the performance of my duties.	10	0
2	Through my tutoring, I promote students' independence in learning.	7	3
3	I adapt to students' immediate needs and am culturally sensitive to their needs.	9	1
4	I facilitate student insights into how to learn.	7	3
5	I help students improve in their confidence and attitudes toward math.	9	1
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.	8	2
7	I am a better tutor because of the training I received.	9	1

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?

Evaluations indicate that tutors need to encourage tutees to communicate more mathematically. While most tutors responded that they understand "how" to communicate mathematically, it is not clear that tutors are skilled enough to get students engaged in this process. While tutors strongly believe that they improve students' confidence and attitude toward math; only seventy percent of the students responded that this had actually occurred. Student responses also indicate that more work needs to be done with tutors to encourage the use of different strategies during the tutoring and problem solving process.

5. Summary: Effectiveness of the math tutoring program.

Tutors are satisfied with the training they are currently receiving from the campus and the math department; they appreciate the opportunity to share information and practice tutoring strategies. Feedback from instructors confirm that tutors need more practice with the inquiry method of teaching. Additionally, tutors need to increase the amount of time spent circulating amongst the students; making themselves readily available to answer questions from students who are struggling. Instructor evaluations also indicate that tutors could do more to build a rapport with the students.



6 Recommendations to Improving In-class Tutoring or Other Aspects of the Tutoring Program

- * Continue to provide opportunities for tutors to practice “questioning” as a teaching tool.

- * Include information and exercises regarding study skills, body language, and rapport building techniques in tutor training.

- * Include a group activity in training that focuses on circulating among the students.

- * Plan a pre-semester or early semester activity where tutors and instructors can collaborate; possibly integrate an activity into one of the math department flex activities.

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Course #	Instructors Using an In-class Tutor By Course	Total # of Instructors for Course
1 / 2 / 7	2	2
12	5	8
25	5	11
26	0	1
30	4	9

Course #	Sections Using an In-class Tutor By Course	Total # of Sections for Course
1 / 2 / 7	4	4
12	7	10
25	5	12
26	0	1
30	6	11

Ethnic Group	Percent of Student Population	# of Tutors in Ethnic Group	Total # of Tutors	% in Group
(Based on fall 2007 research data)				
White	38%	3	11	27.3%
Hispanic	27%	3	11	27.3%
Asian	5%	1	11	9%
Black	15%	2	11	18.2%
Other	16%	2	11	18.2%