

Math Tutoring Report - Spring 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?

Student evaluations of tutors indicate that overall the math department is achieving the goals as listed above. Two of the ten questions answered by students yielded responses below 85%. Questions 1, 2, 3, & 4 correspond to the math department's goal of promoting students' independence; the responses yielded 85%, 88%, 87%, and 79%. The lowest mark of 79% assesses how well the tutor uses different strategies in the learning process with the tutee. Question #8 also received a mark of 79%, falling below the 85% mark; this question appraises the improvement of students' attitudes and confidence levels towards mathematics. Goals 5, & 7 cannot be assessed through student evaluations because these goals pertain to the job description and performance which is evaluated by the instructors.

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

Tutor self evaluations indicate that several tutors feel that they could do more to promote students' independence, as well as be more culturally sensitive. All tutors responded that they feel they are doing a good job with communicating mathematically and the use of multiple representations. Student and tutor evaluations differ on this issue; students evaluations received a low score of 79% while tutors feel they achieve this goal 100% of the time. Eight tutors responded that training helped them become better tutors, two totally disagreed with this statement and four responded ambivalently. The data is listed on the following page.

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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

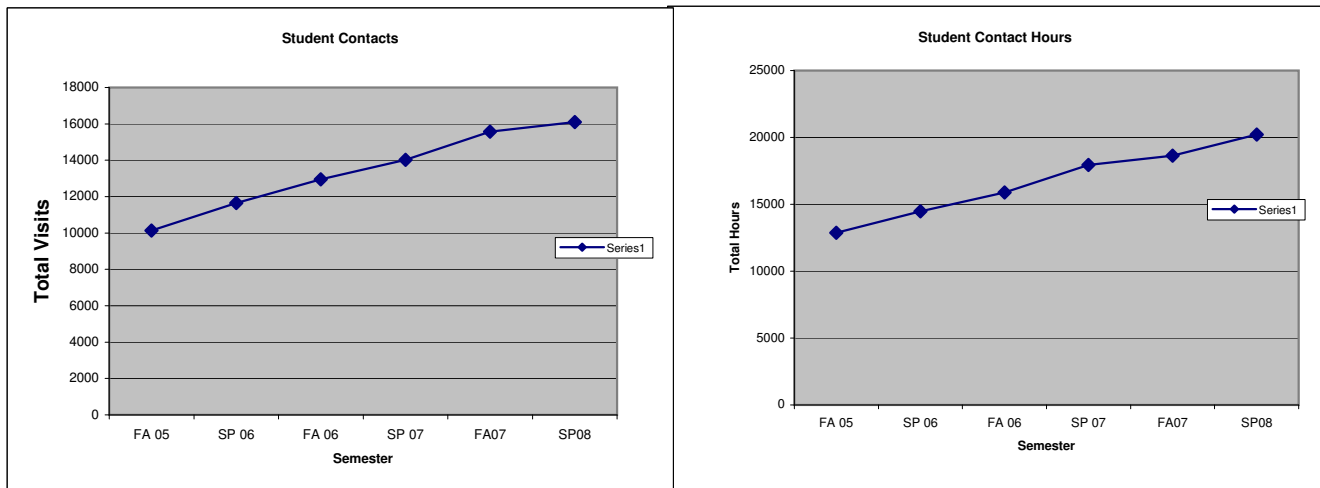
Question #	Responses	1 or 2	3 or 4
1	I am conscientious in the performance of my duties.	8	4
2	Through my tutoring, I promote students' independence in learning.	9	5
3	I adapt to students' immediate needs and am culturally sensitive to their needs.	9	5
4	I facilitate student insight into how to learn.	10	4
5	I help students improve in their confidence and attitudes toward math.	10	4
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.	14	0
7	I am a better tutor because of the training I received.	8	4

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?

While tutors feel confident in their own mathematical skills, communicating mathematically, problem solving, study habits, and using multiple representation, it is apparent from tutee evaluations that the students are not being prompted enough by tutors to use these skills. Of the ten questions students were asked to respond to all but two questions received positive marks of 85% or above. The two areas where tutors could improve is in encouraging students to use different strategies and building confidence within each student. In addition, instructor evaluations indicate that tutors need to do more to encourage students to express their own understanding of mathematical ideas.

5. Summary: Effectiveness of the math tutoring program

The math tutoring program continues to bring about positive effective change in the students it serves. Over the last three years the number of students served by the math tutoring program has steadily increased. A steady and consistent increase in the number of students served is another indicator that tutors are valued by students and professors. During the next few semesters more attention needs to be given to increasing student independence, attitude and confidence building, multiple representation and the use of different strategies in the problem solving process.



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7. Recommendations for improving in-class tutoring or other aspects of the tutoring program:

- * In an effort to increase awareness, the goals for in-class tutoring & SLO's will be posted in the staff room and in each tutors' folder.
- * A wiki for tutors is already underway and will be used for information sharing amongst tutors, coordinators and the tutor faculty lead.
- * Remove choice "e" , corresponding to a "do not know response," from student evaluations of tutors - too many students are using this response.
- * Practice more Socratic questioning and multiple representations during tutor training.
- * Offer training to professors in "How to use in-class tutors effectively."
- * Develop a plan to pair new tutors with seasoned tutors for mentoring.

Course #	Instructors Using an In-class Tutor By Course	Total # of Instructors for Course
1 / 2 / 7	3	3
12	7	15
25	9	20
26	1	6
30	5	13

Course #	Sections Using an In-class Tutor By Course	Total # of Sections for Course
1 / 2 / 7	8	8
12	9	24
25	10	29
26	1	6
30	9	24

Ethnic Group	Percent of Student Population	# of Tutors Ethnic Group	Total # of Tutors
(Based on spring 2007 research data)			
White	40%	10	19
Hispanic	25%	3	19
Asian	5%	1	19
Black	15%	2	19
Other	3%	3	19

