

2005–2006 Assessment Impact Report

Undergraduate Tutorial Center

(Last update: 8/15/06)

I. Mission:

The Undergraduate Tutorial Center (UTC) is charged with contributing to students' academic success. The fulfillment of this charge involves several objectives:

- providing a variety of tutorial services—grounded in sound educational theory and practice—that promote undergraduate students' academic achievement;
- hiring qualified students to work as peer tutors and training them to apply effective, research-supported tutoring methods;
- continually assessing current tutorial formats, resources and services;
- developing partnerships with department-based instruction, tutorial service, and other student support providers, primarily through exploring and developing effective tutoring and communications strategies and then sharing those tools and interventions with the campus and tutorial communities.

II. Outcomes

A. Intended Program Outcomes

1. Within the limits of the program budget, provide program services efficiently to as many students as possible:
 - a. Sign-up Tutoring (SU) will maintain a usage rate of at least 70%.
 - b. Weekly Assigned Tutoring (WA) percent of requests filled will increase by 10% from 2004–05,
 - c. Supplemental Instruction (SI) will be offered to at least as many classes in 2005–06 as in 2004–05.
 - Increase the percentage of students attending SI:
 - from 36.9% to 40% in fall and
 - from 27.6% to 35% in spring.
 - Increase the average attendance(s) per user:
 - from 3.09 to 4.0 in fall and
 - from 2.86 to 3.5 in spring.
 - d. The Physics and Mathematics Tutorial Center (PMTTC) will maintain its efficiency ratio.
 - e. Writing and Speaking Tutorial Services (WSTS) will increase the efficiency from 2004–05 to 2005–06:
 - from 41.66% to 47% in the fall and
 - from 42.22% to 47% in the spring.
2. Students with different levels of academic achievement at NC State will utilize UTC tutorial services.
3. At least 80% of students will be satisfied with the UTC services they use.
4. UTC's tutorial services will have a diverse clientele. Underrepresented populations will utilize UTC tutorial services equally or more than do majority students.

B. Intended Student Development Outcomes

1. A positive correlation will be shown between SI attendance and SI

attendees' course grades.

2. A positive correlation will be shown between the frequency of use of UTC services (WA, SU and SI) and students' persistence toward a degree.
3. A positive correlation will be shown between students' use of UTC services (SI and WA) and their self-reported improvement of study skills.

C. Intended Staff Development Outcomes

1. Through their experiences with UTC, at least 95% of tutors and SI leaders will report improvement of their understanding of academic course material.
2. Through their experiences with UTC, at least 95% of tutors and SI leaders will report improvement of their tutoring and communication skills.
3. Through their experiences in SI sessions, at least 95% of SI leaders will report improvement of their group facilitation skills.
4. Through ECI 210, at least 95% of tutors and SI leaders will report that tutor training (the course) is effective.
5. At least 95% of tutors and SI leaders enrolled in ECI 210 will report that the ECI 210 instructors are effective.
6. Through their experiences with the UTC, at least 95% of tutors and SI leaders will obtain College Reading and Learning Association (CRLA) certification.

D. Intended Campus and Tutorial Communities Outcomes

1. Through consultations, presentations and workshops, the UTC staff will build awareness of UTC services with members of the campus and tutorial communities.
2. Through consultations, presentations and workshops, the UTC staff will share their expertise in content areas with members of the campus and tutorial communities.

III. **Evaluation Methods and Implementation.**

Each program's coordinator will be responsible for that program's data collection and reporting. The Director is responsible for the Weekly Assigned and Sign-up programs. The Assistant Director is responsible for ECI 210 and the PMTC. The Supplemental Instruction Coordinator is responsible for SI. The Writing and Speaking Tutorial Services Coordinator is responsible for WSTS and presentation / consultation / workshop data reporting. The Director is responsible for Assessment Plan execution and the final Impact Report, which will be submitted to the Dean's office and Assessment office by August 15 each year. Following the Impact Report's completion, each coordinator will work to implement necessary program changes, which are based on assessment findings.

V. Results

A. Program Outcomes

Outcome A1: Provide program services efficiently to as many students as possible within the limits of the unit's budget through five programs: Sign-Up Tutoring (SU), Weekly Assigned Tutoring (WA), Supplemental Instruction (SI), Physics and Mathematics Tutorial Center (PMTC), and Writing and Speaking Tutorial Services (WSTS).

Individual Tutoring (WA and SU)

	Fall 2004	Spring 2005	Fall 2005	Spring 2006
Total # of requests (WA+SU)	691	551	793	671
# of WA requests	421	331	397	367
% WA requests/Total requests	60.9%	60.1%	50.1%	54.7%
# of WA tutors	59	77	56	78
# of WA assignments	187	246	291	304
% of WA requests filled	44%	74%	73%	83%
# of WA hours tutored	1,561.5	2,857.5	3,111.25	3,911.0
Hours Used	601	480	710.5	616.75
No-Show Hours	43	38.5	48	34
Total hours scheduled	644	518.5	758.5	650.75
Total hours offered	774	712	870.5	740.25
# of SU tutors	9	8	10	10
Percent used	78%	67%	82%	83%
Percent scheduled	83%	73%	87%	88%

Observation / Conclusion: The goal of maintaining a usage rate of at least 70% in the SU program was met, as well as the goal that the % of WA requests filled would increase by 10% from 2004-05. This can be attributed to offering 4 sections of ECI 210 in the fall and 3 in the spring. Also all weekly assigned tutors were required to work with more tutees as a condition of employment in spring 2006.

TutorTrac software was implemented in the SU program in Spring 2006. This allowed students to schedule tutoring appointments online, easing the scheduling process for both students and staff. Overall the use of TutorTrac was a success, despite minor glitches with the program. The % of scheduled appointments was a record high 88%. Online tutoring initiatives were also investigated.

Applications for individual tutoring were not accepted after November 1st in fall 2005 and April 1st in spring 2006. This decision was made since weekly tutors are not available late in the semester, as well as to reinforce our philosophy that tutoring is most effective when used regularly during a semester.

Action / Decision: Orientations will continue to emphasize the benefits of each form of individual tutoring so that students are able to make a more informed decision about which service will best fit their needs.

Continue to stop accepting individual tutoring applications approximately six weeks before the end of each regular semester. A new Coordinator of Individual Tutoring has been hired for the 2006-07 academic year. The returning weekly assigned tutors and sign-up tutors will have more direct supervision and continued training.

Continue to work with TutorTrac staff to improve software issues. Increase number of tutoring hours available in the sign-up program. Although technology continues to improve, the nature of online tutoring prevents many important aspects of the tutor-tutee interaction from occurring. We have decided not to pursue online tutoring for now, but will explore online tutoring options again at a later date.

Supplemental Instruction

(SI) Level of Attendance				
	Fall 2004	Spring 2005	Fall 2005	Spring 2006
# of Users	1672	1221	2010	1052
% of Students Attending	36.9	27.6	34.0	43.0
# of Attendances	5170	3492	6708	4288
Avg. attendances/user	3.09	2.86	3.33	4.08

SI Attendance for Fall 2005 by Course					
	Enrollment	# Attending	Total Attendances	% Attending	Average Attendances per User
CH 101	2291	914	3413	39.9	3.73
CH 201	435	166	620	38.2	3.73
CH 221	570	196	652	34.4	3.33
CSC 116	127	36	219	28.3	6.08
MA 107	271	86	323	31.7	3.76
MA 111	277	72	119	26.0	1.65
MA 121	288	110	243	38.2	2.21
MA 131	98	37	122	37.8	3.30
MA 241	205	103	455	50.2	4.42
PY 205	541	117	202	21.6	1.73
PY 208	814	173	340	21.3	1.97

SI Attendance for Spring 2006					
	Enrollment	# Attending	Total Attendances	% Attending	Average Attendances per User
CH 101	1057	527	2006	49.9	3.81
CH 201	533	256	1049	48.0	4.08
CH 221	138	62	342	44.9	5.52
CH 223	175	41	143	23.4	3.49
CSC 116	307	66	210	21.5	3.18
MA 241	237	100	438	42.2	4.38

Observation / Conclusion: Goals set for Fall 2005 were not met, while goals set for Spring 2006 were. Upon further examination of both percentage attendance and average attendance per user for fall data, we see that students in PY 205 and 208 were not taking advantage of SI at a rate comparable to students in other courses. Without these courses, overall statistics for fall change to 37.7% attending and an average attendance per user of 3.58, both improvements from Fall 2004. With the exception of MA 241, SI is not as heavily utilized in math courses as it is in chemistry. Computer science percentage rates are relatively low, but due to a high average attendance per user, average session size is sufficient for SI to be cost effective here.

Action / Decision: Barbie and Megan met with Physics 205 and 208 instructors in December 2005 and collectively decided that PY 205 and 208 would best be supported through the PMTC. Therefore, SI was not offered in these courses in the spring.

SI was not offered in math courses besides MA 241 in the spring for different reasons. MA 107 was not offered because of poor attendance in Spring 2005. It will be offered again in Fall 2006. MA 111 was not offered because of poor attendance in Fall 2005. We will try this course again in Fall 2006 for the second time, with a different SI leader. MA 121 was not offered again in the spring due to instructor changes. MA 131 was not offered again because the small class sizes do not allow for SI to be cost effective (although percentage attendance and average attendances per user were acceptable, average session size was relatively low).

The staff continues to look for courses with a high failure rate and large class sizes that may benefit from SI. SI will be piloted in CE 214 in Fall 2006.

Writing & Speaking Tutorial Services

WSTS: Total Visits to Six Locations				
	Fall 2004	Spring 2005	Fall 2005	Spring 2006
# of users	262	239	265	283
# of visits	519	457	637	556
Avg. visits/user	1.98	1.91	2.4	1.96
Efficiency (# hours available/# hours used)	41.66%	42.22%	68.19%	59.89%

Observation / Conclusion: In Fall 2005, WSTS began allowing students to make appointments for our daytime location. This dramatically increased the efficiency of that location (70% for 05/06 compared to 57% for 04/05 year). Our residence hall services have mixed results. While our locations in Central and West Campuses are doing fairly well, the East campus locations are not.

NB: Our new data tracking software has become more accurate (For the first time in 05/06 a student who visits two different locations is no longer counted as two students).

Action / Decision:

Continue to offer appointments for daytime location; look at expanding appointments to residence halls (lack of computer access currently inhibits this); evaluate student population on East campus and reevaluate where and when to offer tutoring. Explore online tutoring option for WSTS.

Physics and Mathematics Tutorial Center (PMTC)

Attendance Summary				
	Fall 2004	Spring 2005	Fall 2005	Spring 2006
# of attenders	855	594	854	792
# of attendances	4059	3437	4747	4130
# hours staffed/week	150	121.5	118	164
Efficiency (# hours available/# hours used)	286.9%	321%	528%	297%

Observation / Conclusion: The PMTC met its goal of maintaining the efficiency ratio, although accurate data collection has been a challenge this year. The 2005-06 PMTC data was compromised due to the addition of using TutorTrac in the WSTS and SU programs. In addition, many students fail to sign-in at the login computer when the center is busy. Also, at times the wireless Internet connection fails, which compromises data collection.

A comments section was added as an option for students to complete when they logged out of the center. Also, an end of semester survey was sent to all email addresses of attendees as logged by TutorTrac. These two efforts led to more qualitative feedback that has been used for improvements in subsequent semesters.

Securing funding for the PMTC was a challenge this year due to a change in the physics department administration. Multiple discussions were held with PAMS, math, and physics administration to make financial arrangements for both the 2005-06 and 2006-07 years. The physics department would like to offer grad student support in lieu of some funding. One grad student was accepted during the spring 2006 semester to work in the PMTC and complete ECI 210.

Action / Decision: Discussions continue with the TutorTrac programmers to avoid compromised data in the future. Tutors will be coached to prompt students to register their attendance.

Continue to work with physics and math departments to arrange appropriate staffing. All potential new staff including grad students will be interviewed by Barbie to ensure that they are a good match for the PMTC and are willing to participate in tutor-training.

Outcome A2: Students with different levels of academic achievement at NC State will utilize UTC tutorial services.

Action / Decision: Discussion with the DUAP Assessment office has been held to measure this outcome.

Outcome A3: At least 80% of students will be satisfied with the UTC services they use.

I am satisfied with the UTC tutoring that I received this semester.

# of Students Program	Responding "Strongly Agree" or "Agree" (%)	
	Fall 2005	Spring 2006
Sign Up	79.4 % (n=34)	81.3% (n=26)
Weekly Assigned	91.7% (n=97)	91.8% (n=98)
Supplemental Instruction	76.4% (n=543)	84.1% (n=371)
PMTC	86.1% (n=151)	79.1% (n=139)
WSTS	80.0% (n=15)	87.8% (n=41)

Observation / Conclusion:

- ❑ Sign-up: Some students were frustrated to have to use this program when WA was their first choice and appointments were not convenient for their schedule. Adding the use of TutorTrac helped ease frustration with scheduling appointments.
- ❑ Weekly Assigned: Students are very satisfied with this program.
- ❑ Supplemental Instruction: Students were significantly more satisfied with SI sessions in the spring semester. This may be attributed to the fact that 10 of the 11 SI leaders in the spring semester were returning leaders. At the end of the spring semester, most leaders indicated that they were now fairly comfortable with the true SI model, which was not the case at the start of the fall semester. Student comments on the end-of-semester surveys indicate that dissatisfaction generally stems from students having unrealistic expectations of SI or of SI leaders.
- ❑ PMTC: Even though students indicated that on average they had to wait for assistance a bit longer in the fall, their overall satisfaction with the PMTC tutoring was higher than in the spring. Several staffing issues have been identified as potential reasons, including the addition of a physics graduate student in the spring semester.
- ❑ WSTS: The user satisfaction level and number of respondents was particularly strong in spring 2006.

Action / Decision:

- ❑ Sign-up: Work to expand the number of subjects/appointments available. Continue to use TutorTrac for scheduling appointments.
- ❑ Weekly Assigned: Continue to monitor.
- ❑ Supplemental Instruction: The SI Coordinator and peer supervisors will continue to supervise new and returning leaders closely. In 2006-2007, a greater emphasis will be placed on students, rather than material or content. SI leaders will be expected to spend more time building rapport between themselves and between students and focus their main attention on individual students rather than on the leader's own agenda for the session. Additionally, the SI Coordinator will do a better job of explaining the purpose of SI to students in initial class introductions.
- ❑ PMTC: Closely monitor and supervise the staffing of the center so as not to compromise the satisfaction level of the students.
- ❑ WSTS: Continue to monitor.

Outcome A4: UTC's tutorial services will have a diverse clientele. Underrepresented populations will use UTC tutorial services equally or more than do majority students.

Tutoring by Appointment:

		Fall 2005		
Ethnicity	Overall Undergraduate Enrollment (% of total registered enrollment)*	Number Served (% of total)	Avg. Hours Tutored (WA and SU combined)	
White	16217 (80.5%)	484 (60.7%)	4.53	
African Am.	1983 (9.8%)	252 (31.6%)	5.20	
Asian Am.	1083 (5.4%)	40 (5.0%)	5.08	
Hispanic	488 (2.4%)	13 (1.6%)	3.90	
Am. Indian	159 (0.8%)	9 (1.1%)	1.42	
Not Reported	215 (1.1%)	5 (0.6%)	0.2	
Gender				
Female	9771 (43.5%)	484 (61.1%)	5.14	
Male	13108 (56.5%)	308 (38.9%)	4.17	
		Spring 2006		
Ethnicity	Overall Undergraduate Enrollment (% of total registered enrollment)*	Number Served	Avg. Hours Tutored WA/SU**	
White	15327 (80.5%)	420 (62.6%)	5.62/4.45	
African Am.	1856 (9.7%)	191 (28.5%)	6.55/3.91	
Asian Am.	1028 (5.4%)	32 (4.8%)	3.55/3.93	
Hispanic	455 (2.4%)	13 (2.0%)	7.67/3.33	
Am. Indian	143 (0.8%)	6 (0.9%)	5.25/4.00	
Not Reported	238 (1.3%)	9 (1.3%)	6.14/5.50	
Gender				
Female	9261 (44.1%)	394 (58.7%)	5.97	
Male	12189 (55.9%)	277 (41.3%)	5.63	

* Totals represent all undergraduate students. The SU and WA Programs target only first and second year undergraduate students.

** Avg. hours tutored for spring 2006 are separated by program due to the implementation of TutorTrac

Supplemental Instruction:

Fall 2005			
Ethnicity	Enrollment in SI classes (% of total enrollment)	Number of Participants (% of total)	Average Number of Sessions
White	79.2	75.9	3.33
African Am.	9.8	12.5	3.21
Asian Am.	5.5	5.6	3.26
Hispanic	3.0	3.3	3.69
Am. Indian	1.8	2.3	3.35
Gender			
Female	37.4	42.0	3.24
Male	62.6	58.0	3.37
Spring 2006			
Ethnicity	Enrollment in SI classes (% of total enrollment)	Number of participants (% of total)	Average Number of Sessions
White	77.1	76.4	3.87
African Am.	9.5	10.2	3.94
Asian Am.	7.4	7.6	4.47
Hispanic	2.6	2.4	3.65
Am. Indian	0.96	1.2	2.92
Gender			
Female	42.6%	49.7%	4.07
Male	57.4%	50.3%	3.72

PMTTC:

Fall 2005			
Ethnicity	Overall Undergraduate Enrollment (% of total enrollment)*	Number Served (% of total)	Avg.# of Visits
White	13217 (80.5%)	561 (73.3%)	6.25
African Am.	1983 (9.8%)	114 (14.9%)	6.66
Asian Am.	1083 (5.4%)	54 (7.1%)	4.91
Hispanic	488 (2.4%)	27 (3.5%)	7.07
Am. Indian	159 (0.8%)	3 (0.4%)	2.67
Not Reported	215 (1.1%)	6 (0.8%)	3.33
Gender			
Female	9771 (43.5%)	371 (48.5%)	6.05
Male	13108 (56.5%)	394 (51.5%)	6.05

Ethnicity	Spring 2006		
	Overall Undergraduate Enrollment (% of total enrollment)*	Number Served	Avg. # of Visits
White	15327 (80.5%)	581 (73.4%)	5.17
African Am.	1856 (9.7%)	103 (13.0%)	5.36
Asian Am.	1028 (5.4%)	72 (9.1%)	6.31
Hispanic	455 (2.4%)	22 (2.8%)	4.00
Am. Indian	143 (0.8%)	5 (0.6%)	2.20
Not Reported	238 (1.3%)	9 (1.1%)	2.33
Gender			
Female	9261 (44.1%)	375 (47.3%)	4.76
Male	12189 (55.9%)	417 (52.7%)	5.62

Writing and Speaking Tutorial Services:

Ethnicity	Fall 2005		
	Overall Enrollment (% of total enrollment)*	Number Served (% of total)	Avg. Hours Tutored
White	23227 (77.0%)	139 (53.7%)	1.50
African Am.	2750 (9.1%)	68 (26.3%)	1.25
Asian Am.	1397 (4.6%)	15 (5.8%)	1.96
Hispanic	669 (2.2%)	5 (1.9%)	1.00
Am. Indian	204 (0.7%)	2 (0.8%)	2.25
International	1902 (6.3%)	30 (11.6%)	4.62
Gender			
Female	13125 (43.5%)	162 (61.1%)	2.66
Male	17024 (56.5%)	103 (39.9%)	1.26
Ethnicity	Spring 2006		
	Overall Enrollment (% of total enrollment)*	Number Served	Avg. Hours Tutored
White	21714 (76.1%)	159 (56%)	0.69
African Am.	2587 (9.1%)	43 (15.2%)	0.73
Asian Am.	1339 (4.7%)	13 (4.6%)	0.67
Hispanic	630 (2.2%)	9 (3.2%)	0.79
Am. Indian	185 (0.6%)	1 (0.3%)	1
Not Reported	333 (1.2%)		
International	1748 (6.1%)	57 (20.2%)	0.78
Gender			
Female	12570 (44.1%)	161 (57.1%)	0.72
Male	15963 (55.9%)	121 (42.9%)	0.72

* WSTS serves both undergraduate and graduate students.

Observation / Conclusion: This year all programs were able to report use by ethnicity and gender due to the implementation of TutorTrac. All programs met or exceeded the goal that underrepresented populations will use UTC tutorial services equally or more than do majority students.

Action / Decision: Continue to promote diversity among staff and users.

B. Student Development Outcomes

Outcome B1: A positive correlation will be shown between SI attendance and SI attendees' course grades.

Observation/Conclusion:

The following SI analysis was performed by Hao Mei. Hao was a statistics graduate student enrolled in ST 641, Statistics Consulting in spring 2006. The course instructor was Dr. Kim Weems.

Multiple regression was used for both fall and spring data to control for certain variables which may be related to students' grades. These variables were SATM, SATV, previous GPA, and high school GPA. Note that in order for a student to be included in the analysis, each of these variables must be available. Therefore, only about 80% of students enrolled in an SI section were included in the assessment.

Results of Multiple Regression for Fall 05

<i>Regression Statistics</i>	
Multiple R	0.36575
R Square	0.133773
Adjusted R Square	0.133007
Standard Error	1.216251
Observations	4529

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	1033.491	258.3727	174.6627	2.5E-139
Residual	4524	6692.2	1.479266		
Total	4528	7725.691			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-2.98659	0.210773	-14.1697	1.26E-44	-3.3998	-2.57337	-3.3998	-2.57337
SI att (x_1)	0.060366	0.012121	4.980112	6.59E-07	0.036602	0.08413	0.036602	0.08413
SATM (x_2)	0.003185	0.000314	10.15337	5.77E-24	0.00257	0.003801	0.00257	0.003801
HSGPA (x_3)	0.742182	0.045724	16.23176	1.24E-57	0.65254	0.831823	0.65254	0.831823
SATV (x_4)	0.000657	0.000306	2.150711	0.031552	5.81E-05	0.001257	5.81E-05	0.001257

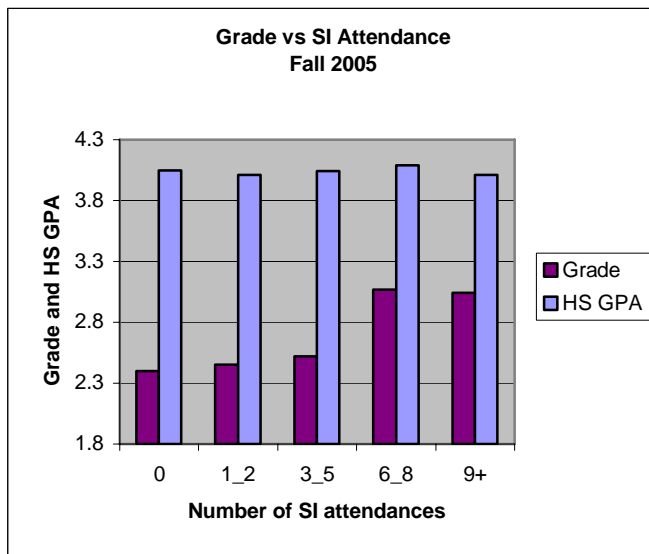
The data was truncated so that students attending 5 or more times were counted as attending 5 times, because the number of these observations was small. Therefore this model is appropriate only to predict the grade for a student attending 0,1,2,3,4, or 5 times.

Low p-values (< 0.05) for each variable suggest that each variable has a relationship to the student's grade. However, as suspected, a low r square value suggests that only 13% of the variability in grade variable is explained by SI attendance, SATM, SATV, and HSGPA.

$$\text{Grade} = 0.06x_1 + 0.003x_2 + 0.742x_3 + 0.000657x_4 - 2.99$$

This model suggests that for each time a student attends SI, his grade will improve by 0.06 (up to 5 times).

We are also interested, however, in the effect of attending SI more than 5 times. The graph below compares the grade received in the SI course to students' High School GPA's. Note that while HS GPA's are fairly consistent, course grade improves significantly for students attending more than 5 times.



Results of Multiple Regression for Spring 2006

<i>Regression Statistics</i>	
Multiple R	0.641175
R Square	0.411105
Adjusted R Square	0.410237
Standard Error	1.065146
Observations	2038

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	1610.961	536.9869	473.3093	3.1E-233
Residual	2034	2307.648	1.134537		
Total	2037	3918.608			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95.0%</i>	<i>Upper 95.0%</i>
Intercept	-2.57434	0.21697	-11.865	1.91E-31	-2.99985	-2.14884	-2.99985	-2.14884

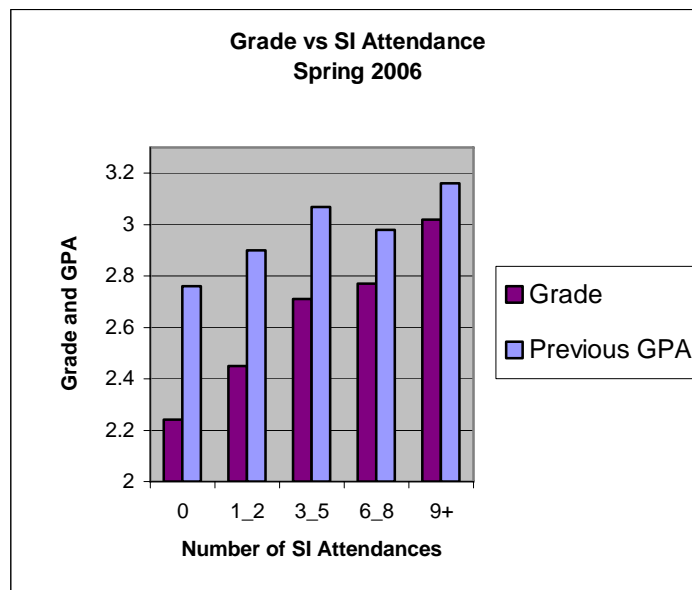
Previous GPA (x_3)	0.951003	0.0298	31.9126	1.6E-181	0.892561	1.009446	0.892561	1.009446
SATM (x_2)	0.003536	0.000349	10.12878	1.48E-23	0.002851	0.00422	0.002851	0.00422
SI attendance (x_1)	0.084818	0.013882	6.11002	1.19E-09	0.057594	0.112042	0.057594	0.112042

For spring data, previous GPA was available for most students. Therefore, this variable was used to replace High School GPA and proved to be a better indicator for grade, with a p-value of 1.6E-181. SATV had a p-value less than 0.05 and this variable was therefore eliminated. Data was again truncated so that students going to SI more than 5 times were coded as going exactly 5 times. Note that for spring data, the R square value is now 0.411, suggesting that 41% of the variability in grades can be explained by SI attendance, previous GPA, and SATM.

$$\text{Grade} = 0.08x_1 + 0.0035x_2 + 0.95x_3 + -2.57$$

This model suggests that for each time a student attends SI, his grade will improve by 0.08 (up to 5 times).

We are also interested, however, in the effect of attending SI more than 5 times. The graph below compares the grade received in the SI course to students' previous GPA's. We are concerned here with the difference between the course grade and previous GPA for each group. Students never attending SI, on average, had a previous GPA of 2.76, but a course grade of only 2.24, a difference of 0.52. Comparatively, students attending 9 or more times, on average, had a previous GPA of 3.16 and a course grade of 3.02, a difference of only 0.14.



Action / Decision: These results will be used to advertise SI to students in 2006/2007. SI leaders will be given greater responsibility to promote SI in their classes so that more students will choose to take advantage of the program. Additionally, SI leader training will continue to develop content-specific strategies and techniques for leaders to use in their sessions.

It is unclear if the decision to truncate the data was reasonable. Further consultation with ST 641 students may be conducted next year.

Outcome B2: A positive correlation will be shown between the frequency of use of UTC services (WA, SU and SI) and students' persistence toward a degree.

Action / Decision: Discussion with the DUAP Assessment office has been held to measure this outcome.

Outcome B3: A positive correlation will be shown between students' use of UTC services (SI and WA) and their self-reported improvement of study skills.

Study skills questions from SI attendee survey; response by level of attendance

Question #1: My SI leader helped me learn how to prepare for tests.		
Scale: 1-5 where 1 = strongly disagree, 5 = strongly agree		
# of Attendances	Fall 2005 (n=544)	Spring 2006 (n=372)
1 to 2	3.22	3.75
3 to 5	3.84	4.01
6 to 9	4.07	4.35
10 to 13	4.16	4.34
14 or more	4.55	4.42

Question #2: My SI leader helped me learn how to manage my time more effectively.		
Scale: 1-5 where 1 = strongly disagree, 5 = strongly agree		
# of Attendances	Fall 2005 (n=543)	Spring 2006 (n=374)
1 to 2	2.74	3.03
3 to 5	3.17	3.39
6 to 9	3.30	3.73
10 to 13	3.70	3.78
14 or more	3.88	4.16

Question #3: I learned how to use my textbook and my class notes more effectively in SI sessions.		
Scale: 1-5 where 1 = strongly disagree, 5 = strongly agree		
# of Attendances	Fall 2005 (n=540)	Spring 2006 (n=374)
1 to 2	2.77	2.94
3 to 5	3.29	3.44
6 to 9	3.57	3.85
10 to 13	3.86	3.91
14 or more	4.19	4.03

Question #4: I was able to utilize the study strategies learned in SI sessions to benefit me in other courses.		
Scale: 1-5 where 1 = strongly disagree, 5 = strongly agree		

# of Attendances	Fall 2005 (n=542)	Spring 2006 (n=371)
1 to 2	2.83	3.14
3 to 5	3.33	3.51
6 to 9	3.64	3.82
10 to 13	3.84	3.91
14 or more	4.02	4.08

Observation / Conclusion: A component on study skills was added to the initial SI leader trainings each semester this year and continued to be an area of focus during supervisions. The SI user survey was modified in fall 2005 so that students could better evaluate how SI was needed and used to improve their study skills in specific areas. The outcome was met for the SI program.

The Tutorial Goal Setting Report (TGSR) was revised to help facilitate the study skills discussion between tutors and tutees. In order to complement the revised TGSR, the WA user survey was also modified so that students could self-evaluate whether tutoring was needed in specific study skills areas, and if so, how much it improved during the semester. Unfortunately, the revision does not allow us to accurately measure the above outcome.

Action / Decision: The staff will continue to work with tutors and SI leaders to improve the facilitation of study skills within sessions. Measuring students' self-reported improvement of study skills continues to be important. Therefore, the outcome will be reworded for 2006-2007.

C. Staff Development Outcomes

Outcome C1: Through their experiences with the UTC, at least 95% of tutors and SI leaders will report improvement of their understanding of academic course material.

Tutor Self-Evaluation Form:

Scale:		
Questions relevant to Outcome C1	Fall 2005	Spring 2006*
<i>I have a good understanding of the subjects that I tutor.</i>	94.7%	NA
<i>My own knowledge of the subject improved as a result of tutoring.</i>	92.6%	NA

*Data from Spring 2006 is not available due to a recording error.

From SI Leader Self-Evaluation:

Scale:		
Questions relevant to Outcome C1	Fall 2005	Spring 2006
<i>My own knowledge of the subject matter has improved as a result of leading SI sessions.</i>	76.5%	88.9%

Observation / Conclusion: The ranking scales on all surveys were modified this year for uniformity. The tutor self-evaluation form represents responses from new ECI 210 tutors and returning tutors in the WA, SU, PMTC and WSTS programs. The survey was further modified in spring 2006 to give tutors the opportunity to reflect on their growth in key areas of the ECI 210 curriculum. While the vast majority of tutors agree that their own knowledge of the subject matter improves through tutoring experiences, some do not. The qualitative questions regarding strengths, areas for improvement, and areas of greatest improvement give supervisors useful information regarding the tutors' growth.

Action / Decision: Reassess the wording and measurement of this outcome for 2006-2007.

Outcome C2: Through their experiences with UTC, at least 95% of tutors and SI leaders will improve their tutoring and communication skills.

Tutor Self-Evaluation Form:

Scale:		
Questions relevant to Outcome C2	Fall 2005	Spring 2006
<i>I have improved my ability to communicate as a result of tutoring.</i>	93.6%	NA
<i>In general, my abilities as a tutor have improved this semester.</i>	93.6%	NA

*Data from Spring 2006 is not available due to a recording error.

From SI Leader Self-Evaluation:

Scale:		
Questions relevant to Outcome C2	Fall 2005	Spring 2006*
<i>I have improved my ability to communicate and interact as a result of leading SI sessions.</i>	94.1%	88.9%

<i>In general, my abilities as a tutor/SI Leader have improved this semester.</i>	94.1%	100%
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Observation / Conclusion: See information in C1. While the vast majority of tutors agree that their skills improved through tutoring experiences, some do not. Surveys are completed at the end of each semester and evaluate only the current semester of work. The qualitative questions regarding strengths, areas for improvement, and areas of greatest improvement give supervisors useful information to make future training decisions.

Action / Decision: Consider rewording this outcome and measurement for 2006-2007.

Outcome C3: Through their experiences in SI sessions, at least 95% of SI leaders will report improvement of their group facilitation skills.

From SI Leader Self Evaluation:

Scale:		
Questions relevant to Outcome C3	Fall 2005	Spring 2006
<i>I have improved my ability to facilitate groups as a result of leading SI sessions.</i>	94.1%	100%

Observation / Conclusion: SI leaders agree that group facilitation skills have improved as a result of leading SI sessions.

Action / Decision: Continue to monitor.

Outcome C4: Through ECI 210, at least 95% of tutors will report that tutor training (the course) is effective.

ECI 210 Course Evaluation Results

SCALE:		
The ECI 210 course helped me or encouraged me to:*	Fall 2005 (n=49)	Spring 2006 (n=39)
Learn about the Undergraduate Tutorial Center's policies and procedures.	91.8%	94.9%
Understand the tutor-student relationship and my role as a tutor.	98.0%	100%
Differentiate between direct and indirect tutoring techniques.	89.8%	100%
Use positive reinforcement in my tutoring sessions.	93.9%	97.4%
Use questioning in my tutoring sessions.	93.9%	97.4%
Encourage tutee verbalization through	89.8%	89.7%

listening in my tutoring sessions.		
Encourage my tutees to become independent learners.	79.6%	89.7%
Analyze my strengths and areas of improvement as a tutor.	89.8%	89.7%
Encourage my tutees to set goals.	83.7%	84.6%
Understand my learning preferences and how they impact my work with students.	85.7%	79.5%
Employ assertive approaches to dealing with problems within the tutoring relationship.	81.6%	79.5%
Increase awareness for working with student differences.	81.6%	84.6%
Apply strategies that accommodate student differences.	85.7%	82.1%
Promote study skills with my tutees by modeling and discussing effective behavior.	75.5%	79.5%

*Each measurement represents a course objective.

Observation / Conclusion: The ECI 210 end-of-semester course evaluation was revised for the 2005-06 year, including revising the scale to give students more choice flexibility in their rankings. Also, the section above was modified to more accurately measure areas that the instructors agreed are key focal points for successful development of new tutors. The course syllabus was revised so that an entire class period could be devoted to address the importance of promoting study skills in tutoring sessions. Several assignments were revised to further challenge and stimulate self-reflection. The Tutorial Goal Setting Report was streamlined to encourage discussion at the first tutoring meeting regarding goals for the tutoring relationship, as well as to increase tutor awareness about the importance of incorporating study skills into sessions.

Areas that appear to be weaker components of the course based on the student survey are typically topics that are always more difficult for students to apply. Instructors agree that students' lower responses generally indicate an awareness of necessity for these techniques, which is a critical goal of ECI 210. Through video observation and in-class discussion, instructors have noticed that tutors focused more on study skills, for example, than in previous semesters, as we revised the syllabus to include a day specifically for this topic.

Action / Decision: A summer section of ECI 210 was piloted in summer 2006 in response to the popularity of the course, as well as consistently having a shortage of trained tutors each fall. A separate section for writing tutors will be offered in fall 2006 in order to better meet the training needs of these tutors. Recruiting efforts have expanded to target specific majors with the goal of locating tutors for courses where demand always exceeds supply. Qualitative data

from the end-of semester surveys will also continue to be used in decisions regarding revising the curriculum and assignments.

Outcome C5: At least 95% of tutors and SI leaders enrolled in ECI 210 will report that the ECI 210 instructors are effective.

SCALE:		
The ECI 210 Instructor:	Fall 2005 (n=49)	Spring 2006 (n=12)*
Demonstrated a thorough understanding of the course content and tutoring practices.	95.9%	100%
Was enthusiastic about teaching.	89.8%	100%
Was well-prepared for class.	95.9%	100%
Used time in class effectively.	95.9%	100%
Varied teaching style to fit a range of learning styles.	91.8%	91.7%
Stimulated interest in tutoring.	89.8%	100%
Welcomed questions and discussion.	91.8%	91.7%
Encouraged class participation.	89.8%	100%
Created a class atmosphere conducive to learning.	93.9%	91.7%
Gave timely feedback on assignments and individual progress.	93.9%	100%

*Note that data from Spring 2006 is not complete. Only 12 ECI 210 students' responses were recorded.

Observation / Conclusion: The UTC offered four sections of ECI 210 in fall 2005 despite losing an instructor last August. The effectiveness of the instructors remained high that semester. ECI 210 instructors met regularly to share ideas and insure curriculum and assignment quality. The instructors also served as guest lecturers for one another based on areas of expertise. This allowed all staff members to interact with all new tutors.

Action / Decision: The new Coordinator will co-teach with Barbie during fall 2006. Continue to monitor.

Outcome C6: Through their experiences with the UTC, at least 95% of tutors and SI leaders will obtain College Reading and Learning Association (CRLA) certification.

Certification Level:	2005-2006 academic year (n=178)
Level I (10 training hours, 25 tutoring hours)	51 (28.7%)
Level II (20 training hours, 50 tutoring hours)	75 (42.1%)
Level III (30 training hours, 75 tutoring hours)	35 (19.7%)
Total:	161 (90.4%)

Observation / Conclusion: The UTC employed 132 tutors and SI leaders during fall 2005 and 140 during spring 2006. The required ECI 210 course provides 20 training hours for all new tutors during their first semester of employment. Nevertheless, not all tutors enrolled in ECI 210 achieved certification due to a lack of completed tutoring hours. Also, in fall 2005 several math tutors were hired mid-semester to address the math disenrollment issue. Most of these tutors did not return in spring 2006, and thus did not achieve certification.

Many tutors have not been easily able to reach level III certification due to a lack of continued training opportunities.

Action/Decisions: The new Coordinator will be implementing more required continued training opportunities for returning tutors. The staff will be increasingly cautious about waiving the ECI 210 requirement for new hires.

D. Campus and Tutorial Communities Outcomes

Outcome D1: Through consultations, presentations and workshops, the UTC staff will build awareness of UTC services with members of the campus and tutorial communities.

FALL 2005					
	Consultations	Parent and Student Orientations	Classroom Visits	Other Presentations	Fall Total
# of Events	9	12	92	1	114
# of Attendees	12	4290	7555	70	11927
SPRING 2006					
	Consultations	Parent and Student Orientations	Classroom Visits	Other Presentations	Spring Total
# of Events	8	2	45	2	57

# of Attendees	10	37	3791	60	3898
Total Attendees					

Other initiatives were also employed in order to build awareness of UTC services throughout the NCSU community. These initiatives included the UTC's Website, which is accessed by students looking for assistance, by campus constituents, and by other universities. An article about UTC services appeared in the Technician in early fall 2005. UTC information was also circulated on the stateadvisors listserv. The UTC brochure was revised and a logo and slogan were adopted.

Observation/ Conclusion: The UTC continues to build awareness of services with a variety of initiatives. During this academic year, UTC staff members met with the following on-campus departments and groups: ASPSA, WISE, Chemistry, COM, SOC, Math, Physics, MBA school, FYWP, HI, AFS, ARS, ROTC, PS, SOC, REL, and Civil Engineering. Staff members spoke with the following off-campus tutorial providers: Temple University, Louisiana State University, and the College of Charleston.

Action/Decisions: Continue to monitor.

Outcome D2: Through consultations, presentations and workshops, the UTC staff will share their expertise in content areas with members of the campus and tutorial communities.

FALL 2005						
	Con- sul- ta- tions	Classroom Pre- sen- ta- tions	Student Group Pre- sen- ta- tions	Faculty Pre- sen- ta- tions	Profes- sional Pre- sen- ta- tions	Fall Total
# of Events	2		21	1	1	25
# of Attendees	2		665	10	10	687
SPRING 2006						
	Con- sul- ta- tions	Classroom Pre- sen- ta- tions	Student Group Pre- sen- ta- tions	Faculty Pre- sen- ta- tions	Profes- sional Pre- sen- ta- tions	Spring Total
# of Events	1	8	4	1	9	23
# of Attendees	1	186	295	20	182	684

Observations / Conclusions: No classroom presentations were made during fall 2005 since Marcia took on additional UTC responsibilities with the loss of our Director in August 2005, although numerous student group presentations were made by the UTC staff. Marcia was able to fulfill many classroom presentation requests during the spring 2006 semester. The following topics were provided to various class and student groups: Creating Effective Oral Presentations, Giving Effective Presentations with PowerPoint, Group Presentations, Writing in

Academia, Group Facilitation, Conducting and Interview, Revising and Editing Strategies, Effective Listening, Effective Professional Communication, and Writing Personal Statements.

The UTC staff made presentations at the following professional conferences: CRLA, SWCA, UNC TLT, 4Cs, ATP, the NCSI Peer Conference, and the UMKC SI International Conference.

The tutor-training video products produced by the UTC continued to be distributed both nationally and internationally to other tutorial providers. The ordering process was outsourced this year and a new contract with the vendor was signed. Over 100 products have sold since this change occurred.

Actions / Decisions: It is not possible to fulfill all presentation requests due to time constraints on the staff. Marcia has worked with DELTA to create two online presentations. She has also created a lesson plan on Creating Effective Oral Presentations for other instructors to use.

Continue to monitor professional development opportunities and video sales.