



Research Brief

Fall 2013 and Spring 2014 HSI Title III STEM Supplemental Instruction Program Evaluations

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Purpose of Brief

This brief analyzes the results of the Fall 2013 and Spring 2014 HSI Title III STEM supplemental instruction program evaluations.

Summary of Findings

- The overall response rate of the STEM SI evaluation survey was 55%.
- While 62% of respondents stated they attended an SI session, attendance records indicate that only 59% of those responding had attended an SI session, which indicates that some respondents may not understand what SI is while others may be exhibiting social desirability bias by not accurately reporting their attendance.
- When asked why they chose not to attend an SI session, respondents provided various reasons related to time conflicts (52), a lack of need for assistance (7), obtaining alternative assistance (10), or a lack of interest (6).
- 100% of respondents either agreed or strongly agreed that the SI leader was knowledgeable about the course material and created a supportive environment.
- Respondents provided 63 additional comments and suggestions. 43 responses praised the SI program or the SI leader, 9 provided suggestions for improvement, and 7 suggested having additional time offerings.

Overview

In an effort to improve students' math, technical and conceptual science skills as a part of the HSI Title III STEM Grant, Crafton Hills College (CHC) developed a supplemental instruction (SI) program as an alternative learning strategy. In the Fall 2013 and Spring 2014 term, CHC offered supplemental instruction for students enrolled in the following course sections: CHEM-150-20, CHEM-150-21, CHEM-150-22, CHEM-150-25, CHEM-150-26, CHEM-150-27, MATH-103-35, MICRO-102-15, MICRO-102-16, MICRO-102-35, MICRO-102-36, PHYSIC-250-25, PHYSIC-250-27, and PHYSIC-250-90. Surveys were provided to students enrolled in these sections to evaluate the SI program.

Table 1 illustrates the response rate for each section where '#' is the number of responses, 'N' is the number of students earning a grade on record (GOR¹) in the section, and '%' is the number of responses divided by the total number of students earning a GOR in the section. The overall response rate of the STEM SI evaluation survey was 55%.

Table 1: Response rate for STEM SI evaluations.

Term	Course Section	#	N	%
Fall 2013	CHEM-150-20	15	25	60.0
	CHEM-150-21	15	22	68.2
	CHEM-150-22	9	14	64.3
	MATH-103-35	24	35	68.6
	MICRO-102-15	14	27	51.9
	MICRO-102-16	5	10	50.0
	MICRO-102-35	18	26	69.2
	MICRO-102-36	3	11	27.3
Spring 2014	PHYSIC-250-25	0	17	0.0
	CHEM-150-25	18	25	72.0
	CHEM-150-26	21	26	80.8
	CHEM-150-27	9	13	69.2
	MATH-103-35	22	38	57.9
	MICRO-102-15	11	22	50.0
	MICRO-102-16	3	10	30.0
	MICRO-102-35	5	27	18.5
	MICRO-102-36	3	14	21.4
	PHYSIC-250-25	12	23	52.2
PHYSIC-250-27	10	17	58.8	
PHYSIC-250-90	14	17	82.4	
TOTAL		231	419	55.1

Methodology

In conjunction with the STEM Alternative Learning Strategies Coordinator, the Office of Institutional Effectiveness, Research, and Planning developed a one-page paper survey to measure students' perceptions of the SI program. The evaluations were matched to Ellucian student data and SI attendance records to

¹ GOR is a grade earned in the course of A, B, C, D, F, P, NP, CR, NC or I

analyze evaluations for STEM SI sessions. Respondents were asked whether they attended any SI sessions along with a follow-up open-ended question if they did not attend any sessions. Respondents were then presented with a series of Likert-scale questions to measure their level of agreement with statements regarding various program components. Responses were ranked where Strongly Agree = 5, Agree = 4, Disagree = 3, Strongly Disagree = 2, and Not Applicable = 1. Lastly, respondents were presented with a final open-ended question for any additional comments.

Findings

Table 2 examines the number of respondents who stated whether or not they attended an SI session in comparison to whether attendance records showed the respondent as attending at least one SI session. While 62% of respondents stated they attended an SI session, attendance records indicate that only 59% of those responding had attended an SI session. The difference includes 22 respondents (10%) who reported attending an SI session when attendance records indicated they had not, and 15 respondents (7%) reported not attending an SI session when attendance records indicated they had. This result indicates that some respondents may not understand what SI is while other respondents may be exhibiting social desirability bias by not accurately reporting their attendance. No respondents had selected "I don't know what SI is."

Table 2: Respondents' self-reported SI session attendance by attendance record.

Attendance Record	Did you attend a Supplemental Instruction (SI) session?			
	Yes		No	
	#	%	#	%
Attended at least 1 SI Session	121	52.4	15	6.5
Did not attend any SI Sessions	22	9.5	74	32.0
TOTAL	143	61.9	89	38.5

When asked why they chose not to attend an SI session, respondents provided various reasons related to time conflicts (n = 52), a lack of need for assistance (n = 7), obtaining alternative assistance (n = 10), or a lack of interest (n = 6). Representative examples of responses are provided below:

Please explain why you did not attend an SI session, and if anything could be done to persuade you to do so:

Time conflicts

- I wanted to attend but it did not work around my class schedule.
- I had class during the times.
- I was not able to attend due to my work schedule, but if there was sessions when I was able to then I would have. It seemed very helpful to those who went.

Lack of need for assistance

- I did not feel I needed to attend to pass the class.
- I understood the material well enough not to go.
- I wasn't having trouble in the class.

Obtaining alternative assistance

- I like the tutoring center better.
- I had my own teaching aid, so SI was not needed. If I did not have a tutor or support group, I'd attend.
- Prefer to study independently.

Lack of interest

- Kept forgetting to go.
- Too lazy. Persuadable if very hard class.

Table 3 illustrates respondents' levels of agreement with statements regarding various components of the SI program. 100% of respondents either agreed or strongly agreed that the SI leader was knowledgeable about the course material and created a supportive environment. Over 90% of respondents agreed or strongly agreed with the remainder of the statements, except one.

Table 3: Respondents' levels of agreement with statements regarding various SI program components

Statement	Strongly Agree		Agree		Disagree		Strongly Disagree	
	N	%	N	%	N	%	N	%
The SI leader explained SI in class and I understood what he/she meant	112	70.0	47	29.4	1	0.6	0	0.0
The SI leader attends class regularly	108	73.0	34	23.0	5	3.4	1	0.7
The SI leader answered questions effectively by re-directing them to the students	96	64.4	51	34.2	2	1.3	0	0.0
The SI leader was knowledgeable about the course material	115	75.2	38	24.8	0	0.0	0	0.0
The SI leader was well-organized	111	72.1	40	26.0	3	1.9	0	0.0
The SI leader provided helpful learning/studying strategies	105	70.0	40	26.7	5	3.3	0	0.0
The SI leader created a supportive environment	113	75.3	37	24.7	0	0.0	0	0.0
The SI sessions helped me do well on the tests.	88	63.3	45	32.4	6	4.3	0	0.0
I would attend SI sessions for other courses	94	59.9	49	31.2	9	5.7	5	3.2
The SI sessions were very helpful for learning the course content	96	68.1	40	28.4	5	3.5	0	0.0

Respondents provided 63 additional comments and suggestions. Forty-three responses praised the SI program or the SI leader, 9 provided suggestions for improvement, and 7 suggested having additional time offerings. Representative examples of responses are provided below:

If you have any other comments or suggestions regarding SI, state them here:

Praise

- The SI sessions I attended were very helpful in giving the right start in MICRO-102.
- Thoroughly enjoyed previous semester SI meetings. I think they are very helpful!
- SI saved me in this class, and I look forward to attending in the future.
- Great SI instructor, very helpful.
- Hope to attend in future classes that give me trouble.
- I am very thankful for SI both in calculus & chemistry.

Additional time offerings

- I think it's a great idea and opportunity. It just never worked for my schedule this semester.
- Scheduling, but only because I had other classes during SI. sessions.
- More time, never had enough time in SI.

Other suggestions for improvement

- Please get an S.I. session for CHEM-151!
- Have the S.I. leader collaborate with the prof for test prep.