AC 2010-420: THE EEES/CONNECTOR FACULTY PROGRAM: SURVEYS OF ATTITUDES, EXPERIENCE AND EVALUATIONS

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The EEES/Connector Faculty Program:
Surveys of Attitudes, Experience and Evaluations

Abstract

Retention of early engineering students is a nation-wide concern that will affect the strength of the future engineering workforce and the role of the United States as a dominant world player in engineering and technology. Increasing the number of undergraduate engineers can be accomplished by recruitment, retention, or a combination of both. The research described in this paper is part of a larger, integrated retention effort at Michigan State University College of Engineering that has been funded by a five-year NSF STEP (STEM **T**alent **E**xpansion **P**rogram) grant to "Engage Early Engineering Students (EEES)". The project goals are to increase student retention locally by 10 percentage points and to provide a transferable model for increasing retention at other large state institutions.

Specifically this paper describes the research that was conducted during the Spring (January-May) 2009 term at Michigan State University by the Office for Survey Research (OSR) for the EEES team on one particular thrust of the project, the implementation of a "Connector Faculty" student mentoring program. The objective of the research was to establish baseline measures for the EEES project in general and the Connector Faculty (CF) program in particular. Results of four surveys taken of faculty and students are reported. While the program has not been in place long enough to determine college-wide retention outcomes, early results show that this program may have a positive effect on achieving the retention goals of this project.

Background

The College of Engineering (COE) at Michigan State University (MSU) has embarked on a five-year program aimed at increasing student retention. Freshmen entering MSU may initially declare engineering as an intended major, but students are not officially accepted until they complete six required courses (generally as late sophomores or early juniors) and attain a required grade point average. Over the past five years, approximately 65% of the freshmen who declare their intention to enter engineering actually graduate from the college. The five-year program, titled Engaging Early Engineering Students (EEES) has set a goal of increasing that percentage to 75%.

Historically, about half of the students who begin with the intention to study engineering but do not graduate are not retained because of failing to meet the curriculum and grade requirements. A similar number choose a different course of study, even though they have successfully completed the required coursework. EEES is designed to help retain the prospective students in a four-part effort as shown in the graphic on the following page. Three of the parts are designed to help students meet the academic requirements of the program:

- data-driven early intervention, making tools available to students who are seen as needing help with their core courses
- peer assisted learning (PAL) for undergraduate COE students who study in targeted gateway core courses

- course cross linkages, wherein concepts in problem sets and assignments are linked among target pre-engineering courses
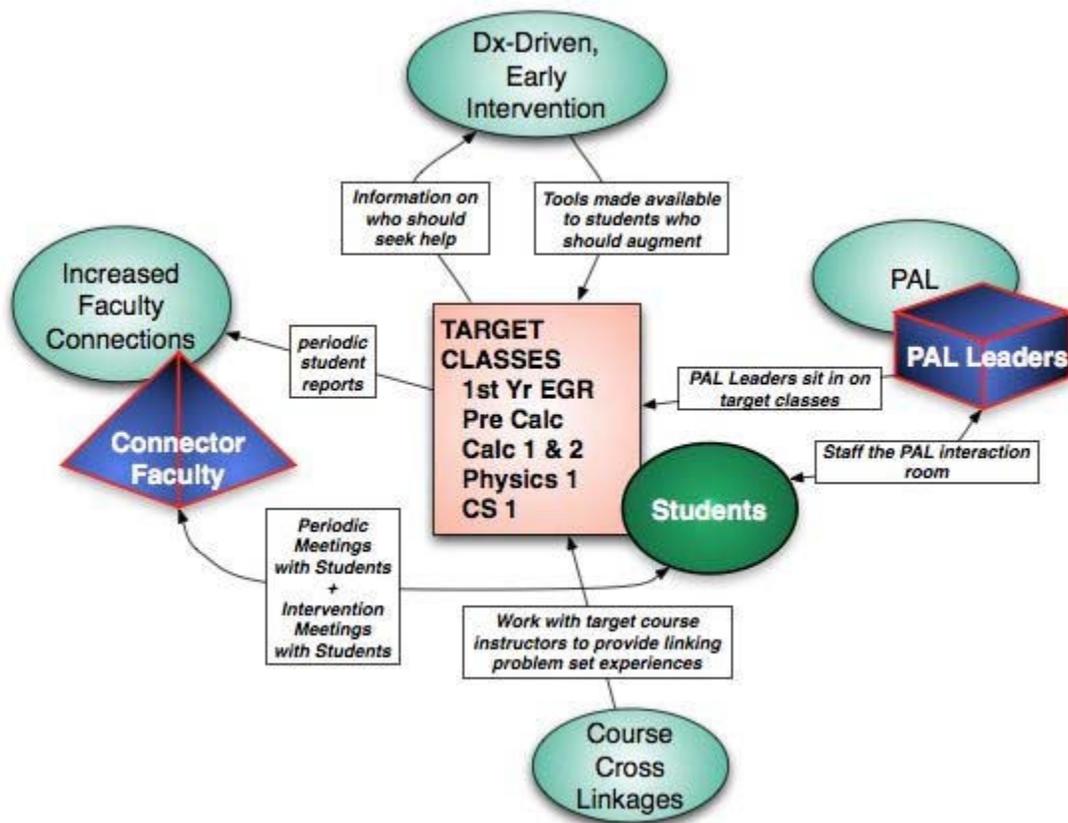
The fourth arm of the retention program is directed at increased faculty connections with entering students, primarily through designated Connector Faculty.

Of the four retention efforts, the Connector Faculty (CF) program is the only one targeting the entire freshman intenders (FI), but is specifically aimed at the student who chooses to go to another discipline even though academic achievement is not an issue. These "leavers" were studied extensively by Seymour and Hewitt[1], with a major conclusion being that this type of FI goes elsewhere largely because she feels isolated, disconnected, and adrift. Faculty engagement with the student can make the difference between the student's remaining in engineering and choosing a different, seemingly "friendlier" career path.

The subgoals of the CF program are to
- link early engineering students to engineering faculty and
- project the core value of the College of Engineering that engineering faculty care about the early engineering students.

Studies have repeatedly shown that one important factor in promoting early student engagement in coursework is the degree to which the students **perceive** that the instructor wants the students to succeed, and genuinely cares about their academic progression (Keller[2]; Stipek[3]; Bransford,

Brown et al.[4]). The central charge to the increased faculty connections component is to foster faculty engagement and concern for students.

At the time of this writing, the CF program has been in place two full academic semesters—the pilot program in Spring, 2009, and the full-scale effort in Fall, 2009. Students in EGR 100, Introduction to Engineering Design, are assigned to a CF based mainly on intended major and, in some cases, on gender. The CF are members of the COE faculty, but are not primary instructors of EGR 100. Their role is to serve as a "friendly face" and contact for these young students outside of their course instructors.

CF Training

Historically, MSU COE faculty members have had little contact directly with first-year students. In order to support positive interactions between the connector faculty and their students, the faculty had to be made aware of who these young students were and how best to make them feel connected.

To help with this aspect of the project, the project team was assisted by MSU's Counseling Center Director. Because of her exceptional expertise in developing counseling programs that support academic success, student retention, and faculty development, she was uniquely qualified to lead the orientation and training.

The one and one-half hour orientation session covered the following topics:
- Characteristics of incoming freshmen including attitudes and study habits
- Interactive discussion of what to do when the students showed up at the faculty's office
- Role-playing and scenarios that could be typical of a first-year engineering student's comments and question
- Active listening skills
- Suggestions for informal meetings with students
- Resources and on-campus referrals
- Recognizing a troubled student

The sessions were highly interactive and generated an enthusiasm for the project because of the synergistic interactions among the faculty attending the sessions and the excellent session facilitation by the Director of the Counseling Center.

Survey results

The research presented here consists of a survey protocol presented to students and faculty in the twelfth week of the fall semester of 2009. Invitations were sent via email to 68 participating CF and 556 Freshman Intenders (FI), i.e. first-year students who have declared their intention to enter the COE. Thirty-six of the CF (53%) and 207 of the FI (37%) gave consent and returned the questionnaire during the 14-day data-collection period. Two reminders were sent to non-responders in each group. Our analysis follows this path: first, we describe the analysis of the FI responses in some detail, then overall results for the CF, and conclude with findings based on how FI and CF recalled the frequency and content of their meetings with each other.

Student (FI) survey

The student survey began with a four-question evaluation section.

Q1: Did you receive any advance information about the Connector Faculty Program?

YES	50%
NO	50%

Q2: Please rate your overall impression of the Connector Faculty Program

|	
EXCELLENT	20%
GOOD	48%
FAIR	25%
POOR	7%

Q3: Thinking back to the beginning of the semester, what was your expectation of the usefulness of the Connector Faculty Program in achieving the goal of increasing student retention in the College of Engineering?

I was **convinced** that it would be helpful	14%
I was **hopeful** that it would be helpful	52%
I was **doubtful** that it would be helpful	30%
I **did not think it would be helpful** at all	5%

The percentages for Q3 do not add to 100% because of rounding; 13.7%, 51.7%, 29.8% and 4.9% were the exact numbers

The first three questions provided background to the critical question of whether there was a **change in student perception** as a result of the CF program, and, if there was, what was the nature of the change?

Question 4 stated, "Now that the semester is nearly over, how has your expectation changed?" The results are shown in Figure 1.
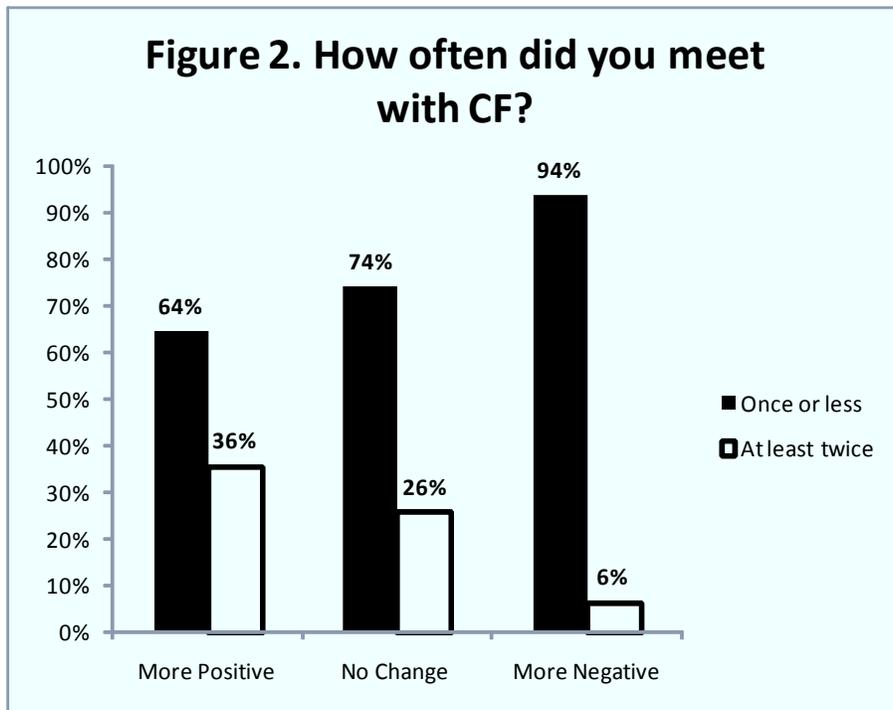
Figure 1. Change in Expectation
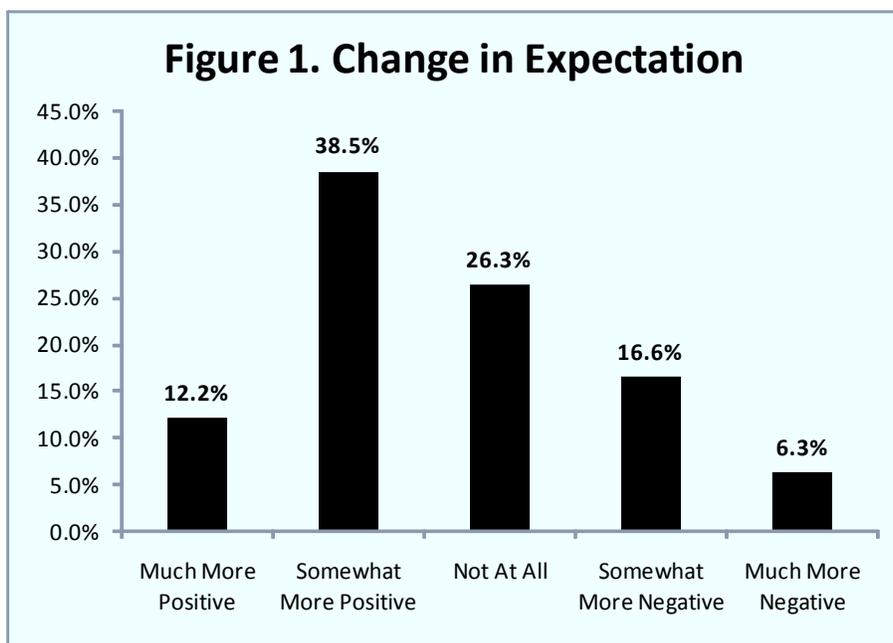
Note that a total of 50.7% reported a positive change, vs. 24.9% whose expectations became more negative. This constitutes good evidence that the goal of **altering the students' perceptions in a positive direction** has been accomplished.

This does not guarantee that the retention goals of EEES will be met. There is, as yet, no definitive opportunity to test for that; however, if the research cited about student perceptions correct, the positive change in perception will help to keep "leavers" in the program. The program might also aid borderline academic achievers by **increasing their motivation** to work harder to meet academic admission thresholds of the COE.

The next section of the survey asked specific questions about the student's experience with the CF program. In addition to showing the responses and frequency for these items, we extracted item-by-item cross-tabulations of the responses with the change in expectation simplified into "positive," "no change," and "negative" categories.

The first item, "How many times did you meet IN PERSON with [Dr. XYZ]?" yielded the following result:

Overall, 7% said "Never," 67% said "Once," 20% said "Twice," and 6% said "More than twice." We simplified the responses to "Once or Less" and "At least twice". The result is shown in Figure 2.

Figure 2. How often did you meet with CF?

Legend:
- Once or less (black)
- At least twice (white)

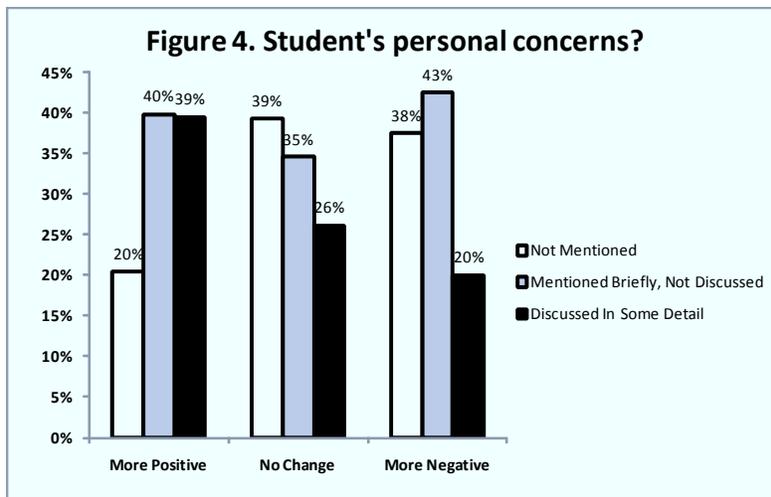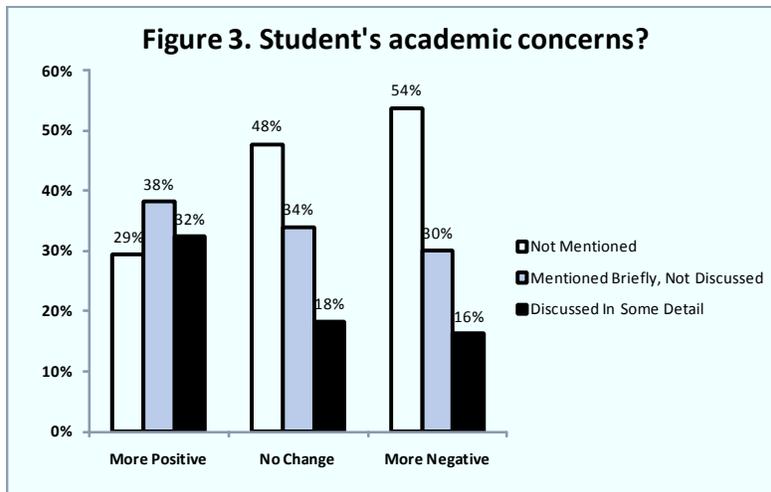| Change in expectation	Once or less	At least twice
More Positive	64%	36%
No Change	74%	26%
More Negative	94%	6%

There is a clear-cut relationship between frequency of meeting and change in expectation of the CF program: the more meetings reported by the student, the more positive the change in expectation. Like the previous finding, this is strong evidence that whatever is taking place in the meetings, the CF program is starting out as a successful instrument to improve FI's perception of their relationship to CF.

The next 13 questions probed the frequency with which the student and the faculty member had discussed certain topics. The 13 topics were divided into three general areas: student's academic issues, student's personal issues, and faculty concerns. Results for each topic area are shown in the Figures 3-5.

In the first case, "brief mentions" are not significantly different across change in expectation, but there was a strong association between "discussed in detail" (the more this occurred, the more positive the change in expectation). Correspondingly, the avoidance of mention was related to a negative change in expectation.

In the first case (Figure 3, below), "brief mentions" are not significantly related to change in expectation, whereas "discussed in detail" was positively related to improved perception (the more this occurred, the more positive the change in expectation). More "not mentioned" instances of student's academic concerns were related to a negative change in expectation.

Figure 3. Student's academic concerns?

Legend:
- Not Mentioned
- Mentioned Briefly, Not Discussed
- Discussed In Some Detail

More Positive: 29%, 38%, 32%
No Change: 48%, 34%, 18%
More Negative: 54%, 30%, 16%

Figure 4. Student's personal concerns?

Legend:
- Not Mentioned
- Mentioned Briefly, Not Discussed
- Discussed In Some Detail

More Positive: 20%, 40%, 39%
No Change: 39%, 35%, 26%
More Negative: 38%, 43%, 20%

A similar effect, but not as extreme, was observed regarding the student's personal concerns (Figure 4 above). That is, 20% of the students who were more positive perceived that their personal concerns were ignored (or not mentioned) and 39% said their concerns were discussed in some detail. Thirty-eight percent of the students who became more negative cited that their personal concerns were ignored, and only 20% said those issues were discussed in detail.

Figure 5. Faculty Topics?
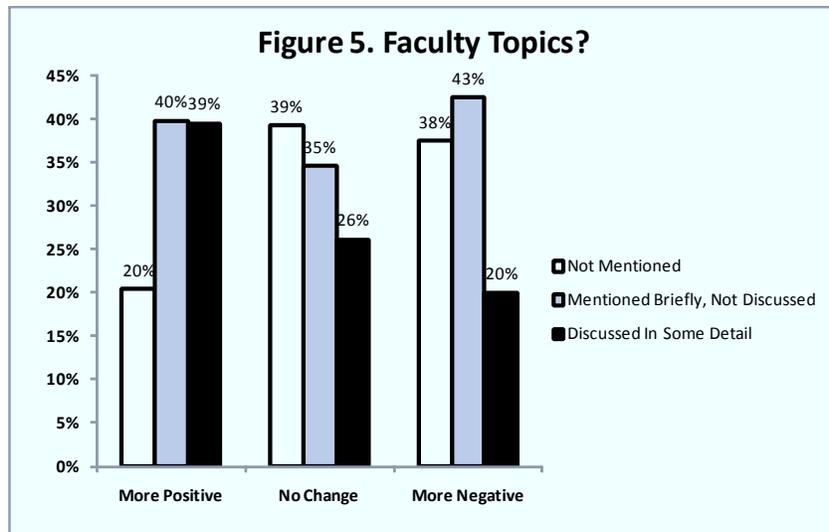
The overwhelming majority of students perceived that faculty topics were discussed in detail. There was no evident effect on attitude change from these discussions.

It is not surprising that FI's improved attitudes are related to their perception that the discussions they had with CFs included their concerns, both personal and academic, and that there was no net effect of the CFs describing their own activities in general, as engineering faculty, or as working engineers.

The final section of the questionnaire probed the students' attitudes about the likely course of their career. We asked

> "When you first met with [NAME], did you have an opinion as to whether you would eventually be accepted as a student in the College of Engineering?
>
>> Yes, I thought I would be accepted.
>> Yes, I thought I had a better-than-even chance of being accepted in the program.
>> Yes, I thought I had a worse-than-even chance of being in the program.
>> Yes, I thought I would not make it be accepted into the program.
>> No opinion."

This was followed by a similar item referring to the time at which the survey was taken ('first meeting' or 'now').

Of those who had an opinion, 69% thought they would be accepted, 31% thought they had a better-than-even chance of being accepted, and the remaining three percent were split evenly in the two negative outcomes. The responses for 'first meeting' and 'now' were virtually identical, and there was no apparent relation between their expectations and the number of times met.

We note that 69% is close to recent historical retention data (~65%), and that an additional 31% report an optimistic view of their acceptance.

The final item in the questionnaire asked about Likely Scenarios,

> "There are several different categories of students who begin their careers at MSU with the intention of becoming Engineers and then are not in the program in their junior year:
>
> > those who drop out of MSU,
> > those who cannot meet the academic requirements, and
> > those who are academically qualified but opt for a different major.
>
> What is the most likely scenario for YOU in your junior year?
>
> > Drop Out of MSU
> > Do not meet academic requirements
> > Opt for a different major
> > Both Do not meet academic requirements and Opt for a different major
> > Be accepted into the engineering program"
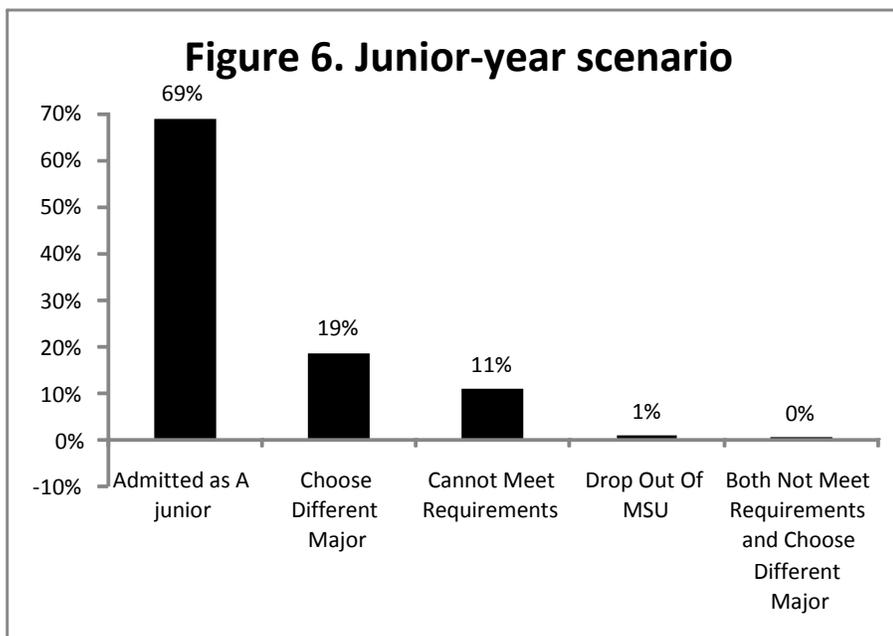
Figure 6. Junior-year scenario

Figure 6 indicates that students estimate almost twice as many 'leavers' as 'rejects' and that the retention would increase 4% over the current rate.

Faculty (CF) Survey

The faculty survey resembles the student questionnaire but is more detailed. The baseline findings were as follows:

> Almost half (47%) of the respondents had acted as CFs in the previous (Spring, 2009) semester; the remainder were new recruits.

About 40% of the respondents attended the Fall, 2009 training session, which they rated as follows:

Excellent: 21%, Good: 43%, Fair: 36%, and Poor: 0%.

We asked about CF's expectation of the program at the beginning of the semester and how they had changed by week 12.

Table 1. Change in Faculty Expectations of CF Program

	Change in Expectation		
Beginning Expectation	Positive	No change	Negative
Convinced would be helpful	1	0	1
Hopeful would be helpful	9	9	8
Doubtful would be helpful	0	5	1

As the results in Table 1 above indicate, 26 of 34 respondents had been hopeful at the outset that the CF program would be helpful, and those 26 were divided as equally as possible between positive, negative, and no change in expectation.

Next, we asked about the CF's intention to participate in the program in the next semester:

Figure 7. Initial Expectation x Change x Intention to continue
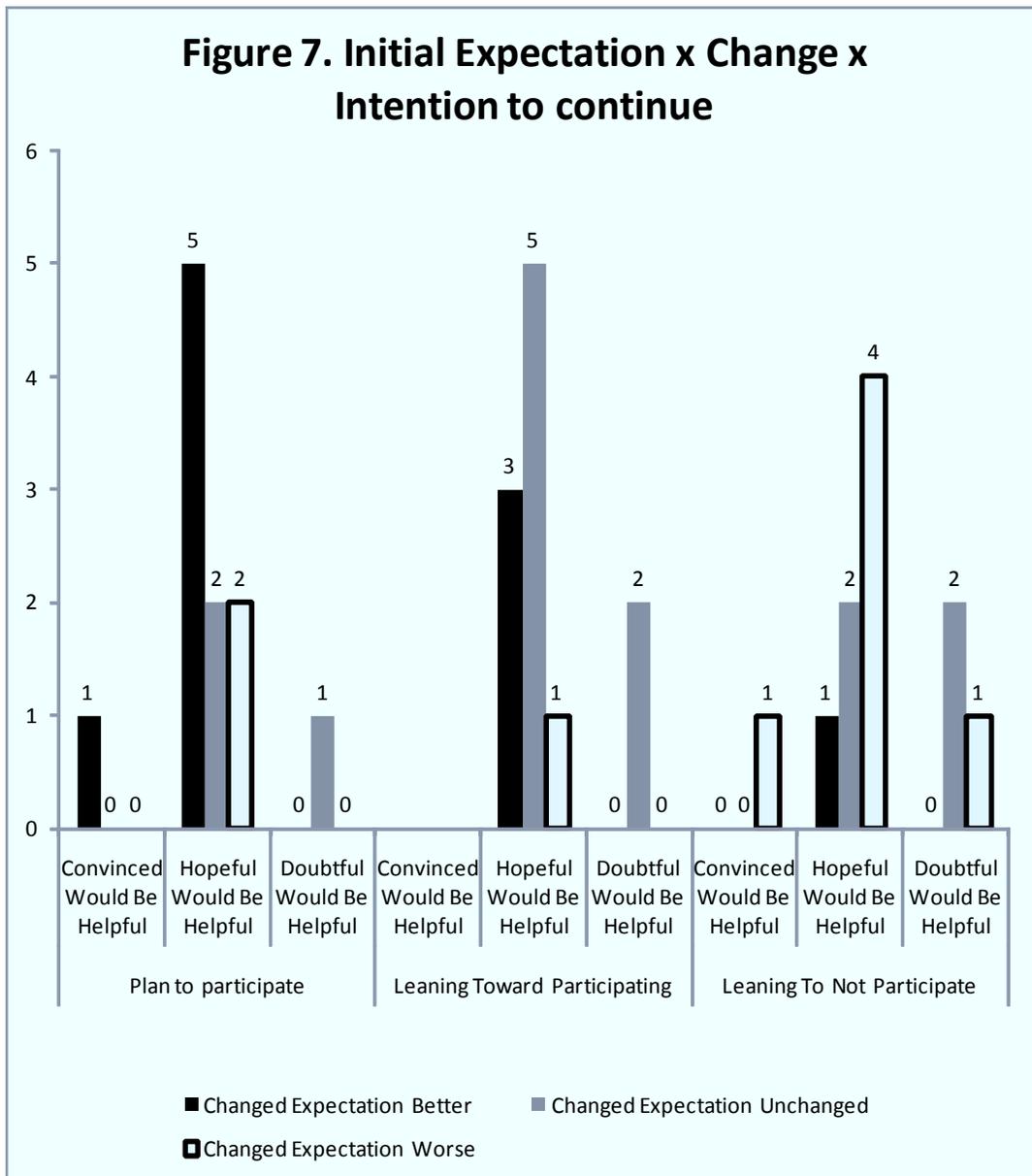
While the sample numbers are small, the indications are clear:

- The modal response for CFs who plan to participate is an "improved expectation;" the modal response of the CFs leaning towards participation is "no change in expectation;" and the mode for those leaning to non-participation is a "worsened expectation" that the program will be useful.
- Overall, 30% of the responding CFs were more optimistic, 42% were unchanged in their outlook, and 28% were more pessimistic.

After the evaluative section, we asked faculty ratings of the frequency of meeting and discussion of topics for each student assigned to the faculty member. The number of FI assigned to each CF ranged from one to eleven. The Table 2 summarizes the mean ratings that students and faculty gave to each item.

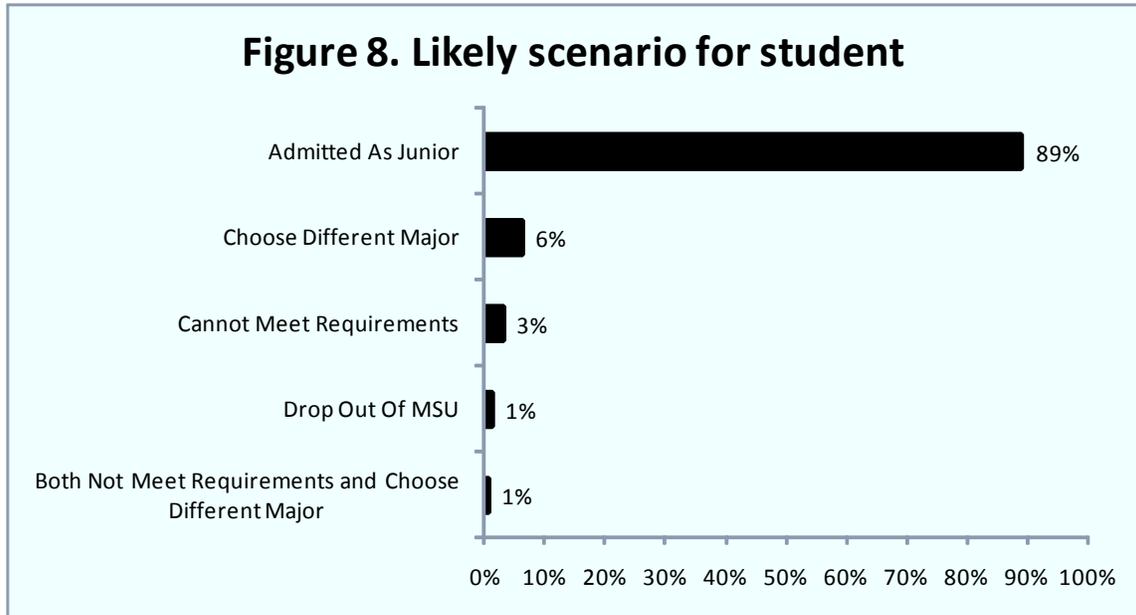**TABLE 2. Mean Ratings of Frequency of Topic Discussion by Students versus Faculty**

Category	Rated by	Students	Faculty	Diff
Student Academics	**Student Expectations of Program**	**1.76**	**2.36**	**0.60**
	College of Engineering Curriculum	**2.14**	**1.69**	**0.46**
	Student Expectation of Eng. Program	2.16	1.77	0.39
	Requirements College of Engineering	1.63	1.41	0.22
	Likelihood of Entrance as a Junior	1.76	1.58	0.18
	Student Study Habits	1.82	1.65	0.17
Student General	**Student Expectations of University**	**2.16**	**1.74**	**0.42**
	University in General	**2.44**	**2.04**	**0.40**
	Students Hobbies or Interests	2.27	2.09	0.17
	Students Family Background	1.87	1.71	0.16
Faculty	**Faculty's Experiences**	**2.62**	**2.01**	**0.61**
	Faculty Work as Engineer	**2.94**	**2.50**	**0.44**
	Faculty Members Work as Faculty Member	2.94	2.65	0.29

In this table, the numbers represent an indicator of how frequently a topic was discussed (1=Never to 3=Extensively). The items in **bold face** represent those topics where there was a significant discrepancy between student and faculty perceptions.

- The CF perceived much greater attention paid to the "student's expectation of the program" than did the students, while the students thought that the discussions went deeper into the COE curriculum than did the faculty
- Students thought discussion of their "expectations of the university" and of the "university in general" were more in depth than the faculty, and they thought the same was true of discussion of "faculty's experience" and "work as an engineer."

The fact that we are citing discrepancies should in no way imply that there was a significant disconnect between student and faculty perception. Indeed, the item by item correlation between student and faculty scores is +.75.
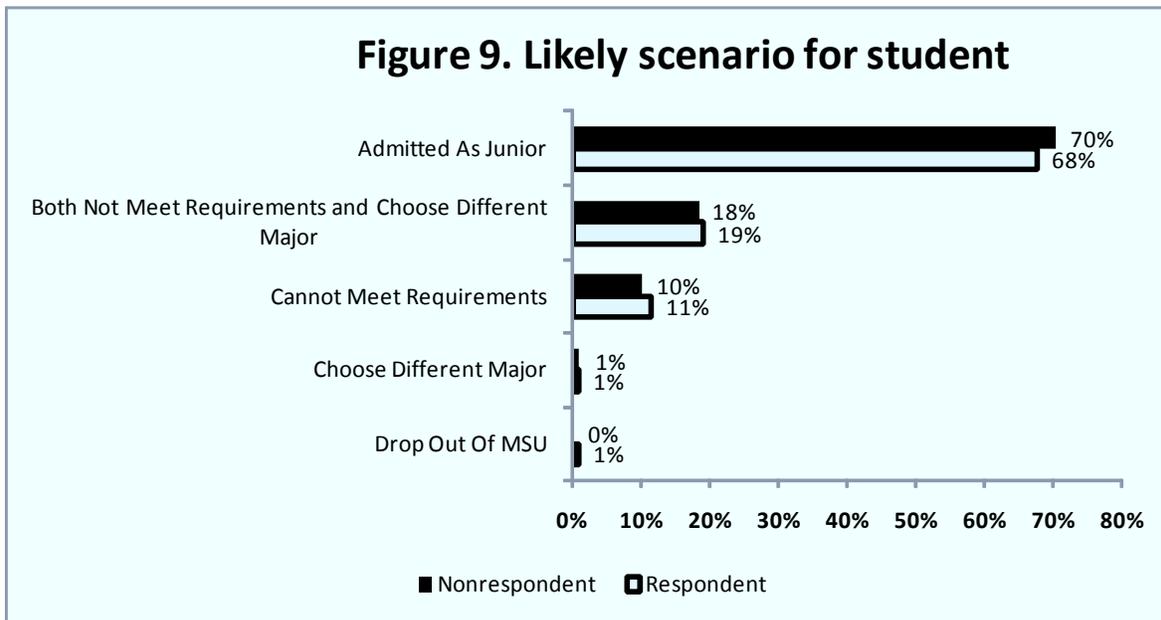
The faculty survey concluded with questions about their opinions of the chances of retaining the students and admitting them into the disciplinary programs.

Figure 8. Likely scenario for student

Scenario	Percentage
Admitted As Junior	89%
Choose Different Major	6%
Cannot Meet Requirements	3%
Drop Out Of MSU	1%
Both Not Meet Requirements and Choose Different Major	1%

Since the goal of the EEES project is to increase the retention rate from 65% to 75%, and the faculty estimate is that almost 90% of the students whom they saw will be admitted, then either
1. faculty perception is optimistic with no real solid basis for prediction or
2. there are systematic sampling errors, to wit:
    a. the students who showed up for were not representative of the FI, or
    b. the faculty who responded were fundamentally different from those who did not answer the survey questions, or
3. both 1 and 2.

We can rule out 2a since the students' own estimate was that 69% would be admitted. We tested hypothesis 2b by comparing the estimates given by students of responsive vs. nonresponsive faculty, with the results shown in the Figure 9 below.

Figure 9. Likely scenario for student

Scenario	Nonrespondent	Respondent
Admitted As Junior	70%	68%
Both Not Meet Requirements and Choose Different Major	18%	19%
Cannot Meet Requirements	10%	11%
Choose Different Major	1%	1%
Drop Out Of MSU	0%	1%

■ Nonrespondent   □ Respondent

The graph clearly shows that students' self-perceptions are virtually identical whether the CF assigned to them responded to the survey or not. That leaves only the conclusion that CF responders are optimistic in their estimates when compared to the estimates of FI or recent experience.

We note that the students' self-estimates of the likely junior-year scenario showed more "leavers" than "rejects" by a margin of 19% vs. 11%. The faculty estimate is roughly parallel, with 6% leavers and 3% rejects.

An analysis of the interaction between CF and the FIs who were assigned to them revealed the following result. Table 3 below shows the mean value from 1 (Never) to 3 (Extensively) for how much each topic was discussed in CF meetings with their assigned FI. The columns "Admitted" and "Other" denote the rating of CF of their students.

Table 3. Frequency of Topic Discussion by Scenario of Student Success

Rated by CF	Likely Scenario		
	Admitted	**Other**	**DIFF**
CF work	**2.74**	**2.37**	**0.37**
CF work as engineer	**2.67**	**2.37**	**0.29**
FI's Study Habits	**1.75**	**1.53**	**0.22**
FI family, friends	**1.63**	**2.15**	**(0.52)**
FI's Interests	**2.07**	**2.38**	**(0.31)**
The University	**1.99**	**2.21**	**(0.22)**
Frequency of Meeting	2.09	2.07	0.02
COE requirements	*1.48*	*1.36*	*0.12*
FI's Experience	*2.47*	*2.37*	*0.10*
Student Univ. Expectation	*1.84*	*1.82*	*0.02*
CF Expectation	*2.08*	*2.17*	*(0.09)*
Student EGR expectation	*1.85*	*1.92*	*(0.07)*
Likely accept	*1.63*	*1.68*	*(0.05)*
EGR Curriculum	*1.76*	*1.77*	*(0.01)*

When CFs believed they were dealing with a student who was likely to be admitted, they were more likely to discuss their work as a faculty member or an engineer, or the FI's study habits, than they would with a student who they felt would not be admitted. For those FIs whom the CFs judged would not be admitted, the CFs were more likely to discuss the FI's family, friends, interests, and the university in general. We cannot speculate on the reasons for the discrepancy, but it is something we will investigate as the project continues.

We attempted a similar analysis on the FI's mean values for the same topics, and found no differences of similar size between their self-reported scenarios.

Early "Retention" Data

While the program has not been in place long enough to determine college-wide retention outcomes after the entire four-year program, early results show that the CF project may have a positive effect on achieving its retention goals. In addition, the EEES project is designed such that multiple efforts contribute to an improvement in the overall student retention rate.

While these are the only data available at the time of this writing, data for "retention" from EGR 100 (measured as students still enrolled in engineering as of Spring, 2010) are as follows:

Table 4. Preliminary Retention in Engineering

Semester taking EGR 100	Number Enrolled in EGR 100	Number in Engineering Spring, 2010	% Retained as of Spring 2010
Fall, 2008	453	300	69.1%
Spring, 2009	189	122	75.3%
Fall, 2009	537	438	90.5%

The first cohort of students to participate in the CF program was the group taking EGR 100 in Spring, 2009. Students who took EGR 100 in the Fall of 2008 had no CF mentoring. Although students leave engineering throughout their four years of college, the upswing in retention for the Spring, 2009 cohort is, at minimum, a hopeful sign that the CF program may be contributing to retaining students in engineering. This is supported by the largely positive view that the students had of the CF program as it relates to literature reports of the correlation between attitudes and retention. It is also clear that the 90.5% retention can be expected to decline, both because retention always declines with increasing credits, and because students have had only a short period of time to evaluate their circumstances and to make wise choices about whether or not to change majors. Because we do not yet have data to indicate retention over a consistent period, we could not conduct a meaningful statistical analysis of these early results.

Summary and Conclusions

The major, most encouraging conclusion of this analysis is that the Connector Faculty program has potential to dramatically affect student perceptions and thus have a positive effect on retention. In addition, the results of these surveys provide valuable feedback for improving the EEES Connector Faculty program.

- The comparison between student and faculty perceptions provides good insight on how students think; this will be incorporated into the training materials that are used for CF orientation before each semester activities begin;
- Students perceived the CF program as an encouraging element of their freshmen experience; this type of encouragement is positively correlated to student retention;
- Knowledge of the types of topics that positively influence students is valuable for faculty in the CF program, but is also transferrable to other settings:
  - information for how faculty may best encourage students during office hours and in everyday interactions;
  - helpful information for faculty at other institutions who may design similar programs for interacting with early engineering students.

Nationally conducted surveys such as the National Survey of Student Engagement (NSSE)[5] offer insightful information about first-year students. Over the years, changes in student nature, attitudes, and experiences are real and substantive. Faculty need to be knowledgeable about these students in order to be effective instructors, advisers, and mentors. Results of the EEES project may also serve to paint a broader picture of the first-year engineering student and how best to nurture their success and retention in engineering programs.

Acknowledgements

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Fall 2009 EEES Student Survey

The College of Engineering has asked MSU's Office for Survey Research (OSR) to distribute this survey that will allow participants in the Connector Faculty Program (CF) -- both faculty and students -- to evaluate how the program is operating in its first full year of operation.

Your participation is completely voluntary. We urge you to participate, no matter what your level of involvement or how you feel about the Connector Faculty Program. The more opinions we get, the better equipped we are to assess and improve the program.
If you agree to participate in the survey, your identity will be protected to the maximum extent allowed by local, state and federal law. Your responses will in no way be connected to you or your name. To determine student and faculty pairings for the purpose of evaluating the program, faculty names will appear in the survey, but this information will be removed from the final dataset.
If you have questions or concerns about the survey, please contact Dr. N. J. Ehrlich by email at ehrlichn@msu.edu or by telephone at 517.353.2639.
I indicate my voluntary consent to participate in this research and have my responses included in the dataset by completing and submitting this survey.

☐ Yes
☐ No

Part A: Overall Program Evaluation

A1. Did you receive any advance information about the Connector Faculty Program?

☐ Yes
☐ No

A2. Please rate your overall impression of the Connector Faculty Program:

☐ Excellent
☐ Good
☐ Fair
☐ Poor

A3. Please use the space below for any comments or feedback you have regarding your rating of the Connector Faculty Program.

_____
_____

A4. Thinking back to the beginning of the semester, what was your expectation of the usefulness of the Connector Faculty Program in achieving the goal of increasing student retention in the College of Engineering?

□ I was **convinced** that it would be helpful
□ I was **hopeful** that it would be helpful
□ I was **doubtful** that it would be helpful
□ I did **not** think it would be **helpful at all**

A5. How much did the first interview assignment help you get to know your Connector Faculty member?

□ It helped a great deal
□ It was minimally useful
□ It was not helpful at all

A6. Now that the semester is nearly over, how has your expectations about the Connector Faculty Program changed?

□ I am **much** more **positive**
□ I am **somewhat** more **positive**
□ I am **somewhat** more **negative**
□ I am **much** more **negative**
□ My expectations have not changed

Part B: Your Contact with Your Connector Faculty Member

B1. According to our records, your Connector Faculty member is Dr. (Faculty Member). About how many times did you meet individually IN PERSON with Dr. (Faculty Member)?

□ Never
□ Once
□ Twice
□ More than twice

Part B: Your Contact with Your Connector Faculty Member

B2. Thinking about your meeting(s) with Dr. (Faculty Member) this past semester, please indicated if each of the following topics were not mentioned at all, were mentioned briefly but not discussed in detail, or discussed in some detail.

	Not Mentioned	Mentioned Briefly, Not Discussed	Discussed In Some Detail
Dr. (Faculty Member)'s experiences as a student	☐	☐	☐
Your expectations of the Connector Faculty Program	☐	☐	☐
MSU in general	☐	☐	☐
Your likelihood of entering the College of Engineering as a junior	☐	☐	☐
The requirements for acceptance into the College of Engineering	☐	☐	☐
Dr. (Faculty Member)'s work as a faculty member	☐	☐	☐
Your hobbies or interests	☐	☐	☐
Your expectations of the engineering program	☐	☐	☐
Your expectations of MSU	☐	☐	☐
Dr. (Faculty Member)'s work as an engineer	☐	☐	☐
Your family background	☐	☐	☐
The curriculum in the College of Engineering	☐	☐	☐
Your study habits	☐	☐	☐

B3. You indicated that you met with Dr. (Faculty Member) more than one time. Were your subsequent meetings . . .
　　　　☐ Initiated by you
　　　　☐ Initiated by Dr. (Faculty Member)
　　　　☐ Initiated by both you and Dr. (Faculty Member)

B4. When you <u>first</u> met with Dr. (Faculty Member) what was your opinion as to whether you would <u>eventually</u> be accepted as a student in the College of Engineering?

　　　　☐ I thought I **would** be accepted
　　　　☐ I thought I had a **better-than-even** chance of being accepted in the program
　　　　☐ I thought I had a **worse-than-even** chance of being in the program
　　　　☐ I thought I would **not** be accepted into the program
　　　　☐ No opinion

B5. Now that the semester is nearly over, what is your opinion <u>now</u> as to whether you would eventually be accepted as a student in the College of Engineering?

　　　　☐ I think I **will** be accepted
　　　　☐ I think I have a **better-than-even** chance of being accepted in the program
　　　　☐ I think I have a **worse-than-even** chance of being in the program
　　　　☐ I think I will **not** be accepted into the program
　　　　☐ No opinion

B6. There are three different categories of students who begin their careers at MSU with the intention of becoming engineers and then are <u>not</u> accepted into the program in their junior year
Students who cannot meet the academic requirements of the College of Engineering and are denied entrance into the College of Engineering in their junior year
Students who are academically qualified to enter the College of Engineering, but choose a different major
Students who drop out of MSU
What is the most likely scenario for you?

☐ Cannot meet the academic requirements of the College of Engineering
☐ Choose different major
☐ Drop out of MSU
☐ Both - **not** meet the academic requirements **and** will choose a different major
☐ I will be admitted as a junior

Thank you for your participation.

If you would like to make any additional comments about the Connector Faculty Program, please do so below.

_____
_____
_____

Fall 2009 Connector Faculty Survey

The College of Engineering has asked MSU's Office for Survey Research (OSR) to distribute this survey that will allow participants in the Connector Faculty Program (CF) -- both faculty and students -- to evaluate how the program is operating in its first full year of operation.

Your participation is completely voluntary. We urge you to participate, no matter what your level of involvement or how you feel about the Connector Faculty Program. The more opinions we get, the better equipped we are to assess and improve the program.

If you agree to participate in the survey, your identity will be protected to the maximum extent allowed by local, state and federal law. Your responses will in no way be connected to you or your name. To determine student and faculty pairings for the purpose of evaluating the program, students names will appear in the survey, but this information will be removed from the final dataset.

If you have questions or concerns about the survey, please contact Dr. N. J. Ehrlich by email at ehrlichn@msu.edu or by telephone at 517.353.2639.

I indicate my voluntary consent to participate in this research and have my responses included in the dataset by completing and submitting this survey.

☐ Yes
☐ No

Part A: Overall Program Evaluation

A1. Did you act as a Connector Faculty (CF) in the previous semester (Spring 2009)?

☐ Yes
☐ No

A2. Did you attend the training session held this fall?

☐ Yes
☐ No

A3. Please rate your overall impression of the training session you attended.

☐ Excellent
☐ Good
☐ Fair
☐ Poor

A4. Please use the space below for any comments or feedback you have regarding the training session you attended.

_____

_____

A5. Thinking back to the beginning of the semester, what was your expectation of the usefulness of the CF Program in achieving the goal of increasing student likelihood of being accepted into the College of Engineering?

☐ I was **convinced** that it would be helpful
☐ I was **hopeful** that it would be helpful
☐ I was **doubtful** that it would be helpful
☐ I did **not** think it would be **helpful at all**

A6. Now that the semester is nearly over, how has your expectations about the Connector Faculty Program changed?

     ☐ I am **much** more **positive**
     ☐ I am **somewhat** more **positive**
     ☐ I am **somewhat** more **negative**
     ☐ I am **much** more **negative**
     ☐ My expectations have not changed

A7. How likely or unlikely are you to be a part of the Connector Faculty Program next semester?

     ☐ I **definitely** plan to participate
     ☐ I am **leaning** toward participating
     ☐ I am **leaning** towards **not** participating
     ☐ I am **definitely not** participating

Part B: Contact with Connector Program Students

In this section, we would like you to answer a short series of questions about your experiences with each of the students who were assigned to you this semester.
According to our records, you were assigned the following students:

[list of student names]

Part B: Contact with Connector Program Students

S1a. About how many times did you meet individually IN PERSON with (student 1-11)?
(Note: The series of questions, S1a through S1d, were asked individually for each student the faculty member was assigned.)
     ☐ Never
     ☐ Once
     ☐ Twice
     ☐ More than twice

S1b. Thinking about your meeting(s) with this past semester, please indicated if each of the following topics were not mentioned at all, were mentioned briefly but not discussed in detail, or discussed in some detail.

	Not Mentioned	Mentioned Briefly, Not Discussed	Discussed In Some Detail
(student 1-11)'s experiences as a student	☐	☐	☐
Your expectations of the Connector Faculty Program	☐	☐	☐
MSU in general	☐	☐	☐
(student 1-11)'s likelihood of entering the College of Engineering as a junior	☐	☐	☐
The requirements for acceptance into the College of Engineering	☐	☐	☐
Your work as a faculty member	☐	☐	☐
(student 1-11)'s hobbies or interests	☐	☐	☐
(student 1-11)'s expectations of the engineering program	☐	☐	☐
(student 1-11)'s expectations of MSU	☐	☐	☐
Your work as an engineer	☐	☐	☐
(student 1-11)'s family background	☐	☐	☐
The curriculum in the College of Engineering	☐	☐	☐
(student 1-11)'s study habits	☐	☐	☐

S1c. You indicated that you met with (student 1-11) more than one time. Were your subsequent meetings . . .

☐ Initiated by you
☐ Initiated by
☐ Initiated by both you and

S1d. There are three different categories of students who begin their careers at MSU with the intention of becoming engineers and then are <u>not</u> accepted into the program in their junior year
Students who cannot meet the academic requirements of the College of Engineering and are denied entrance into the College of Engineering in their junior year
Students who are academically qualified to enter the College of Engineering, but choose a different major
Students who drop out of MSU

What is the most likely scenario this (student 1-11)?
☐ Cannot meet the academic requirements of the College of Engineering
☐ Choose different major
☐ Drop out of MSU
☐ Both - **not** meet the academic requirements **and** will choose a different major
☐ **(student 1-11)** will be admitted as a junior

Part C: Previous Connector Faculty Role

C1. Have you maintained any relationship(s) that were established in the PREVIOUS semester (Jan-May 2009)?

☐ Yes
☐ No

C2. In what ways have you continued your relationship with students from last semester?

_____
_____

Thank you for your participation.

If you would like to make any additional comments about the Connector Faculty Program, please do so below.

_____
_____
_____