AC 2010-2054: STUDENT-PERCEIVED VALUE OF ACADEMIC SUPPORT INTERVENTIONS

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Student-Perceived Value of Academic Support Interventions

Abstract

Student retention, particularly first-year retention, is widely of concern in engineering education. In 2005, a feature article in ASEE's Prism magazine reviewed interventions implemented by engineering programs nationwide in an attempt to increase the retention of first-year students. Regardless of availability, interventions cannot be effective if students do not participate, or if they are present in body but not in spirit. It seems likely that a student's perception of the value of any particular intervention is likely to strongly influence the frequency and quality of his/her participation. Perception may come from personal experience, or be influenced by conversations with peers.

Here, freshmen registered for engineering majors at one university are surveyed at the start of their second term of study to determine students' perception of the value of various academic support activities to their academic development. The goal is to identify intervention strategies which have perceived positive impacts on freshmen engineering student success, and to explore the extent to which these perceptions are based on personal vs. vicarious experience. This survey is part of a longer-term project in which the objective effectiveness of these interventions (as measured by retention and by GPA) will be evaluated. Presentation at the 2010 meeting will be of the first year's results only, focusing on three interventions: Engineering Freshman Learning Communities, Supplemental Instruction for Pre-Calculus, Calculus, and Chemistry, and Peer-Led Team Learning for Pre-Calculus, Calculus, and Chemistry.

From this preliminary data, it was found that peer opinions (at least when they are positive) seem to have little influence on a student's attitude towards a particular academic support program, or on whether or not the student actually participates in the academic support program. The results suggest that contact by academic advisors with both students (and prospective students) and their parents to encourage utilization of academic support resources is potentially highly-effective.

Introduction

A brief review of the literature shows student retention in engineering to have been of concern for more decades. A 2005 feature article in ASEE's Prism magazine (Loftus, 2005) featured retention-enhancement programs at a number of universities, and quoted a national average of 52% of engineering freshmen eventually graduating with engineering degrees. The article's message was that this was an improvement over the prior decade, but still unsatisfactory.

Various authors have reported assessments of the effectiveness of individual retention programs. For example, Baxter and Yates (2008) report an increase in retention of engineering freshmen at the University of Southern California following centralization of freshman advising in the engineering Student Affairs office and implementation of a freshman seminar course for engineers. Morning and Fleming (1994) report on higher-than-predicted retention for minority students participating in a program that emphasizes development of cognitive skills, close relationships with other students and with faculty, and connection to the educational institution.

Other authors have reported on key predictors of or barriers to student retention. For example, Levin and Wyckoff (1988, 1990) have reported that grades in engineering foundation courses such as calculus, physics, and chemistry are strong predictors of both persistence and success in engineering beyond the freshman year at Pennsylvania State University. Budny and coworkers (1997) similarly reported that success in math, chemistry, and physics in the first year predict eventual success in engineering at Purdue University, but further demonstrated that placing students so that they develop the appropriate foundation (i.e., algebra or pre-calculus placement vs calculus placement) is more important to retention than the level of secondary school preparation with which a student enters. They also found that providing supplemental instruction for foundation courses enhanced the retention and success of at-risk students, and did not in general simply delay their loss from engineering. Ohland and coworkers (2004) later confirmed these observations at Clemson University.

Habley and McClanahan (2004) analyzed surveys from 1061 institutions of higher education, including 228 from 4-year public institutions, to select the most effective interventions for improving student retention from a list of 82 possibilities. This report by ACT, and its predecessors, are widely cited in papers investigating retention in public universities. However, it is important to note how Habley and McClanahan collected their data: university officials were asked via survey to rate the impact that *they themselves perceived* various interventions to have on student retention. With 42.5 % of contacted 4-year public institutions responding, there is little doubt of how these interventions are perceived by university officials. However, Habley and McClanahan in their 2004 report did not delve into the evidence upon which university officials based their perception, or, indeed, the extent to which objective evidence exists.

Habley & McClanahan did identify 10 interventions which received high ratings, and for which the proportion of high-retention universities practicing them exceeded the proportion of low-retention universities practicing them by at least 10 percentage points. The surface implication is that these activities that might make a difference at low-retention schools, if implemented. However, deeper reading of the report reveals a murkier situation. For example, two practices more commonly implemented at high-retention schools are extended freshman orientation without credit (56%, vs. 40% of low-retention schools) and freshman seminar / "university 101" without credit (26%, vs. 16% of low-retention schools). However, high- and low-retention schools in similar proportions offer "for credit" versions of these programs. In fact, 51% of responding 4-year publics offer freshman seminar / "university 101" *for credit*, while only 8% of responding 4-year publics offer such programs *without credit*. It seems counter-intuitive for a school with a *for credit* program to withdraw credit in a bid to improve retention. More likely, a *no credit* program is better than *no* program, but the report does not readily enable that simplistic comparison.

Ohio University, a comprehensive four-year public institution, has an overall first-year retention rate of exceeding 80%, and a 6-year graduation rate of approximately 70%. (See http://www.ohio.edu/instres/retention/) About 10 % of freshmen who enter as engineering majors change to other degree programs within the university by the start of their second year, and about 20 % of entering freshman engineers leave the university by the start of their second year. A further 20% leave engineering sometime before graduation, about 15 % leaving the university completely and about 5 % transferring to other degree programs within the university. This 50% graduation rate is comparable to the 52% rate reported in Prism. (Loftus, 2005)

Ohio University has a number of programs to support first-year retention within engineering, some focused on improving success in the foundation math and science courses, some focused on building an early sense of connection to the Russ College of Engineering and Technology. The university's Academic Advancement Center provides supplemental instruction for math and science courses; general chemistry and some math courses have associated "Peer-Led Team Learning" classes for credit; the Russ College of Engineering and Technology offers "Engineering Freshman Learning Communities" for credit during Fall quarter; the Engineering Freshman Learning Communities have associated weekly study sessions led by more advanced engineering students; each Russ College student has a faculty advisor with whom he/she is required to meet at least quarterly; the Allen Student Help Center in the student union coordinates intervention activities, is open for walk-ins or for referrals from faculty or staff, and actively reaches out to students of all majors who are identified to be at risk.

At various times, the effectiveness of each of these intervention activities has been investigated. Typically, investigation shows that the proportion of successful students among the intervention participants exceeds the proportion of successful students overall, or the proportion of successful non-participants. Sometimes, those proportions are normalized using some predictor of success (e.g. ACT score) to demonstrate that the proportion of successful students exceeds what would otherwise be expected. The danger of the typical approach is that, at least anecdotally, the students most at risk are also the students least likely to take advantage of optional resources. An intervention has proven utility when participants are more successful than would otherwise be expected. Then, the challenge is to recruit at-risk students to participate.

For this paper, it is considered to be axiomatic that an intervention strategy can only be effective if students participate in it. In contrast to Habley and McClanahan's approach, here *students* are asked to rate the effectiveness of various intervention strategies, and to identify their reasons for participating in them. The extent to which students' opinions and behavior are influenced by their peers is of particular interest. The goal is to identify recruiting strategies likely to improve student participation in our most effective interventions. It is explicitly recognized that student perceptions are evaluated in this paper, not the objective effectiveness of interventions.

Methods

Data were collected through two primary avenues: an electronic survey distributed to all engineering freshman, and the course evaluations for the Engineering Freshmen Learning Communities. Respondents for either avenue cannot be individually indentified.

The text of the electronic survey is provided as Appendix A. The survey was approved by the Institutional Review Board at Ohio University. The survey was distributed using Survey Monkey, and was constructed using the Professional version with a conditional structure, so that questions made irrelevant by a participant's response to a prior question were not displayed. The Russ College Student Records office staff compiled university e-mail addresses for the 295 first-year students who were enrolled in engineering in Fall 2009-2010. These students were e-mailed a link to the survey during Winter quarter 2009-2010; e-mails were sent out on January 12 and 19; the survey ended January 31. Although some of the Fall freshmen may not have returned for Winter quarter, all would still have had valid university e-mail addresses.

The electronic survey covers a variety of Russ College intervention strategies, including the Engineering Freshmen Learning Communities, Peer-Led Team Learning courses, Supplemental Instruction through the Academic Advancement Center, and Advising. With the exception of the Engineering Freshmen Learning Communities (currently available only to Fall quarter freshmen), students will have the opportunity to utilize these resources in future quarters. Further, students can join Supplemental Instruction or request an advising appointment at any time during a quarter.

Selected questions from the course evaluation for the Engineering Freshmen Learning Communities (EFLCs) are provided as Appendix B. The selected questions either address topics similar to those in the electronic survey, or complement the questions in the electronic survey. The EFLCs are among many Learning Communities offered at Ohio University, all with a common course evaluation, so some answer options are not applicable to EFLCs. Such options are noted in Appendix B.

In the EFLCs, students are grouped into sections by major first (including "undecided engineering" as a major), and then by math enrollment. For example, there was one section for chemical engineers enrolled in calculus, and one for chemical engineers enrolled in precalculus or algebra. The EFLCs are one-credit, graded courses that meet once per week, at 5:10 pm. Each EFLC section is led by a faculty member ("faculty mentor") and an upperclass student ("peer mentor"), both typically from the same program as the students enrolled. From 5:10 – 6:00 each week, the mentors initiate activities to introduce first year students to engineering as a career and profession. Afterwards, the peer mentors lead study sessions for math and chemistry courses. Attendance from 5:10 to 6:00 is mandatory; study session attendance is optional. Mentors are given wide latitude in the activities they choose for the 5:10 – 6:00 period. Peer mentors also invite the first-year students to several events outside class, ranging from sporting events to lectures to performances to professional society meetings. The course evaluations were distributed as hard copies in class at the end of the quarter, and were collected by the peer mentors and submitted for data compilation by university staff. Peer mentors do not have grading responsibility in the EFLCs.

Results and Discussion

Only 22 of the 295 first-year students enrolled in engineering in Fall 2009-2010 responded to the electronic survey. All received responses came within 2 days of an e-mail notice. With this low response rate, the electronic survey results cannot be taken as representative of all engineering freshmen at Ohio University. The extent to which respondents differ from typical Russ College freshmen can be inferred to some extent by the proportions who self-report enrollment in math or chemistry. This will be summarized prior to seeking areas for further investigation among the results. Clearly, a more effective method of seeking information from the students is needed.

Of the 295 first-year students enrolled in engineering in Fall 2009-2010, 181 (61%) enrolled in one of the 10 sections of the Engineering Freshmen Learning Communities. Of those 181 students, 152 answered at least some of the course evaluation questions, with no question receiving fewer than 147 responses. Thus, responses represent at least 81% of EFLC participants, and at least 50% of all freshmen in engineering in Fall 2009-2010. Where these questions overlap with the electronic survey, they may be useful to evaluate its reliability. At the same time, it must be explicitly recognized that the students most resistant to participating in any optional activity are likely to be among the 39% of freshman engineers who did not enroll in an EFLC. Also, the strategies resulting in high yields for EFLC participation and course evaluation participation should be investigated for marketing and evaluating other retention interventions.

Table 1. Math / Chemistry enrollments of Russ College freshmen

Math Course	All Russ College freshmen Fall Course Enrollment
Algebra	14 %
Pre-Calculus	42 %
Calculus I	23 %
Calculus II	15 %
Other / No Math	5 %
General Chemistry	52 %

Self-reported enrollments of the electronic survey respondents are in similar proportions to those typical of all Russ College freshmen (Table 1), suggesting that this small sample is not necessarily atypical of the population. The electronic survey's self-reported enrollment in an Engineering Freshman Learning Community is 14/20 (70%), compared to an actual EFLC enrollment rate of 61%. The electronic survey covered Supplemental Instruction and Peer-Led Team Learning for General Chemistry I, Pre-Calculus and Calculus I. Enrollment data (Table I) indicate that about 2/3 of Fall quarter freshmen should be enrolled in either Pre-Calculus or Calculus I, and at most 1/20 should be without a Fall math class. On the survey, 1/22 respondents stated that (s)he did not take math in Fall, which is consistent with enrollment data. An additional 3/22 students did not identify a math instructor; two of those answered no questions beyond those about the EFLC, suggesting that they simply stopped participating in the survey. It is thus inferred that at most 2/22 respondents were not enrolled in a math class, in reasonable agreement with the enrollment data. Regarding chemistry enrollment, 7/20 respondents (35%) did not take chemistry, compared to the expected value of 48% (Table 1).

Table 2. Top reasons to enroll in Engineering Freshmen Learning Community

	Electronic Survey (n=14)	Course Evaluation (n=151)
To make friends / meet people	71 %	63 %
Recommended by precollege orientation advisor	64 %	62 %
Recommended by parents	50 %	31 %
For academic support	36 %	48 %
To learn about engineering as a career	21 %	*option not provided*

Table 3. Top reasons NOT to enroll in Engineering Freshmen Learning Community

	Electronic Survey (n=8)
Didn't know about it	50 %
Didn't need academic support	50 %

Table 4. Would recommend enrolling in Engineering Freshmen Learning Community to others

	Yes	No
Electronic survey, EFLC participants (n=14)	11 (79 %)	3 (21 %)
Electronic survey, EFLC non-participants (n=8)	1 (13 %)	6 (75 %)
Course evaluation, EFLC participants (n=152)	90 %	10 %

Tables 2 and 3 summarize students' most common reasons for participating (or not) in the EFLC. Note that respondents were asked to mark all choices that applied. Clearly, participants are motivated by a desire to connect with other engineering students and by external advice (parents, precollege orientation advisors). Our precollege orientation advisor pushes the EFLC program enthusiastically to both incoming freshmen and their parents. The overall participation among Russ College freshmen (in excess of 60 %) and the reasons cited in Table 2 suggest that this strong push at precollege orientation is effective. The top reasons for not participating (Table 3) are not knowing about the program and not perceiving a need for academic support; these two reasons together account for 6/8 of the non-participants.

Students by-and-large get what they expect from the EFLC program. The course evaluation shows that 99 % (n=152) agree that being in a learning community helped them meet other students at Ohio University, 95 % (n=151) agree that the course helped them develop friendships with other new students, and 92 % (n=152) cite "meeting new people and making friends" as a most valuable aspect of their participation. Further, 60 % (n=151) of EFLC participants study for other classes often or very often with members of their learning community, 89 % agree that learning community members encourage each other to do well academically, and 49 % cite "studying for other classes with my classmates" as a most valuable aspect of their participation.

Because Engineering Freshmen Learning Communities are only offered in Fall to incoming freshmen, opportunities to be influenced by peers in choosing an EFLC are limited. For this reason, the survey did not explore students' perceptions of peer opinions about the EFLC program. On the course evaluation, only 14% of respondents report hearing about learning communities from a sibling or friend, while 69% report hearing about it from a precollege orientation advisor. Still, the results indicate the limited role that peer influence is appears to play in first-year students' participation in retention programs. While a strong majority of EFLC participants would recommend it to others (Table 4), the majority of non-participants would not do so. Given that more than 60% of Russ College freshmen do participate, one would expect ample opportunity for word of their satisfaction to spread. However, the single non-participant who would recommend it to others also gave class schedule conflicts as his/her only reason for not enrolling. In other words, but for an overriding external factor, that student would have participated. Apparently, no non-participants changed their minds about the program during the Fall term, in spite of the positive attitude of the majority of their peers. However, this leaves open the question of whether non-participants did not hear from their peers about the EFLCs, or whether they were uninfluenced by what they heard.

The general agreement between the electronic survey results and the EFLC course evaluation results lends confidence to some tentative analysis of the remaining electronic survey data, in spite of the low response rate.

Peer-Led Team Learning (PLTL) at Ohio University denotes an optional, limited-enrollment, 1-credit class associated with a regular course. PLTL sections are led by upperclass students who have succeeded in the course, with an experienced faculty member coordinating sections, training peer leaders, and providing study exercises. Questions on the electronic survey covered PLTL sections for Pre-Calculus, Calculus I, and General Chemistry I. Only 4/22 respondents enrolled in PLTL, 2 for chemistry and 1 for each of the math courses. No respondents enrolled in more than one PLTL. Of the 4 PLTL participants, 3 were also EFLC participants. Table 5 summarizes student ratings of PLTL helpfulness; Table 6 summarizes student recommendations for others to participate in academic support programs.

Table 5. Ratings of Peer-Led Team Learning

	Participants Peer Rating	Participants Self Rating	Non-participants Peer Rating (n=16)*
Chemistry PLTL			
Extremely or Often Helpful	2	2	2
Occasionally Helpful	-	-	2
Not Helpful	-	-	1
Have not heard	-	-	13
Pre-Calculus PLTL			
Extremely or Often Helpful	1	-	-
Occasionally Helpful	-	1	3
Not Helpful	-	-	-
Have not heard	-	-	16
Calculus PLTL			
Extremely or Often Helpful	1	1	1
Occasionally Helpful	-	-	3
Not Helpful	-	-	-
Have not heard	-	-	15

*Of 16 non-participants, 11 claim to have heard nothing from their peers about any PLTL, and 5 have heard about at least 1 PLTL from their peers.

For the 4 PLTL participants, their personal rating of the value of PLTL typically agrees with what they have heard from others, and is positive. All PLTL participants would recommend that others participate. Nearly all of the peer ratings provided are positive. The student who rated the Chemistry PLTL “Not helpful” provided ratings of “Often helpful” and “Occasionally helpful” for the other two, and participated in the Pre-Calculus PLTL, indicating an isolated poor experience and not a broad indictment of PLTL. In fact, it is worth noting that all students who provided peer ratings differentiated among the PLTL offerings, suggesting that they were providing honest perceptions. However, for each PLTL, a majority of survey respondents have heard nothing from their peers. In fact, 11/20 respondents have never heard any evaluation of PLTL from their peers. Interestingly, 10/16 non-participants would recommend that others participate in PLTL, including 8/11 who report no information about PLTL effectiveness either from their peers or from personal experience. The basis for their recommendation is unknown. This is different from the situation with the EFLCs, for which non-participants appear not to recommend participation by others.

Table 6. Peer Recommendations

	Participants	Non-Participants
I would recommend PLTL to other students	4 (n=4)	10 (n=16)
I would recommend SI to other students	4 (n=4)	14 (n=15)

Supplemental Instruction (SI) at Ohio University is administered by the Academic Advancement Center, which hires upperclass students who have succeeded in the courses as group tutors. Sessions are not-for-credit, regularly scheduled, free, and available for students to drop in with no enrollment limits and no preregistration required. Thus, in contrast to EFLC or PLTL, a student hearing positive reports about SI could then participate within the same academic term.

Compared to Peer-Led Team Learning, survey respondents appear to have been exposed to more peer opinions about Supplemental Instruction. Only 2 survey respondents claim never to have heard an evaluation of any SI session from their peers. In general, impressions from the students' peers are positive (Table 7). Table 6 shows that students are highly disposed to recommend SI to others. However, participation in SI is about the same as in PLTL, and mostly limited to chemistry (Table 7). Of the five SI participants, four were also EFLC participants. The two students who attended Calculus SI also attended Chemistry SI, and were EFLC participants.

Table 7. Ratings of Supplemental Instruction

	Participants Peer Rating	Participants Self Rating	Non-participants Peer Rating
Chemistry SI	n=5	n=5	n=15
Extremely or Often Helpful	3	2	8
Occasionally Helpful	2	3	1
Not Helpful	-	-	1
Have not heard	-	-	5
Pre-Calculus SI	n=0	n=0	n=19
Extremely or Often Helpful	-	-	5
Occasionally Helpful	-	-	2
Not Helpful	-	-	-
Have not heard	-	-	12
Calculus SI	n=2	n=2	n=17
Extremely or Often Helpful	2	1	9
Occasionally Helpful	-	1	-
Not Helpful	-	-	1
Have not heard	-	-	7

It is disappointing to see SI participation apparently unaffected by easy access and positive student perceptions. This could be a positive reflection of the accessibility of the math instructors, particularly of the instructor hired in 2009-2010 by the Russ College to teach math sections exclusively to engineers. 7/19 respondents who were enrolled in Math in Fall went to see the instructor at least once for help (including 4/9 enrolled in engineer-only sections), compared to only 2/13 respondents enrolled in chemistry. It could also reflect an unusually high success rate in freshman foundation courses among the relatively small number of survey respondents. However, low participation is at least equally likely to indicate that accessibility and positive peer opinion are not strong motivators for students to engage in the SI program.

It is of interest that the Learning Community program, which students must join by the start of their first term or not at all, is the only one of the three programs here discussed about which participants and non-participants seem to hold opposing opinions, as measured by their stated recommendation to others. One explanation is that this apparent difference results from the difference in the participation rates in the EFLC program vs. the SI and PLTL programs. More than 60 % of Russ College freshmen actually participate in the Learning Community program; the self-reported rate of participation from the electronic survey is 70 %. The overall percentage of survey respondents who would recommend EFLC participation is 57%; 70 % of these respondents are EFLC participants. The overall percentages of survey respondents who would recommend PLTL and SI are 70 % and 95 %, respectively; only 20 % of these are PLTL / SI participants. The next step was to look more closely at the 30 % of survey respondents who did not participate in the EFLC. See Table 8.

Table 8. Responses for academic support units by learning community participation status

	EFLC Participants (n=14)	EFLC Non-Participants (n=8)
Heard opinions from peers about PLTL	8 (57 %)	1 (13 %)
Participated in PLTL	3 (21 %)*	1 (13 %)
Would recommend PLTL	11 (79 %)	3 (38 %)
Heard opinions from peers about SI	11 (79 %)	7 (87%)
Participated in SI	3 (21 %)*	1 (13 %)
Would recommend SI	13 (93 %)	5 (63 %)

*Two individuals participated in both SI and PLTL

In general, the students who did not participate in the Engineering Freshmen Learning Community were less likely than EFLC participants to recommend SI or PLTL to other students, less likely to participate in SI or PLTL, and somewhat less likely to hear opinions from their peers about SI or PLTL. The apparent contradiction between Tables 4 and 6, in which SI and PLTL non-participants would generally recommend the programs to others, but EFLC non-participants would not, likely is an artifact of the EFLC non-participant group including a greater proportion of students who strongly resist engaging in optional activities. Perhaps 60 – 70 % of the EFLC participants have a generally positive view of academic support services in the abstract, and can be successfully encouraged by advisors and parents to participate in them, but are not strongly inclined to such participation, and thus move into the "non-participant" category for SI and PLTL. These students represent perhaps half of the total survey respondents.

Conclusions

First-year students do not appear to be strongly influenced by their peers' opinions when evaluating the effectiveness of academic support resources, or when making decisions about whether or not to participate in them. Although program participants generally report peer opinions that match their own, from the current investigation there is no evidence that they form their opinions using data from their peers, as opposed to assuming that they and their peers hold the same opinions. Certainly, positive opinions about the "helpfulness" of a program are insufficient to yield high participation rates, regardless of whether the program is for-credit (such as Peer-Led Team Learning courses at Ohio University) or accessible at any time during the term (such as Supplemental Instruction sessions at Ohio University).

Many first-year students in their first term apparently can be influenced to enroll in programs intended to support retention and academic success, if those programs offer an opportunity to connect with other first-year engineering students and are strongly advocated by parents and advisors during preregistration, prior to arrival for the academic term. Ohio University's Engineering Freshman Learning Community fits this description, and attracts full-term participation by more than 60 % of engineering freshmen. It is not known whether participation would persist if it were not graded, not for-credit.

This work has shown that the rate at which students utilize academic support services is not correlated with individual or widespread positive perception of the effectiveness or desirability of those services, though the effect of widespread negative perception was not investigated. Factors other than perception of "helpfulness" must influence participation. The potential positive influence of advisors and parents should not be underestimated.

Further, this work emphasizes that to assess student perceptions via a survey instrument, adequate response rates are much more likely to be achieved when students are physically faced with a survey instrument at a regularly-scheduled meeting. For surveys distributed electronically, response rates are likely to be low, and nearly all responses are likely to occur within two days of the survey announcement.

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Appendix A: Text of the Academic Support Survey

Russ College of Engineering & Technology Academic Support Survey
Fall 2010

The Russ College is conducting a survey to learn about which academic support services our students find most helpful, and how we can improve them. It will probably take you about 20 minutes to complete it. Your responses are anonymous. Your responses will be aggregated with those of other students. In addition to using the aggregate results to improve what we do in the Russ College, we may report on the aggregate results at Engineering Education meetings, to help other Engineering Programs improve.

You may choose whether or not to complete the survey. There is no penalty for not participating, but we hope that you will answer thoughtfully. We cannot think of any possible risk to you in completing this survey. By submitting your responses to the survey, you are giving us permission to use your anonymous responses as part of our research. Only students aged 18 years or over are eligible to participate, due to federal guidelines governing consent to participate in research. Please do not respond if you are under 18 years of age.

This study is led by Dr. Valerie Young, Chemical & Biomolecular Engineering. Dr. Young can be contacted at youngv@ohio.edu.

This study has been reviewed by the IRB office at Ohio University. If you have questions regarding your rights as a research participant, please contact Jo Ellen Sherow, Director of Research Compliance, Ohio University, (740)593-0664.

Click here <link goes here> to complete the survey.

Russ College of Engineering & Technology Academic Support Survey
Fall 2010

The Russ College is conducting this survey to learn about which academic support services our students find most helpful, and how we can improve them. Please complete it thoughtfully.

1. I took the "Engineering Exploration Learning Community" UC190.
   - o Yes (go to question 2a)
   - o No (go to question 2b)

2a. I decided to take the Engineering Exploration Learning Community because (check all that apply):

- □ It was required for my scholarship.
- □ Another student recommended it.
- □ My precollege or academic advisor recommended it.
- □ My parents recommended it (or made me).
- □ I thought it would help me do better in my classes.
- □ I thought it would help me meet other engineers.
- □ I thought it would help me learn what an engineering career is like.
- □ ________________________________ _____________(add your own)

2b. I decided not to take the Engineering Exploration Learning Community because (check all that apply):

- □ I didn't know it was offered.
- □ Another student recommended against it.
- □ My precollege or academic advisor recommended against it.
- □ My parents recommended against it.
- □ I figured I didn't need extra help in my classes
- □ I figured it would be full of nerds.
- □ I prefer not to work in teams.
- □ I already know what engineers do.
- □ I preferred to use that time to study.
- □ I preferred to use that time to earn money.
- □ I preferred to use that time for extracurricular activities.
- □ ________________________________ __________ (add your own)

3. Knowing what I know now, I would recommend that other incoming freshmen take the Engineering Exploration Learning Community UC190.
   - □ Yes
   - □ No

4. The next set of questions relates to Peer-Led Team Learning (PLTL) courses.

   4a1. I hear from other students that CHEM 100D (PLTL course for CHEM 151) is
   - □ Extremely helpful.
   - □ Often helpful.
   - □ Occasionally helpful.
   - □ Not helpful at all.
   - □ I have not heard anything about CHEM 100D from other students.

   4a2. I took CHEM 100D (PLTL course for CHEM 151) in Fall 09-10.
   - □ Yes (go to 4a3.)
   - □ No (go to 4b1.)

   4a3. For me, personally, CHEM 100D (PLTL course for CHEM 151) was
   - □ Extremely helpful.
   - □ Often helpful.
   - □ Occasionally helpful.
   - □ Not helpful at all.

   4b1. I hear from other students that MATH 103P (PLTL for MATH 115) is
   - □ Extremely helpful.
   - □ Often helpful.
   - □ Occasionally helpful.
   - □ Not helpful at all.
   - □ I have not heard anything about MATH 103P from other students.

   4b2. I took MATH 103P (PLTL for MATH 115) in Fall 09-10.
   - □ Yes (go to 4b3.)
   - □ No (go to 4c1.)

   4b3. For me, personally, MATH 103P (PLTL for MATH 115) has been
   - □ Extremely helpful.
   - □ Often helpful.
   - □ Occasionally helpful.
   - □ Not helpful at all.

   4c1. I hear from other students that MATH 103A (PLTL for MATH 263A) is
   - □ Extremely helpful.
   - □ Often helpful.
   - □ Occasionally helpful.
   - □ Not helpful at all.
   - □ I have not heard anything about MATH 103A from other students.

   4c2. I took MATH 103A (PLTL for MATH 263A) in Fall 09-10.
   - □ Yes (go to 4c3.)
   - □ No (go to 5.)

   4a3. For me, personally, MATH 103A (PLTL for MATH 263A) has been
   - □ Extremely helpful.
   - □ Often helpful.
   - □ Occasionally helpful.
   - □ Not helpful at all.

5. Knowing what I know now, I would recommend that other incoming freshmen take a Peer-Led Team Learning course.
   - □ Yes
   - □ No

6. The next set of questions relates to the weekly Supplemental Instruction (SI) sessions organized by the Academic Advancement Center

6a1. I hear from other students that the CHEM 151 SI sessions are

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.
- □ I have not heard anything about CHEM 151 SI sessions from other students.

6a2. In Fall quarter, I went to the CHEM 151 SI sessions ____ times.

- □ 0 (go to question 6b1.)
- □ 1 – 2
- □ 3 or more

6a3. For me, personally, CHEM 151 SI sessions were

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.

6b1. I hear from other students that the MATH 115 SI sessions are

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.
- □ I have not heard anything about MATH 115 SI sessions from other students.

6b2. In Fall quarter, I went to the MATH SI help sessions ____ times.

- □ 0 (go to 6c1.)
- □ 1 – 2
- □ 3 or more

6b3. For me, personally, MATH 115 SI sessions were

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.

6c1. I hear from other students that the MATH 263A SI sessions are

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.
- □ I have not heard anything about MATH 263A SI sessions from other students.

6c2. In Fall quarter, I went to the MATH 263A SI sessions ____ times.

- □ 0 (go to question 7.)
- □ 1 – 2
- □ 3 or more

6c3. For me, personally, MATH 263A SI sessions were

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.

7. Knowing what I know now, I would recommend that other freshmen attend SI sessions for their courses.

- □ Yes
- □ No

8a. In Fall quarter, I went to see my math instructor outside of class ____ times .

- □ 0
- □ 1 – 2
- □ 3 or more
- □ I'm not taking math this quarter. (go to question 9a.)

8b. My Fall math instructor's name was ______________________. (Spell it as best you can.)

8c. For me, personally, my math instructor Fall quarter was

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.

9a. In Fall quarter, I went to see my chemistry instructor outside of class ____ times .

- □ 0
- □ 1 – 2
- □ 3 or more
- □ I'm not taking chemistry this quarter. (skip to question 10a)

9b. My Fall chemistry instructor's name was _____________________. (Spell it as best you can.)

9c. For me, personally, my Fall chemistry instructor was

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.

10a. In Fall quarter, I went to see my academic advisor ____ times .

- □ 0
- □ 1 – 2
- □ 3 or more
- □ I don't have an academic advisor. (end survey)

10b. My academic advisor's name is _____________________. (Spell it as best you can.)

10c. For me, personally, my academic advisor has been

- □ Extremely helpful.
- □ Often helpful.
- □ Occasionally helpful.
- □ Not helpful at all.

End of survey message.

"Thank you for helping us by completing this survey. Your input will help us better serve students in the Russ College of Engineering & Technology."

Appendix B: Selected Questions from the Freshman Engineering Learning Community Course Evaluation

Student Evaluation

In order to provide the best learning community opportunities for future students, receiving feedback from you concerning your specific learning community experience is valuable. When complete, return to the designated collector in your class. Thank you in advance for your assistance.

What aspects of the LC course were most valuable to you? (mark all that apply)

- □ Meeting new people and making friends.
- □ Out of class activities.
- □ In class discussions.
- □ Small class size.
- □ Journals and self reflection assignments.
- □ Study skills tips.
- □ Studying for other classes with my classmates

How did you learn about the learning community programs at Ohio University? (mark all that apply)

- □ ConnectOhio booklet.
- □ Letter to home about LC programs.
- □ Email from Ohio University.
- □ Sibling / friend.
- □ Precollege orientation LC session.
- □ Precollege orientation advisor.
- □ Admissions fair, day, or event.

Why did you decide to participate in / register for a learning community? (mark all that apply)

- □ For the classes. [*LC enrollment results in priority registration for some courses*]
- □ Make friends / meet people.
- □ Study groups.
- □ College advisor recommended it.
- □ Required of my scholarship. [*Not for EFLCs*]
- □ Required with my housing / residence hall placement. [*Not for EFLCs*]
- □ Parents told me to.
- □ Required by my college. [*Not for EFLCs*]

Being in a learning community has been a positive experience.

- o Strongly agree
- o Agree
- o Disagree
- o Strongly disagree

I would recommend a learning community to an incoming new student.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

My learning community members encouraged each other to do well academically.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

The learning community course helped me to make a positive transition into the University.

- Strongly agree
- Agree
- Disagree
- Strongly disagree

The learning community course increased my knowledge of academic support resources on campus

- Strongly agree
- Agree
- Disagree
- Strongly disagree

The learning community course provided me information regarding academic expectations at Ohio University

- Strongly agree
- Agree
- Disagree
- Strongly disagree

The learning community course covered issues / topics important to new students.

- Strongly agree
- Agree
- Disagree
- Strongly disagree