USING A ROOMMATE PREFERENCE SURVEY FOR STUDENTS LIVING ON AN ENGINEERING DORM FLOOR

Mary R. Anderson-Rowland
Arizona State University, Tempe AZ 85287

Abstract

Arizona State University is primarily a commuter school and many of its students work. These factors contribute to a serious problem of retention for the University and the College of Engineering and Applied Sciences. In an effort to increase retention rates and to improve student life, three years ago an engineering dorm floor was designated and advertised to incoming engineering students. During the first two years only a small number of engineering students were attracted to this style of living. Roommate assignments were done by chance.

Last year, in an effort to improve the process, an interest and preference survey was developed for potential dormitory residents in an effort to increase the quality of roommate pairing. An unexpected result of the use of the survey was that three times as many students requested clustered engineering housing and completed the survey.

The roommate survey is described and anecdotes from students given. Some results of a survey of the student satisfaction with the engineering cluster housing program are also presented. Minor changes to the survey are discussed and difficulties with the process and their solution are also addressed.

Introduction

Research has shown that "the first six weeks on campus are the most important in determining whether a student is going to stay and succeed—or leave [1]." Research by Laurie Schreiner, a national leader in retention studies, shows that 50% of students who withdraw during a term do so in the first six weeks. If a student has not had significant contact with a faculty or staff member in the first three weeks, the drop out rate is 50% [1]. To help identify students who are particularly in need of attention during these first few weeks, Schreiner has developed the profile of an "at-risk" student. The demographic factors are low income, minority, first-generation college, and commuter. Among the behavioral factors of an "at-risk" student is a student who doesn't live on campus; has no posters on their dorm walls and rarely leaves the dorm room; is a resident student, but goes home every weekend; and is one of the last to see his/her advisor [1].

Arizona State University (ASU) is primarily a commuter school with typically only 20% of the students living on campus. However, a larger percentage of first-time freshmen live on campus: 55% during fall 96 [2]. Over half of the freshmen engineering students work, with 25% working over 20 hours a week [3]. These factors contribute to the serious problem of retention for the University and the College of Engineering and Applied Sciences (CEAS). Special efforts have been made in the last few years to increase retention rates, especially of first-time, full-time freshmen to their second year. In fact, due to the Board of Regents for ASU, a freshman retention goal of 78% for fall 1999 has been set for the University. Until two years ago, the freshman retention rate of all students University-wide was approximately 68%. Engineering freshman had approximately the same university retention rate, although their retention rate in the CEAS was only 54% for the fall 95 cohort [4].

During the past few years, University-wide efforts have increased the retention rate to 75.4% for fall 1996 full-time, first-time freshmen (FFF) [4]. (A first-time, full-time freshman is a student who carries at least 12 hours in their first semester at ASU, and transfers in with less than 12 credit hours.) These efforts have included increasing the number of lower level undergraduate classes taught by faculty, class clustering for students, and the Freshman Year Experience (FYE). The FYE provides academic support services and campus resources in a community designed especially for freshmen. Included in this program is cluster housing: students with a common interest are placed together in the university dormitory system. At the same time student support services for CEAS freshmen have been increased and the retention rates increased for the fall 96 FFF CEAS students. After one year, 77.3% of them remained at ASU and 66.2% of them remained in the CEAS [4].

Research has shown in general that the retention rate is higher for students who live in the campus dorms as opposed to living off campus. ASU provides housing for approximately 5,000 students. Some 2,500 of these are freshmen. Among the residential ASU freshmen in fall 96, 2,341 were FFF, 77.36% of whom were retained for fall 97. Of the 1,674 FFF who lived off campus, only 71.21% were still enrolled in fall 97 [2]. This difference is very highly statistically significant at p=.00001 level. Of the ASU FFF residential students, the 76% who were a part of the FYE program, were retained at a slightly lower rate than the non-FYE residents. However, the FYE freshman who were active in FYE activities were retained

at a rate of 77.91%, while those who were not active were retained at 72.11% [2]. The statistical significant difference here is p=.09. Research has also shown that retention of engineering students is low due to the isolation felt by students, especially women and underrepresented minority students. Dormitory living should help combat isolationism.

Engineering Dorm Floor Established

In view of these facts, three years ago an engineering dorm floor was designated and advertised to incoming engineering students. The concept of an engineering dorm floor fit in nicely with the Freshman Year Experience program already in place at ASU. Residential Life was most helpful in adding an engineering dorm floor to the floors already designated for the FYE. All ASU dorm floors are coed. The particular dorm was chosen for its medium price and its convenience to the location of most engineering classes.

Although the program seemed to be well advertised, there were several unexpected difficulties that were encountered the first year. These difficulties included: 1) many engineering students who were not made aware of this option had requested other dorms prior to the advertisement of the floor and did not want to change, 2) many non-engineering women were assigned to the floor at their request without a major check (being on a dorm floor with engineering men was apparently an attractive option), and 3) two nonengineering athletes were assigned to the floor. So, although there was an engineering nucleus of 40 students, this floor that housed 58 students was not really an engineering floor. Other than keeping the engineering students together as much as possible, all roommate assignments on the floor were done at random. An engineering student was assigned as the Resident Assistant (RA) for the floor.

The second year of the engineering dorm floor, applicants were screened for their declared major, but in the end, still only approximately 40 of the 528 new engineering freshman requested the floor. Since over 50% of ASU's freshmen live on campus, at least 250 students would be expected for this floor. This concept obviously was not considered to be very attractive to most engineering freshmen. Again, two athletes were assigned to the engineering dorm floor and Residential Life did the roommate assignments. Again, an engineering student was assigned as the RA.

Students on the floor those two years seemed reasonably satisfied with their dorm experience, although they all stated that it was not really an "engineering floor," since so many of the students were not engineers. Some programs were brought to the dorm floor, such as orientation and pre-registration information. Attendance at these events was modest. A general consensus from the students seemed to be that they did not want additional programs.

Clearly, something more needed to be done to make this effort a success. The Engineering dorm floor opportunity was discussed in all recruitment efforts. By mutual agreement, Residential Life turned over the room assignments to the Office of Student Affairs in the CEAS. Residential Life reserved the same dorm floor for engineering students, but agreed to not assign athletes from other colleges to this floor. All engineering students who had applied for dormitory housing were assigned to the dorm with the engineering floor. Since housing became very tight, in this way the engineering students were at least assured a room.

Roommate Preference Survey

The assignment of roommates for freshmen college students is an awesome responsibility. In an effort to improve the process, an interest and preference survey was developed for potential engineering dormitory roommates. The primary purpose of the survey was to increase the quality of roommate pairing. Discussions with students and staff were used to help write a pilot dorm survey. The Engineering Dorm RA then distributed several pilot surveys to residents of the engineering dorm floor. The surveys were returned with comments and suggestions for improvement. These suggestions were incorporated into the survey. Based on suggestions from a focus group held with engineering dorm floor residents in the fall 1997 and a dorm satisfaction survey, the Roommate Preference Survey form was further modified. The survey used for fall 1998 is displayed in Figure 1.

The survey was sent to all engineering students who had applied for University housing. A letter was sent with the survey explaining that there was no guarantee of a perfect roommate, but that we would do our best. Interested engineering students then mailed the survey back to the Office of Student Affairs. The students, who applied, were put into a database for data management.

Roommate Assignment Based on the Survey

Based on the completed Roommate Preference Survey, 119 students were initially assigned to three dorm floors. These engineering students filled 56 of the 58 spots on the dorm floor that had been designated for engineering students. Twenty-three women engineering students were assigned to this floor. Due to the increased interest by the incoming engineering students, Residential Life also allocated 31 of the 58 spots on the floor just above. Eleven women engineering students were assigned on this floor. An additional area was provided for engineering freshmen in a nearby dorm. The last 28

FRESHMAN ENGINEERING HOUSING SURVEY - FALL 1998
TO: First Year Engineering and Construction Students
FROM: Office of Student Affairs, College of Engineering and Applied Sciences

You have chosen to live on an engineering dorm floor. In an attempt to make your first year housing at ASU as supportive as possible, please complete the following survey and mail back to the return address given. We will use this information to assist in the assignment of rooms.

Name _____ SS# _____

Address_____

Phone _____ E-mail_____

Major _____ Age_____ Class Status_____ Gender: ___ F ___ M

In which mathematics class will you be enrolled in the fall?
___ MAT 170 (pre-calculus) ___ MAT 270 (first semester calculus)
___ MAT 271 (second semester calculus) ___ Other:_____

Would you prefer that your roommate has the same major as you do? _____ Yes _____ No
If no, which major(s) would you prefer? _____

Do you smoke? _____ Yes _____No
Are you a _____ morning or a _____ night person?
Do you consider yourself athletic? _____ Yes _____ Somewhat _____ No
Relative to study, are you a: ____ hard worker ____ medium worker ____ worker when necessary?
Do you keep your room: _____ tidy _____ somewhat tidy _____ not tidy ?
Do you consider yourself: _____ outgoing _____ flexible _____ reserved?
Do you prefer a roommate who is: _____ outgoing _____ flexible _____ reserved?
Do you require any special accommodations?
_____

What type of music do you enjoy? Check all that apply:
____ easy listening ____ classical ____ country ____ R&B ____ pop
____ classic rock ____ hard rock ____ alternative ____ Other: _____

List any hobbies or special interests that you have:
_____

Is there anything else about you that might be helpful for us to know in the assignment of a roommate?
_____

Considering the factors that were listed on the other side or any additional factors that you've listed, choose the three factors that would be the most important to you in the assignment of a roommate.

1. _____
2. _____
3. _____

Dormitory Preference (1 for first preference):
____ DORM 1 ____ DORM 2 ____ DORM 3

Figure 1: Roommate Preference Survey

students (all male) were clustered there, making up about one-fourth of a floor. The women were purposely clustered on just two floors. The room plan on each floor was made up of suites, four students each. Two students shared a room on each side of a common suite bathroom.

There is no guaranteed method to match perfect roommates. However, a general priority of criteria was used to increase the success of compatible roommate assignments. After gender, smoking is an overruling University priority on all suite assignments. Non-smokers are never paired with smokers within a suite. Next, unless requested otherwise, a student was matched with someone in his/her major. The next criteria used were music, math class, morning/night person, and neatness. Then the additional information on special interests was used to match the roommates. Attention was given to those studying particular musical instruments. At the same time, attention was given to the top three items the student had listed as being important to them in the assignment of a roommate. The students were also assigned to the three floors according to order of application, as much as possible.

Special requests were honored. If students requested to room together, they were placed together. Several out-

of-state students asked to be placed with someone from the local area to help them to learn about the area and how to get around. Some male students requested that their roommate also be interested in sports. Some honors students, who were not able to obtain a space in the Honors Dorm, were placed together as roommates.

The assignment of roommates is a difficult task. Thirty-four (28.6%) of the 119 students initially assigned were female. The students were divided among the 10 majors in the college. Usually there was not an even number of women in a particular major. If a woman was not assigned a roommate with the same major, if possible, she had a suite mate or someone in a close room with the same major. A few phone calls were made to students to further clarify their preferences in a roommate. The times between 4 and 7 on a Friday evening found most students at home.

After the initial assignments were made, there were some cancellations. A few students changed dorms or were able to get into the Honors College dorm. A few students did not matriculate at ASU. The CEAS retained control of the room assignments as long as possible (filled in cancellations with new applicants). At some point, in July, due to the heavy demand for on campus housing, the control of the roommate assignments was given back to Residential Life for last minute changes in assignments. Therefore, due to last minute cancellations, a few engineering students on the engineering floors did not have an engineering major as a roommate.

Engineering Dorm Floor Satisfaction

A focus group was held with residents of the main engineering floor late in the fall 1997 semester. Students from this group reported that they were more confident of being assigned a compatible roommate with the use of the survey. The roommate assignment would have been left up to chance, if they had not chosen to live on an engineering floor. One student reported the delight in having a roommate, who also played the violin (an interest identified on the survey). They then also remarked about the two men who were drummers and who were assigned together. One young woman reported that all four of the women in her suite wore the same size clothes (This information was not available through the survey!).

Early in the 1998 spring semester, an Engineering Dorm Survey was taken of the engineering students who lived on the three floors designated for engineers. Surveys were sent to 96 students (28 females and 68 males). Fifty-one students (19 females and 32 males) completed surveys, a 53% return. Surveys were also sent and returned from the RA and two tutors on the full engineering floor (all three were male). In general, the students reported a positive experience. Two typical comments were: "I like the fact that everyone had to study at the same time, and were mostly studying the same subjects, so you could always ask for help," and "I liked the way if I needed help with any of my homework, there was always someone to help me. This semester (spring), half the floor is in my classes. It's really nice to always have someone to walk to class with."

Of the 51 students who returned surveys, 42 (82.4%) still had the same roommate in the spring as they were assigned in the fall. One student chose a suite mate as the new roommate for the spring and a second student chose a student from another engineering floor as the spring roommate. The roommate satisfaction was generally the same for both men and women. Of the 32 men in the survey, 26 (81.3%) had the same roommate in the spring. Of the 19 women in the survey, 16 (84.2%) still had the same roommate in the spring. A typical comment was: "My roommate was great!" A few roommate pairings did not work: "The roomette I got was one of three people on the floor that I did not get along with. Everyone else was fine."

The students were asked about additional factors that could have been added to the Roommate Preference Survey. Some felt that it was good as it was. Some of the suggestions were as follows: "Make sure that they have common interests and have the same sleep schedule;" "If roommates are from out of state, make sure suite mates are from somewhere close to the area so that out of state students can get a feel for the area;" "Do not necessarily pair up people from the same high schools or states;" "Put athletes with athletes;" "Consider study habits;" and "Really look more closely at compatibility, such as daily habits and cleanliness."

Several of the comments above were incorporated into the survey shown in Figure 1. However, to be able to judge daily habits and cleanliness is a very difficult task. Two additional changes that will probably be added for fall 99 are: what volume of music are you comfortable with and, as a night person, do you normally end the day at 10pm, midnight, or frequently much later.

Assessment and Results

Based on anecdotes from the students and the 82.4% roommate retention for the spring semester reported on the survey, the Roommate Preference Survey is judged successful. An unexpected result of the use of the survey was that three times as many students chose to live in clustered engineering housing and completed the survey. Some 100 engineering students actually moved onto the engineering student floors. The students were asked on the Engineering Dorm Survey if the Roommate Preference Survey influenced their decision to live on the Engineering floor. Many students said that it did. Comments included: "I knew I had a better chance of getting a good roommate," and "I thought it would be helpful to be with people that were in the same major and

situation as I was in." This increased confidence was probably the primary factor for the increase in the number of applications for a dormitory assignment on an engineering floor. However, we had a little parental support also, since one student wrote: "My mom made me fill it out." One student wrote: "Seems like you actually care who we live with." We in the Office of Student Affairs do care, and are pleased that it shows.

Of course, the bottom line result of engineering students having a good experience living on an engineering dorm floor is increased retention. We will continually monitor the retention of these students. The research at ASU that was cited earlier in this paper showed that FYE students who were active participants in FYE activities had the highest retention rate. Of the FYE engineering students, 84% participated in FYE activities during the fall 97 semester. (This percent is not statistically different from the FYE participation of all residential FFF during falls 95 and 96.) On average, they participated in 2 2/3 events. Thirty percent of the students only participated in one event. Only seven students used the FYE academic advising and only 10 students visited the writing center. Seventy-three percent of the students participated in the computer labs an average of 1.45 times. Forty-one students took part in the tutoring center with an average of 2.46 visits. This low usage is not surprising for engineering students, since there are additional support services on campus for each of these areas. For example, each engineering freshman should have his/her own departmental academic advisor within engineering. There are many computer labs on campus and a "Writing Across the Curriculum" Center is conveniently located to help engineering students. Free tutoring is also available through the engineering college and the mathematics department.

Student requests on the survey included the availability of a computer lab on their floor and more program activities to make the engineering floor a more special place to live.

Conclusions and Future Plans

The Roommate Preference Survey has been successful in interesting more engineering freshmen to live in a dorm and in creating a high roommate retention rate to the spring semester. The fall 1998 Roommate Preference Survey was revised to include more information on "night owls" and music level tolerance. Other changes may be made as we continue to dialogue with our students. Two mailings were sent to all engineering students who had been admitted to our college as freshmen. The mailing included a letter from the Associate Dean of Student Affairs inviting students to live on an engineering dorm floor and a survey was included. A letter will be sent to our engineering students after they have been assigned a roommate. The letter will express our desire to have the best roommate pairing possible. However, the letter will also include a strong disclaimer on the ability to make perfect matches for all roommates. Residential Life has reserved more dorm space for engineering students for fall 1998. We hope to be able to successfully place even more engineering students together.

Based on the survey of the engineering floor residents, additional program events will be scheduled this year to increase the overall satisfaction with engineering dorm living. Two of the dorm floors available for engineering freshmen this fall will be equipped with a computer lab for convenience. This study space should also help roommates living with "night owls" who literally study with a light on.all night

We will continue to monitor the engineering dorm residents for their retention and graduation success. Efforts will be made to compare the engineering roommate retention to the spring semester with freshmen who are assigned roommates at random. An additional area for research is to compare the demographics and grades of the engineering dorm students during the freshmen year with the demographics and grades earned by freshmen engineering students living off campus.

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