

A Study of Staff and Faculty Commuters at the University of California, Los Angeles

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ABSTRACT

The University of California, Los Angeles, Transportation Services Administration (UCLA/TSA) and Commuter Computer studied the transportation needs of UCLA faculty and staff to determine the market for ridesharing. Study results are to be used by UCLA/TSA and Commuter Computer to develop a campus ridesharing program. Survey results revealed that most respondents (74 percent) drove alone to campus, the average distance from home to UCLA was 11.5 mi, and commuting and parking costs were the primary transportation-related concerns. Driving time and stress were also mentioned frequently as concerns. Only 3 percent of the faculty and staff were registered for ridesharing. Although "need for a car" was one of the most common reasons given for not ridesharing, people used their cars an average of only 1.36 days a week for noncommuting purposes. Other rationales for not ridesharing included inflexible and irregular work schedules. Reduced costs, pool flexibility, and availability of a ridesharing coordinator were cited as factors that would encourage carpooling. Respondents also indicated that university-provided vans would encourage vanpooling.

During the past 6 months, the University of California, Los Angeles, Transportation Services Administration (UCLA/TSA) and Commuter Computer have been working together on a study to determine the market for ridesharing in the UCLA population. The objective of the survey was to determine the commuter transportation needs and characteristics of those people who travel to the UCLA campus. The results of the study are to be used by UCLA/TSA to plan and develop a ridesharing program for the Westwood campus. An analysis of the needs and characteristics of a university population will also help Commuter Computer develop a more targeted campus ridesharing program that will meet the specific needs of the university.

METHODOLOGY

The actual survey was designed through the mutual efforts of Patricia Ann Phillips, Ridesharing Coordinator for the UCLA Transportation Services Administration, Melissa Miller, Account Executive at Commuter Computer, and Adele Pearlstein, Planning and Development Division at Commuter Computer. The concept was devised in December 1983, and the actual design of the questionnaire was begun in January 1984.

The survey targeted faculty and staff members as the first groups to be evaluated. In early March, the original questionnaire was pretested on 150 faculty and 150 staff members. When the results were received, the questionnaire was revised; it was printed in late March. The survey questionnaire was then distributed to the selected sample through the intercampus mail system. A self-addressed return envelope was provided to encourage people to return the survey. Respondents were offered a copy of the results.

Sampling

The population for this survey was the faculty and staff at the UCLA campus. To determine the characteristics of this population, without actually surveying nearly 13,000 people, it was necessary to select a sample of the population. By using random sampling, it was possible to infer the characteristics of the entire faculty and staff by surveying less than 20 percent of the population.

The UCLA Administration Information Service selected the faculty and staff samples by computer and produced on-campus mailing labels. The entire faculty listing was used; it was systematically divided in two by assigning every other label to be included in the pretest sample; the remaining half was used as the final faculty sample. Every eighth staff person was selected by computer; a portion was given the pretest and the remainder received the final questionnaire.

A week after the surveys were distributed, a thank-you-and-reminder letter was sent out to all people who had received the survey. After several more weeks, another reminder was sent to those who had not yet returned the questionnaire.

When the surveys had been returned, the questionnaires were coded by UCLA/TSA and then returned to Commuter Computer for keypunching and analysis at the end of May. After the data were keypunched, a statistical analysis was run on the UCLA computer using the SPSS-X statistical package. This paper is a summary and analysis of the results of that statistical analysis.

Response Rates

The final questionnaire was distributed to 2,273 people, 1,154 staff and 1,119 faculty. Of the staff, 656 returned the surveys, a response rate of 57 percent; 527 of the faculty turned in their questionnaires, a response rate of 47 percent. The overall

response rate was 52 percent. This is a somewhat higher response rate than is normally expected for a survey in which responses must be returned through the mail. However, follow-up letters and reminders are not always employed and may have encouraged more people to respond.

Another factor that may have affected the response rate is that the original letter accompanying the questionnaire mentioned that the survey was a tool to help build a ridesharing program at UCLA. Normally, the term transportation is used rather than ridesharing to avoid biases for or against ridesharing. People who were not interested in ridesharing or lived close to UCLA may have been less inclined to return their questionnaires. This may have led to underrepresentation of certain sectors in the sample, such as those who view ridesharing negatively or walk to campus and would not be in the market for a ridesharing program.

Sampling Error

Because the survey was administered to a sample of the entire population of faculty and staff, the findings are estimates rather than exact measures of population characteristics. Sampling error is the difference between the estimates shown in the sample and the actual number that would have been obtained from a census of the entire UCLA staff and faculty population. Random sampling errors occur because of the unlikelihood of obtaining the precise proportions of differences that exist in the general population.

For this survey the sampling error of the overall sample is ± 2.8 percent. This is, if the survey results show that 74 percent of the people surveyed drove alone to work, the actual percentage of people driving alone to work in the general population would be expected to be in the range of 74 percent ± 2.8 percent, or from 71.2 to 76.8 percent. The sampling error for staff is ± 3.8 percent; for faculty it is ± 4.3 percent.

Statistical Significance

It is important to note that apparent differences in the results of the survey may not actually exist in the overall population. For example, a difference may appear to exist between faculty and staff in the percentages of each who carpool to UCLA, but this difference may not actually exist in the overall UCLA population. A test for this is statistical significance. In this paper, results are reported as statistically significant or not at the 0.05 level. This means that, if a result is statistically significant, it is 95 percent certain that the differences found in the sample can also be found in the overall population and that the differences are not due to chance or to sampling error.

Weighting

Questionnaires were returned by 527 of the faculty and 656 of the staff to whom they were distributed. This gives a proportion of 44.5 percent faculty and 55.5 percent staff. This does not, however, match the actual breakdown in the university of 2,232 faculty (17.5 percent) and 10,552 staff (82.5 percent). To reflect this actual breakdown when reporting and analyzing the results, and to avoid biasing the results in favor of the faculty, the results were weighted in the statistical analysis. All results reported are weighted except the actual number of faculty and staff responses.

The target group for this survey was only the staff and faculty of UCLA, not all of the people who travel to UCLA. The two largest groups missing are students, who have been difficult to target for ridesharing, and the employees of the UCLA Medical Center. The results of this survey cannot be generalized to either of these populations. To determine their actual characteristics, these populations will also have to be surveyed, which will help in targeting each of them for ridesharing.

In the discussion of the survey results, the following topics are covered: travel patterns, ridesharing interest and commuter concerns, conclusions, and recommendations.

TRAVEL PATTERNS

Method of Travel

As can be seen in Figure 1, nearly three-quarters of the people surveyed (74 percent) drove alone to work. A total of 13 percent of the respondents carpooled. Nearly 15 percent of the staff carpooled, whereas only 9 percent of the faculty did. Most carpools were composed of two people (82 percent), with a mean of 2.3 people. Of the people who carpooled, most did so 5 days per week (63 percent); 14 percent carpooled an average of 4 days, 18 percent did so on 3 days, and 5 percent carpooled only 2 days per week. About one-tenth of those surveyed rode to work on the bus (9 percent). The remainder traveled in a number of different ways, including walking (3 percent), bicycling (0.7 percent), driving a moped or motorcycle (0.7 percent), vanpooling (0.1 percent), or using park-and-ride and then riding a public bus (0.1 percent).

Cross tabulation of mode by gender shows that the percentage of those who drove alone to work followed the split in the general UCLA population: 42 percent of those who drove alone were male and 58 percent were female. Of the women surveyed, 14 percent chose to carpool, 10 percent chose to ride the bus, but a higher than average 74 percent chose to drive alone. This is a statistically significant difference from the men, 72 percent of whom drove alone, 12 percent of whom carpooled, and only 8 percent of whom rode the bus.

Mode choice is clearly associated with distance traveled. Bus riders lived closest to campus, an average of 7 mi; carpoolers lived farthest, about 15 mi from UCLA on the average; solo drivers fell in between, traveling an average of about 12 mi.

Although at first glance there appeared to be a relationship between commute mode and salary, when employment classification (i.e., faculty or staff) was taken into account, the relationship only held true for staff. That is, as income level increased more staff tended to drive alone; conversely, at lower income levels, more staff carpooled and rode the bus. Only 64 percent of the staff earning \$17,000 or less drove alone versus 73 percent of those earning from \$17,001 to \$27,000, 80 percent of those in the \$27,001 to \$37,000 range, and 84 percent of those earning more than \$37,000. No clear-cut relationship between salary and mode choice existed for faculty.

Distance Traveled

Overall, respondents traveled an average of 11.5 mi to UCLA. Faculty traveled a shorter average distance of 10 mi compared with 11.8 mi for staff; the difference was statistically significant. As can be gleaned from Figure 2, about 50 percent of those

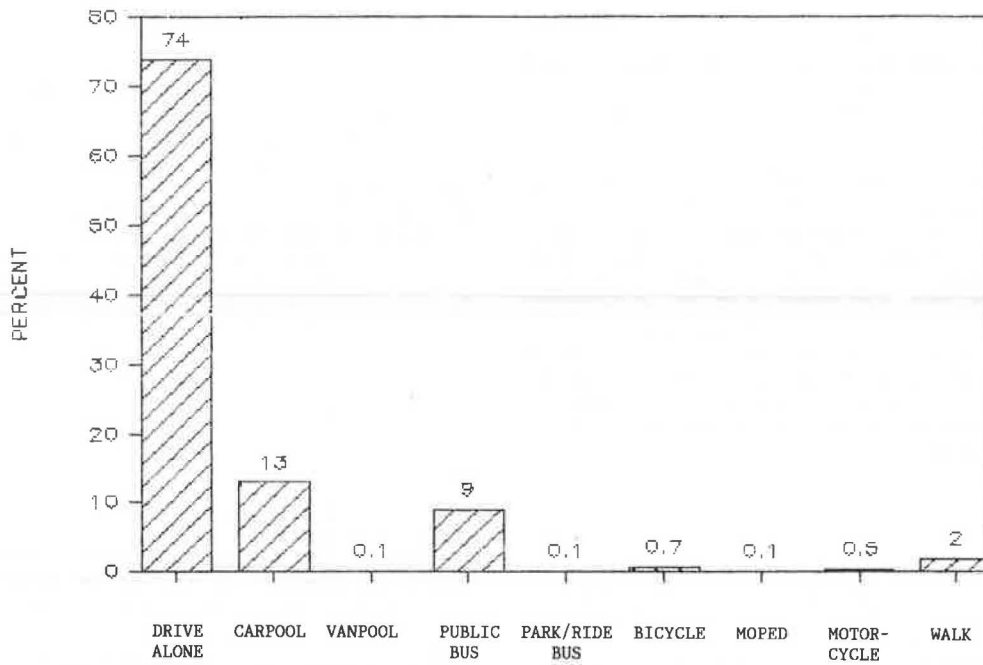


FIGURE 1 Mode of travel to UCLA (total sample population).

surveyed lived no more than 3 mi from campus, 75 percent lived within 15 mi, and only about 2 percent traveled more than 40 mi to get to UCLA. Faculty tend to commute shorter distances than do staff. Thirty-six percent of the faculty live within 5 mi of campus compared with 29 percent of the staff, and 72 percent of the faculty live within 10 mi versus 60 percent of the staff.

Travel Time

One-way travel time averaged 29 min. The staff average was 30 min, but faculty, who generally live closer, traveled for an average of 25 min; the difference was statistically significant (Figure 3). The breakdown of minutes traveled by mode was also statistically significant, with those who drove alone averaging a 28-min commute, those who carpooled 32 min, and those who rode the bus 38 min even though

they live the closest. Nearly 90 percent of the people surveyed traveled 45 min or less to get to work, with most commutes (58 percent) taking between 15 and 30 min. The average ratio between time and distance traveled was 2.53 min per mile. When broken down by miles traveled, it is apparent that traveling shorter distances takes more time per mile. Those who traveled 5 mi or less averaged nearly 6 min per mile, whereas those who traveled more than 15 mi to campus averaged only 2 min per mile.

Work Schedules and Flexibility

Eighty-two percent of the people surveyed worked the same schedule each week, and 86 percent of the staff worked the same days and times each week. This is statistically different from the faculty, but a majority of the faculty (63 percent) stick to the

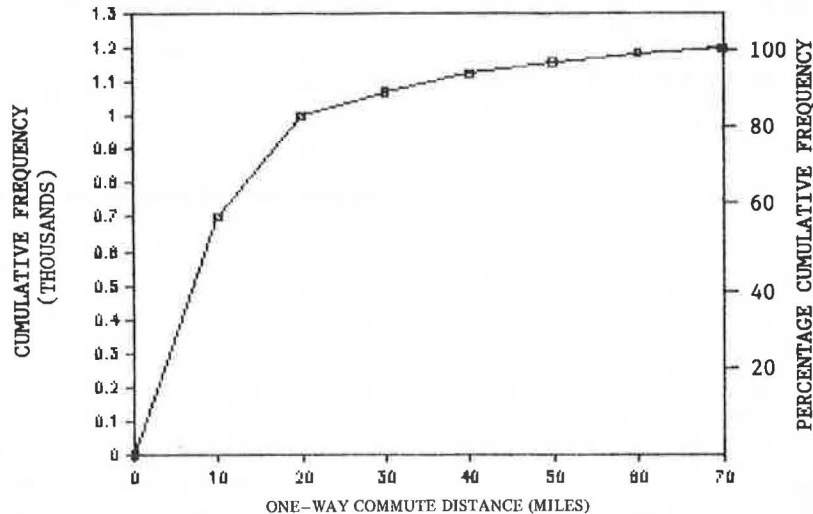


FIGURE 2 Distribution of distance to UCLA (total sample population).

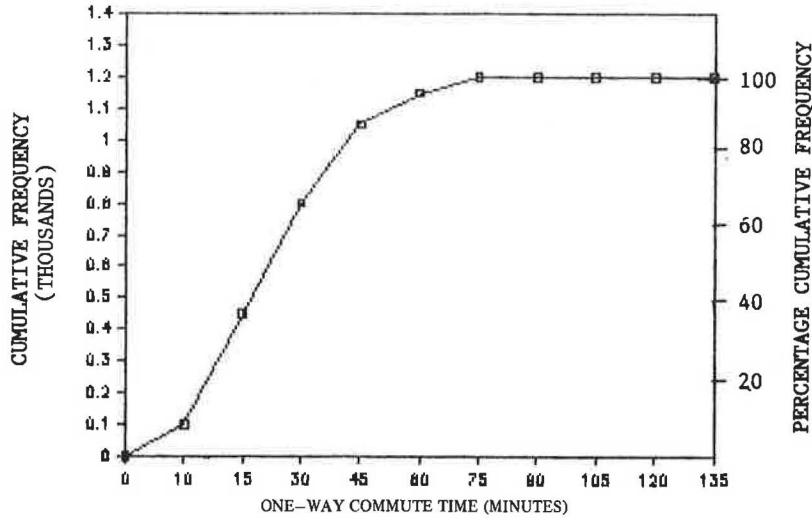


FIGURE 3 Distribution of time to UCLA (total sample population).

same schedule each day. However, faculty tend to have more flexibility in their work hours. Of those faculty who had regular schedules, only 11 percent needed to start at specific times, and 86 percent were flexible except for their class times and office hours. On the other hand, more than a third of the staff (35 percent) had no flexibility, and another 25 percent had only 15 min of leeway.

Figures 4 and 5 show the distribution of start and stop times for UCLA faculty and staff. Many people with regular schedules started at 8:00 a.m. (27 percent) and an even larger percentage got off at 5:00 p.m. (33 percent). The most common schedule was 8:00 a.m. to 5:00 p.m. (17 percent), with the rest of the sample working a variety of schedules. Faculty schedules varied tremendously, with no predominance of any one schedule. Staff, on the other hand, had more consistent schedules, with 19 percent

working 8:00 a.m. to 5:00 p.m. and another 6 percent working 7:30 a.m. to 4:30 p.m. Faculty tend to arrive at UCLA later than staff; more than 50 percent indicated that they usually arrive at 9:00 a.m. or later. Staff usually arrive earlier (90 percent before 9:00 a.m.) and leave earlier (72 percent before 5:30 p.m.); only 54 percent of the faculty usually leave by this time.

Most staff (56 percent) had schedules that were consistent throughout the calendar year, but only 12 percent of the faculty did, a statistically significant difference. Faculty schedules appeared to vary mostly from one quarter to the next (38 percent), or on a daily or weekly basis (34 percent). The majority of the people worked a 5-day week, from Monday through Friday (77 percent). Only about 2 percent of the total worked either Monday, Wednesday, and Friday, or Tuesday and Thursday schedules. Of those who

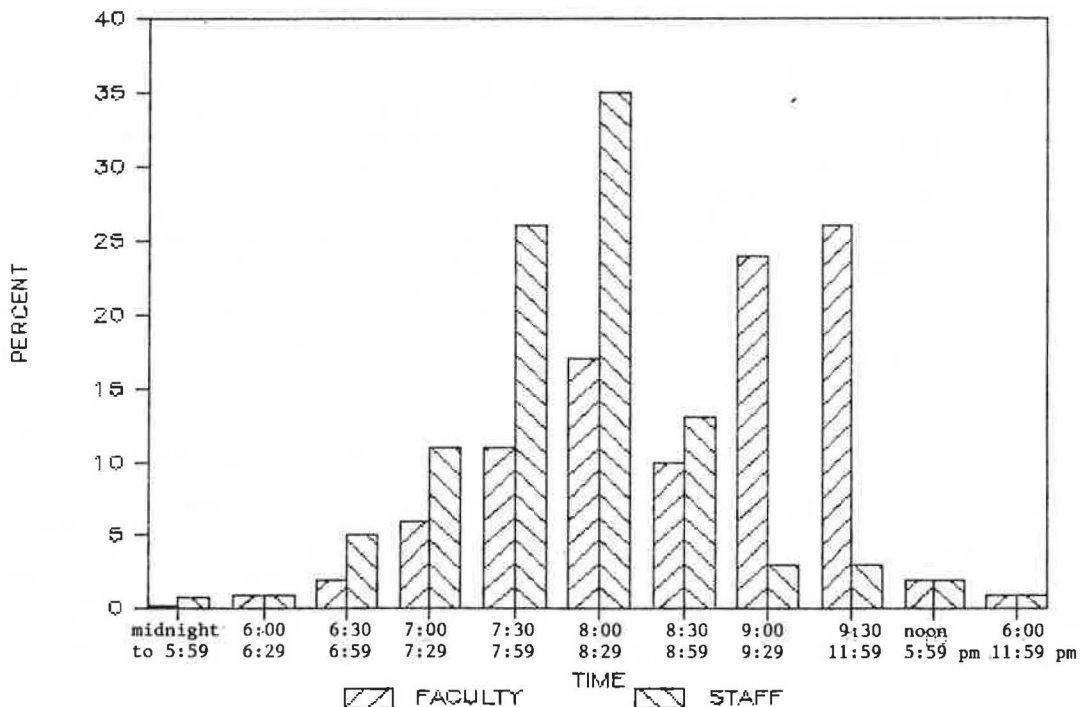


FIGURE 4 Usual time of arrival at UCLA for faculty and staff.

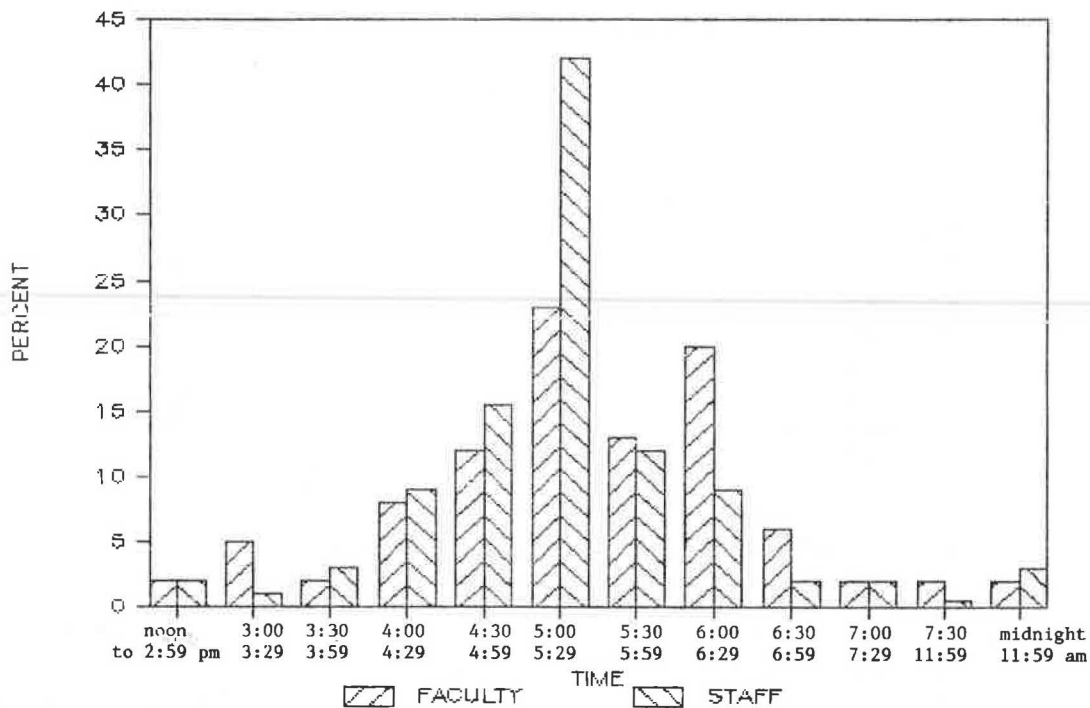


FIGURE 5 Usual time of leaving UCLA for faculty and staff.

carpooled, 89 percent worked Monday through Friday, as did 82 percent of those who drove alone.

Some faculty are perhaps unwilling to carpool because they have variable schedules. However, because they also have more flexibility, it might be possible to work around this potential problem. Staff, on the other hand, appear to be a better market for ridesharing because their schedules are consistent during the year and because they tend to have the same schedule from day to day. Also, they are a much larger market than the faculty.

Parking Permits

Most people (87 percent) had permits for parking on campus. A statistically significant higher percentage of faculty members had parking permits (92 percent) than did staff members (86 percent). Overall, those who did not have parking permits gave the following reasons: they preferred other transportation or did not drive (41 percent), they did not own a car (17 percent), UCLA parking permits were too expensive (15 percent), or they shared a parking permit (9 percent). Of those who did not have parking permits, 55 percent rode the bus to work, 15 percent drove alone and parked off-campus, 14 percent carpooled, and 8 percent walked to campus. Of those who did have permits, the majority drove alone (82 percent), 13 percent carpooled, and 2 percent rode the bus to campus.

INTEREST IN RIDESHARING AND COMMUTER CONCERNS

Registration for Ridesharing

Only 3 percent of the people surveyed were registered for ridesharing either through UCLA or Commuter Computer. More of the staff (3 percent) were registered than faculty (1 percent), a small but statistically significant difference. The most common reason given

for not being registered was a lack of interest in ridesharing (41 percent overall); 52 percent of the faculty gave this reason as did 39 percent of the staff. Another important factor appeared to be that the people surveyed needed their cars before, after, or during work (30 percent). Of those surveyed, 11 percent were unaware of the services provided by the two ridesharing organizations, and nearly 7 percent were not registered because they were already ridesharing.

Commuter Concerns

The major concerns of commuters appeared to be centered around costs, both of general transportation (34 percent) and of parking (32 percent). Other factors that were of concern to a number of commuters were time spent driving (27 percent), stress caused by driving (20 percent), and that buses take so long (19 percent).

Those people who carpooled appeared to be slightly more concerned with parking costs (38 percent), with the time spent driving (35 percent), and with the stress associated with driving (32 percent). Those who rode the bus appeared to be most concerned with how long the bus took (25 percent) and that they had to transfer buses (20 percent). However, 45 percent of the bus riders had no serious concerns at all. People who walked to campus, as well as motorcycle riders, appeared to have fewer concerns, with 47 and 52 percent, respectively, responding that they had no concerns at all. Women were more concerned than men about personal safety walking to and from their vehicles; only 2 percent of the men believed that this was a factor of concern, whereas 12 percent of the women believed that it was. There were no other significant differences in concerns between men and women. Overall, the most important concerns appeared to be consistently centered around costs; incentives for ridesharing should take this into account.

Need for a Vehicle

About half of the faculty and staff commuters (52 percent) did not need their vehicles for noncommuting purposes at all. The average number of days people needed their vehicles was only 1.36 days per week. Of those who drove alone to work each day, 71 percent needed their vehicles fewer than 3 days a week for noncommuting reasons, and 44 percent did not need them at all. Of those who carpooled, 86 percent needed their vehicles fewer than 3 days a week for reasons other than commuting. Nearly half of those people who needed their vehicles needed them solely for personal reasons (48 percent), and 36 percent of the respondents who needed their vehicles used them for both personal and business reasons; only 16 percent needed them for purely business purposes. Most people needed their vehicles only 1 to 3 days a week (70 percent) even if they were needed for business purposes. Of those who needed their vehicles strictly for personal reasons, 56 percent needed them 1 to 2 days a week, and only 22 percent needed them 5 days a week.

When asked if the availability of an around campus/Westwood shuttle would alleviate the need for a vehicle, only 14 percent of the faculty and staff responded that it would. The shuttle would alleviate the need for a vehicle for only 8 percent of the faculty and 15 percent of the staff, a statistically significant difference. The market for ridesharing could be increased if people were made more aware that they need not rideshare every day.

Why People Were Not Ridesharing

The most common reasons given for not carpooling or vanpooling were need for a car before or after work (42 percent), lack of flexibility (39 percent), an irregular work schedule (35 percent), a dislike of relying on others (30 percent), and inconvenience (30 percent). A relatively low 17 percent of the people who were not carpooling or vanpooling reported that one of the reasons they did not rideshare was because they preferred driving alone. Although faculty members were most reluctant to pool because of irregular work schedules (51 percent) and a lack of flexibility (45 percent), staff members most commonly cited a need for their cars before or after work (44 percent), followed by a lack of flexibility (38 percent) and irregular work schedules (31 percent).

Those who drove alone to UCLA appeared to be most reluctant to pool because of a need for their cars before or after work (50 percent) and because of the lack of flexibility (45 percent). Those who took the bus to work did not pool because it was convenient to take the bus (62 percent), because they disliked relying on others (19 percent), and because of the lack of flexibility (18 percent). Those who walked or bicycled to work lived too close to pool (59 and 32 percent, respectively); those who motorcycled or rode a moped to UCLA were evenly divided among reasons for not pooling. Virtually no one cited the fear of losing his parking permit (4 percent) or the reasonable cost of UCLA parking (2 percent) as the reasons for their reluctance to pool. Another reason people may not rideshare to work is that 87 percent of those surveyed possess UCLA parking permits. The most common reasons for not pooling were the need for a car and a lack of flexibility. A good educational program would make people more aware that pools can be flexible and need not be used every day.

Incentives for Changing Travel Modes

When asked if they would seriously consider changing to carpooling under certain circumstances, 35 percent of the nonridesharers said they would. This included 23 percent of the faculty and 37 percent of the staff, a statistically significant difference. In addition, 19 percent stated that they would seriously consider carpooling during the Olympics. Although higher income employees were significantly less interested in carpooling, this relationship did not hold when faculty or staff work status was taken into account. Thus interest in carpooling is not really a function of income level but of whether a person is a faculty or a staff member.

Of those who drove alone, 43 percent stated that they would consider carpooling. Not surprisingly, people who lived farther were more receptive to carpooling; only 29 percent of those living 10 mi or less from campus would consider changing to carpooling, versus 44 percent of people living more than 10 mi from UCLA.

Overall, noncarpoolers would seriously consider carpooling under the following circumstances: if their carpool were flexible (i.e., they did not have to carpool every day) (29 percent), if a parking fee discount were offered (23 percent), if a ridesharing coordinator were available to assist them in finding people with whom to carpool (20 percent), during the Olympics (19 percent), if it cost less than driving alone (19 percent), and if an automobile insurance discount were available (18 percent). Only 2 percent of the respondents would change to carpooling because it would provide people to walk with them to their cars. Overall, half of the respondents (49 percent) indicated that they would not consider carpooling at this time; this sentiment was expressed by 60 percent of the faculty and 47 percent of the staff.

When asked about vanpooling, 32 percent of the nonvanpoolers responded that they were willing to consider vanpooling. Eighteen percent of the faculty said they were willing to consider vanpools, as were 34 percent of the staff. Of those who drove alone, 31 percent would consider vanpools, as would 40 percent of those who carpooled, and 35 percent of the bus riders. Across the board, interest in changing to vanpooling was greater among people living more than 10 mi from campus. These are the people who are being targeted for vanpooling at UCLA. Almost half (49 percent) of the people who lived more than 10 mi from campus responded affirmatively to at least one of the vanpool incentive questions, versus 22 percent of those living closer.

The strongest incentives for vanpooling, for respondents living more than 10 mi from campus, were being able to drive alone occasionally (41 percent), university-provided 15-passenger vans with costs shared among the riders (37 percent), lower cost than driving alone (34 percent), and a campus ridesharing coordinator to assist people in finding vanpoolers (29 percent). In addition, 19 percent of the nonvanpoolers stated that they would vanpool during the Olympics. Thirty-nine percent of the people living more than 10 mi from campus would not consider vanpooling at the time of the survey.

Questions were also asked about the respondents' willingness to change their travel modes to either taking the bus or riding a bike to work. On the whole, 31 percent said they were willing to consider taking the bus. This was the case for 31 percent of those who drove alone and 35 percent of those who carpooled. Those who used other modes did not appear to be particularly willing to change. The most common circumstances under which nonbus riders would change

to taking the bus were if service were reliable and frequent (21 percent), if the route were near their home (16 percent) or direct (13 percent), if the buses were faster (14 percent), or during the Olympics (11 percent). The most common reasons given for not considering taking the bus were generally the reverse, with most people thinking that the bus takes too long (42 percent) or that it is too unreliable and inconvenient (21 percent). Only 11 percent would not consider changing because they needed their cars. Those most interested in changing to riding the bus lived between 5 and 15 mi from campus and accounted for nearly half of those willing to consider changing (46 percent).

Fewer people would consider changing their travel modes to riding a bicycle to work (19 percent). Eighteen percent of those who drove alone would consider changing, 13 percent of those who carpooled, 28 percent of those who rode the bus, and 50 percent of those who walked, a statistically significant difference among the various modes. Of the people who would consider changing, 71 percent drove alone. Not surprisingly, most of those interested in changing to riding a bicycle to UCLA lived less than 15 mi away; 51 percent lived within 5 mi of campus, and 38 percent lived between 5 and 15 mi away. The circumstances under which people would change to riding a bicycle were if there were a safe bike path to campus (47 percent), if they lived closer (12 percent), or during the Olympics (8 percent). As with changing to buses, the reasons for not changing were the reverse of the reasons for changing: 52 percent said that they lived too far away and 26 percent were concerned with traffic and safety. Only 3 percent would not consider changing because they need their cars.

Requests for Information

About 41 percent of the people surveyed wanted information on some aspect of ridesharing, and 21 percent were interested in finding out more about carpooling, 22 percent wanted to learn more about vanpooling, 11 percent wanted more information on public buses, and 8 percent wanted information on park-and-ride lots.

CONCLUSIONS

Carpooling

Ideally, the market for carpooling would be largely comprised of people who drive alone to work, nearly three-quarters of the faculty and staff commuters (74 percent). Also, except for those who rode the bus to campus (and were therefore already ridesharing), those who used other travel modes were less interested in changing to carpooling.

Generally speaking, people who live within 5 mi of their worksites are not inclined to carpool. However, because of the traffic and parking problems indigenous to the Westwood campus, this is not necessarily true at UCLA. People who are not within walking distance, even if they live only several miles from campus, can be targeted for carpooling.

At the time of the survey, about 35 percent of the nonriders indicated that they would seriously consider changing from their current modes to carpooling if circumstances were right. This was true for 43 percent of those who drove alone, 23 percent of the bus riders, and 14 percent of those using other modes. Of the 35 percent of the sample potentially interested in carpooling, 48 percent lived more than 10 mi from campus and might be better

served by vanpooling if they lived near coworkers with similar schedules.

At the very least, the carpool market consists of the 18 percent of the commuters who stated an interest, if certain conditions were met, and lived 10 mi or less from campus; an additional 17 percent of the faculty and staff lived more than 10 mi from campus and were interested in carpooling; the majority of them also comprise the vanpool market. Notably, significantly more staff than faculty are interested in possibly switching to carpooling--37 and 23 percent, respectively. Because of the comparative stability of their schedules, staff would also be much easier to find carpooling partners for on the whole.

On the basis of the responses to the questions that dealt with what commuters were concerned about, why they were not ridesharing, and what might encourage them to carpool, it appears that the best incentives for carpooling center around reducing costs and allowing for flexibility. Need for a car and lack of flexibility were given by almost half of the nonriders as reasons for not ridesharing, but 29 percent said they would consider carpooling if the pool were flexible. One of the goals of the ridesharing coordinator might be to try and match people who need their vehicles several days a week or who need a carpool with a flexible departure time. Also, perhaps those who need a car during the day could be the ones whose cars are used for the carpool.

If people were made more aware that carpools do not need to be used every working day, perhaps it would be possible to capture some of the market that says they do not rideshare because they need their cars, especially because people only needed their cars an average of 1.36 days per week, and a campus/Westwood shuttle would apparently not alleviate the need for cars for most people.

Some people might be encouraged to carpool if they were made aware that pooling is less expensive than driving alone. If different people drive their cars each day for carpooling, then some cars are left at home, which reduces the wear and tear on the cars and, hence, repair costs. Costs of gasoline and the like are generally shared among poolers if driving is not shared. Also, some automobile insurance companies offer reduced rates to their customers who carpool.

These factors are important in encouraging carpooling because 34 percent of the people surveyed were concerned about transportation costs, 18 percent would consider carpooling if it would reduce their automobile insurance premiums, and 19 percent would consider changing if carpooling were less expensive than driving alone.

Another important incentive appears to be reduced parking fees for people who carpool to UCLA. Sixteen percent of the people surveyed were concerned with parking costs and 13 percent said that they would consider changing to carpooling if parking fees were reduced. Parking rates could be reduced for people who carpool to campus, or regular parking rates could be raised at the same time carpooling rates are established, in order to emphasize the incentive.

Vanpooling

Although as a general rule the market for vanpools is considered to be made up of people who drive more than 15 mi to work, the definition of the UCLA vanpool market has been expanded to include persons who live more than 10 mi from campus. The considerable social and environmental benefits resulting from high-occupancy vanpools, such as decreased congestion and parking demand, make the expansion of the

market worthwhile at UCLA. As with carpooling, the market is also generally those who drive alone. In the UCLA faculty and staff survey, 13 percent drove alone more than 10 mi to campus and indicated an interest in switching to vanpooling for reasons other than the Olympics. Significantly more staff than faculty fell into this group--14 and 5 percent, respectively. Of the people traveling more than 10 mi each way, almost half (49 percent) were willing to consider vanpooling and 35 percent requested information on vanpooling.

The questions that dealt with commuters' concerns, reasons for not ridesharing, and what might encourage them to vanpool show that, like carpooling, the strongest vanpooling incentives center around costs and flexibility. Again, making people aware that pooling usually costs less than driving alone and need not be done every day should induce some people to try it.

Public Buses

No incentives that would get people to consider changing to riding public buses were suggested by the survey results. Most concerns about busing were centered around service, over which UCLA/TSA has little or no control. Many people thought that buses take too long (21 percent) or that they are not reliable or frequent enough (11 percent).

Perhaps the best suggestion for encouraging bus riding would be to make schedules and route information more easily available. It may be that people have not looked into taking the bus and do not really know how long it would take them to get to UCLA or how frequently the buses run.

Bicycles

The best incentive for bicycling appears to be a safe bike path to the UCLA campus. Forty-seven percent of the people willing to consider bicycling would consider it if such a path were available; this is a total of about 7 percent of the working population.

RECOMMENDATIONS

On the basis of the results of the UCLA staff and faculty commuter survey, the following elements have emerged as having the greatest potential for structuring a successful commuter transportation program for employees at UCLA. The following points are important to an effective marketing plan for ridesharing:

1. Concentrate efforts on staff rather than faculty. Staff tend to be more interested in ridesharing, have more consistent schedules, and live farther from campus. They also comprise about 80 percent of the employee population.

2. Be responsive to employees' sensitivity to costs. Emphasize benefits of ridesharing such as shared expenses and resulting savings; develop incentives such as reduced parking fees for ridesharers; promote automobile insurance companies that give discounts to carpoolers.

3. Promote the flexibility of ridesharing. The top reasons for not ridesharing were the need for a car before or after work and a lack of flexibility. Yet people needed their cars fewer than 2 days per week on the average. Ridesharing need not be done every day of the week to provide commuters and the entire campus community with economic, social, and environmental benefits.

4. Promote the availability of UCLA's campus ridesharing coordinators. About a fifth of the non-ridesharers stated that they would seriously consider carpooling if a coordinator assisted them in finding other faculty or staff to carpool with.

5. Encourage everyone seriously interested in ridesharing to register and regularly update their registration with UCLA/Commuter Computer. That way those people who are unable to find pooling partners on their own will have the greatest likelihood of contacting prospective poolers. The quality of the ridesharing data base--in terms of both numbers of people and accuracy of the information--is critical if Commuter Computer matchlists are to be useful to registrants. Fewer than half of the people who were not registered had not registered because they were not interested in ridesharing.

The survey results also indicate that university-provided vans would be instrumental in encouraging employees to vanpool. The ridesharing marketing program need not have bicycling and buses as priority elements, yet support for bike paths and facilities, and more easily available bus schedules and information, would be helpful to substantial segments of the employee population. Undoubtedly, these relatively low-cost transportation alternatives would be of interest to many students as well.

An integrated transportation program, which meets the needs of all segments of the campus community, can only be designed after the needs of students and Medical Center employees have been analyzed. This study of faculty and staff has been an excellent first step toward the development of a comprehensive ridesharing marketing program based on careful assessment of commuters' beliefs and behavior.