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ABSTRACT

In 1989, a study was conducted at Phoenix College to explore institutional turnover rates from the spring to the fall semester among part-time community college students. Surveys were administered in class during spring 1989 to a random sample of part-time, working students who were enrolled in 12 credit hours or less. Students were asked about their background, outside responsibilities, educational status, affective reactions to college, and academic performance. The majority of the sample had declared majors, felt that extra help was available from instructors, and were at least moderately satisfied with Phoenix College. Major study findings, based on survey responses from 426 students, included the following: (1) 82% of the students intended to stay at Phoenix College; (2) of the students intending to leave, 90% planned to attend another college; (3) among students planning to transfer, 67% intended to enroll at a four-year institution; (4) 89% attained a grade point average (GPA) for the spring semester 1989 above 1.99; (5) course offerings and scheduling conflicts were the most frequently mentioned school-related obstacles; (6) time/scheduling at work and lack of money were cited often as non-school-related barriers. After excluding students with GPA's below 2.00, student responses were correlated with their continued enrollment at Phoenix College in fall 1989. Commitment to the intention to stay was the strongest predictor of continuation status. The survey instrument is appended. (WJT)

Predicting Institutional Turnover from Spring to Fall Semester Among Part-Time Community College Students Intending to Stay

Final Report to the Maricopa Community Colleges

(C 08445)

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We gratefully acknowledge the extensive assistance provided by Dr. Linda Smith on questionnaire development, sampling, and data collection.

Summary

During the past 20 years, part-time student enrollment in post-secondary educational institutions increased 10 percent (Stern, 1988). Relative to full-time students, part-time students prefer to enroll at community colleges rather than four-year colleges and universities. In 1985, whereas part-time students comprised 40 percent of all undergraduate enrollment, they comprised 63 percent of the students at community colleges (Snyder, 1987).

In a preliminary study of institutional turnover at Mesa Community College, Okun, Weir, Benin, and Richards (in press) drew a convenience sample of students during the twelfth week of the spring 1987 semester. They cross-classified intent (leave or stay) with continuation status in the fall (turnover or continue). When students were disaggregated by credit load, substantial differences in the intent-continuation status relation emerged. Intent was much more strongly related to continuation status among students with high credit loads (13+ credit hours) than among students with low credit loads (1-12 credit hours). Given the intent to stay, the conditional probability of turning over was higher among low credit load (.31) than among high credit load (.19) students.

The findings of the Mesa Community College Study suggested that additional research was warranted on institutional turnover from the spring to the fall semester among part-time community college students. To this end, we conducted the present study at

Phoenix College. Drawing upon previous reviews of research on college student turnover (Bean & Metzner, 1985; Tinto, 1987), we decided to include the following classes of variables: (a) background, (b) outside responsibilities, (c) educational status, (d) affective reactions to college, and (e) academic performance. Moreover, three theoretical frameworks--reasoned action theory, investment theory, and personal projects--were employed to select predictors of institutional turnover among students intending to stay. Among students who intend to stay, we anticipated that attitude, subjective norm, investment, alternative value, satisfaction, and cross-impact would predict commitment to the intention to stay and that commitment to the intention to stay would predict continuation status.

A random sample was drawn of 40 sections of 100-level general studies courses offered in the evening. All instructors agreed to participate except for a few who had scheduled special class sessions (e.g., speech instructors who had planned student presentations). These courses were replaced by other sections of courses that were randomly selected.

The survey was administered during class sessions between the 12th and 14th week of the spring 1989 semester. To be eligible, students had to be enrolled part-time (carrying < 12 credit hours) and had to be working at a paid job, part-time or full-time. A total of 518 surveys was returned to the instructors. Because of missing data on the survey items, (N = 18), omission of student identification number (N = 36),

incorrect student identification number (N = 26), and attainment of a certificate or degree at the end of the spring 1989 semester (N = 12), data from 92 students were discarded. Analyses were based upon the data provided by the remaining 426 students.

Descriptive analyses indicated that the majority of students (a) have majors, (b) do not perceive finances and commuting to be obstacles to attending college, (c) feel that instructors give extra help if desired, and (d) are at least moderately satisfied with Phoenix College. On the negative side, only 43 and 40 percent of the sample endorsed the items pertaining to adequacy of academic advisement and loyalty, respectively.

Eighty-two percent of the students in the present stu indicated that they intended to stay. Ninety percent of the students intending to leave had plans to attend another college. Among students planning to transfer, 67 percent intend to enroll at a 4-year college or university. Among students intending to stay, 82 percent were committed strongly to their decision to return to Phoenix College. Eighty-nine percent of the students attained a GPA for the spring 1989 semester above 1.99. Sixty-two percent of the total sample continued from the spring 1989 to the fall 1989 semester. Given that students intended to stay, the probability that they turned over was .28.

In response to an open-ended probe, the courses being offered and their scheduling were the most frequently mentioned school-related barriers. Similarly, time/scheduling at work were cited frequently as non-school-related barriers.

Background variables, outside responsibilities, and educational status are weakly correlated with commitment to the intent to stay and institutional turnover among students intending to stay. Perceived adequacy of advisement was correlated with satisfaction with the student role which, in turn, was correlated with commitment to the intent to stay.

Prior to testing the model of unintended turnover, we excluded students with semester GPAs below 2.00. Attitude (desirability of returning minus desirability of not returning) was the best predictor of commitment to the intention to stay. As expected, commitment to the intention to stay was the strongest predictor of continuation status. Unexpectedly, investment (amount of resources "put into" college) exerted a direct effect on continuation status. No evidence was found for interaction effects between commitment to the intention to stay and the other variables in the model with respect to predicting continuation status.

We recommend that retention efforts be directed at part-time students who intend to stay as opposed to those who intend to leave. One intervention that may prove useful is to have these students complete enrollment plans in March (prior to early registration for the fall). Review of these plans, coupled with feedback, may maintain or elevate college satisfaction and commitment to the intent to stay and, in turn, reduce the institutional turnover rate among students intending to stay.

Introduction

During the past 20 years, part-time student enrollment in post-secondary educational institutions increased 10 percent (Stern, 1988). Relative to full-time students, part-time students prefer to enroll at community colleges rather than four-year colleges and universities. In 1985, whereas part-time students comprised 40 percent of all undergraduate enrollment, they comprised 63 percent of the students at community colleges (Snyder, 1987). In 1970, the ratio of students enrolled in four-year public colleges and universities to students enrolled in public community colleges was over 2 to 1. By 1987, this ratio was less than 1.2 to 1.

The shift in the composition of college students has led researchers to distinguish between traditional and nontraditional undergraduates. According to Bean and Metzner (1985), a traditional undergraduate is enrolled full-time (credit load > 11 hours), is less than 25 years old, and resides on campus. Undergraduates are nontraditional to the extent that they have one or more of the following characteristics: (1) are enrolled part-time, (2) are over 24 years old, and (3) commute to college. Because almost all community colleges are commuter institutions, undergraduates attending them are, by the above definition, nontraditional. Given the rise in nontraditional undergraduates, it is surprising that research on college student attrition has continued to focus on traditional undergraduates. In part, this trend is due to the hegemony maintained by conceptual frameworks

of college student turnover that were developed during the early and middle 1970s (Spady, 1970; Tinto, 1975).

A Model of Nontraditional Student Turnover

In their review of nontraditional student turnover, Bean and Metzner (1985) noted that much of the research has been descriptive. Calling for hypothesis-testing, multivariate research on nontraditional college student turnover, Bean and Metzner (1985) developed a model of nontraditional college student turnover. They posit that nontraditional college student turnover is a function primarily of four sets of factors--background and defining variables, environmental (external to the college) variables, academic outcome, and intent (to stay or to leave). In addition, two other sets of factors--academic (related to the college) variables and psychological outcomes--are hypothesized to play a secondary role in nontraditional college student turnover. The hypothesized causal relations among the factors is depicted in Figure 1. Sample variables related to each factor also have been included there.

The Mesa Community College Study

To test Bean and Metzner's model, Okun, Weir, Richards, and Benin (in press) conducted a preliminary study of institutional turnover at Mesa Community College. They drew a convenience sample of 375 students from social science courses. Students were eliminated from the analyses if they anticipated receiving a certificate or degree prior to the end of the semester or if they were missing any data. The final sample size was 304. Of the

304 students, 35 percent were male, 88 percent were white, 69 percent were less than 25 years old, and 46 percent were carrying 9 or fewer credits.

Surveys were administered during class sessions around the twelfth week of the spring 1987 semester. Several independent variables from the survey were used in statistical analyses. These variables are listed in Table 1. Intent was assessed by the question, "Do you expect to return to this college next fall for credit courses?" Semester GPA for spring 1987 was extracted from the student information system. Continuation status was defined in terms of whether students were enrolled in courses at this community college as of the 45th day of instruction during the fall 1987 semester. Continuation status was ascertained via the student information system.

Predicting institutional turnover. Okun, Weir, Richards, and Benin (in press) performed a logistic regression analysis to predict spring to fall semester institutional turnover, using all of the variables in Table 1 except for negative life events and depression as predictors. Three variables significantly predicted institutional turnover--intent, credit load, and hours spent on homework.

Credit load differences in the intent-turnover relation. Okun et al. (in press) also cross-classified intent by continuation status. Table 2 shows the results of cross tabulating intent and continuation status for the total sample and separately for students carrying low (1-12) and high (13 or

more) credit loads. For the total sample, the base rate for intent was 81 percent whereas the base rate for continuation was 62 percent. The odds ratio was 11.38, indicating that students intending to stay were over 11 times more likely to continue than were students intending to leave. Among students who intended to stay, 31 percent turned over. Among students who turned over, 59 percent had indicated in the spring that they intended to stay.

When students were disaggregated by credit load, substantial differences emerged. For low credit load students, the base rate for intent to stay was 84 percent whereas the base rate for continuation was 63 percent. The odds ratio was 5.81, indicating that low credit load students who intended to stay were over 5 times more likely to continue than low credit load students who intended to leave. In contrast, for high credit load students, the base rate for intent to stay was 72 percent whereas the base rate for continuation was 59 percent. The odds ratio was 95.83, indicating that high credit load students intending to stay were over 95 times more likely to continue than high credit load students intending to leave.

The conditional probability of turning over, given the intent to stay for low credit load students and high credit load students was .31 and .19, respectively. Also, whereas 70 percent of the low credit load students who turned over had indicated in the spring that they intended to stay, only 34 percent of the high credit load students had indicated in the spring that they intended to stay.

Predicting institutional turnover among students intending to stay. The majority of students in the Mesa Community College students who turned over in the fall had indicated in the spring that they intended to stay. Therefore, Richards (1989) attempted to predict continuation status among students intending to stay, using all of the variables in Table 1 as predictors except for college satisfaction. Only two variables emerged as significant predictors--credit load and semester GPA. These predictors only accounted for 8 percent of the variance in institutional turnover from the spring to the fall semester.

In summary, the results of the Mesa Community College study of institutional turnover indicated that intent, hours spent on homework, and credit load predicted continuation status. Among students intending to stay, as credit load increased, institutional turnover decreased.

Rationale for the Phoenix College Study

The findings of the Mesa Community College Study suggested that additional research was warranted on institutional turnover from the spring to the fall semester among part-time community college students. To this end, we conducted the present study at Phoenix College. Drawing upon previous reviews of research on college student turnover (Bean & Metzner, 1985; Tinto, 1987), we decided to include the following classes of predictors: (a) background variables; (b) outside responsibilities; (c) educational status; (d) affective reactions to college; and (e) academic performance. Moreover, three theoretical frameworks

were employed to select additional predictors of institutional turnover among students intending to stay.

Reasoned action theory. The theory of reasoned action was designed to predict volitional behavior in situations where individuals must make a decision (Ajzen & Fishbein, 1980). For example, this theory has been employed to predict the behavior of individuals making such diverse decisions as having another child, voting in a presidential election, and reenlisting in the military (Ajzen, 1985).

The theory of reasoned action is based upon the notion that people use the available information in a rational manner to arrive at a volitional, behavioral decision. According to the theory, the immediate determinant of a volitional, behavioral decision is the intention to take (or not take) a specific action (e.g, enroll at a particular college in the fall). Intention, in turn, is posited to be a function of two variables--attitude and subjective norm. Attitude is the affect that an individual has toward taking (or not taking) the action. Subjective norm is the person's perception of the opinion of significant others with respect to taking or not taking the action.

Intentions typically account for at least 50 percent of the variance in actions, and attitude and subjective norm together typically explain at least 60 percent of the variance in intentions (Ajzen, 1985).

Ajzen notes, however, that there are boundary conditions on the intent-action relation. As the interval between the

declaration of the intention and the action to be performed increases, the magnitude of the intention-action relation decreases. As time passes, unanticipated life events are likely to occur which trigger changes in intentions. Ajzen also suggests that the probability of maintaining an intention is directly related to the strength of one's commitment to the intention.

We used the theory of reasoned action to make two predictions about institutional turnover among students intending to stay. First, we hypothesized that commitment to the intent to stay will be predicted by attitude and subjective norm. Second, we hypothesized that commitment to the intent to stay will predict continuation status.

Investment theory. Investment theory (Farrell & Rusbult, 1981) is derived from an "economic exchange" model of human behavior (Homans, 1961). This theory has been employed to predict participation in musical activities, grades in a college course, dissolution of romantic relationships, and job turnover (Kluger & Koslowsky, 1988; Koslowsky & Kluger, 1986; Rusbult, 1980; Rusbult & Farrell, 1983). In applying the theory to job turnover, Farrell and Rusbult (1981) postulated that commitment is a function of increases in satisfaction and investment and decreases in alternative value. Commitment, in turn, is hypothesized to be inversely related to job turnover.

Rusbult and Farrell defined job satisfaction as the degree to which the individual positively evaluates his or her job.

They view satisfaction as the net difference between the rewards (e.g., pay) and costs (e.g., difficulty of commute to and from work) associated with the job. Investment refers to the resources that are "put into" the association with the organization (e.g., seniority). Investment resources may be material or psychological. Alternative value is defined as the quality of the best available alternative to the present job (either another job or unemployment). Commitment refers to the binding of the individual to behavioral acts. Job commitment reflects behavioral intentions, primarily the degree of intention to stay with a job.

In testing their first hypothesis, Farrell and Rusbult (1981) examined the intercorrelations among satisfaction, investment, alternative value, and commitment. Correlations among satisfaction, investment, and alternative value were low. As predicted by the theory, satisfaction (r = .67) and investment (r = .27) were positively related to commitment, and alternative value (r = .-.21) was inversely related to commitment.

In testing their second hypothesis, Rusbult and Farrell (1983) conducted a one-year longitudinal study of job turnover among new employees. They found that employees who continued, relative to those who turned over, experienced less decline in rewards, less escalation in costs, less increase in alternative value, and less decrease in investment. Employees who stayed one year and employees who left after nine months initially had comparable job commitment scores. However, for employees who

stayed, job commitment scores were stable over time, whereas for employees who left, job commitment scores decreased substantially over time. Decline in commitment was the best predictor of turnover (r = .61). Furthermore, the effects of changes in satisfaction, investment, and alternative value on turnover were reduced substantially when change in commitment was included in a regression model. Rusbult and Farrell (1983, p. 437) concluded, "although changes in rewards, costs, alternatives, and investments are all significantly related to stay or leave decisions, and although changes in each of these factors affects changes in job commitment, decline in job commitment appears to most directly and powerfully affect such decisions".

Both the theory of reasoned action and investment theory predict that commitment to the intention to stay will exert a direct effect on institutional turnover. However, investment theory and reasoned action theory postulate that different variables influence commitment to the intent to stay. In contrast to reasoned action theory which focuses on attitude and subject norm, investment theory focuses on satisfaction, investment, and alternative value as determinants of commitment to the intention to stay.

Personal projects theory. Little (1983) developed a theory pertaining to how individuals strive to obtain their goals. At the core of his theory is the person-environment unit of personal projects. A personal project is a set of interrelated sequences of actions extended over time which is intended to maintain or

attain a goal. Examples of personal projects include completing a term paper, finding a new job, and spending more leisure time in family-related activities. Little has delineated a number of content and structural dimensions of personal projects.

Ruehlman and Wolchik (1988) demonstrated that mastery, control, and strain were salient content dimensions of personal projects which predicted psychological distress and well-being among college students. In the context of institutional turnover among part-time students, a potentially important structural dimension of personal projects may be their cross-impact. College, work, and family personal projects may be perceived as facilitating or hindering each other. Specifically, we predicted that, as cross-impact ratings of personal projects become more positive, students will be more strongly committed to their intention to stay.

Statement of Hypotheses

Figure 2 summarizes our hypotheses with respect to institutional turnover among students intending to stay. First, we anticipate that attitude, subjective norm, investment, alternative value, satisfaction, and cross-impact will predict commitment to the intention to stay. Second, we expect that commitment to the intention to stay will predict continuation.

Overview of Data Analysis

Several descriptive analyses will be undertaken. First, we will present univariate frequency distributions for most of the variables included on the survey. Second, we will tabulate the

obstacles to continuing at Phoenix College mentioned in response to an open-ended question. Third, for the total sample and for students intending to stay, we will assess the relations between (1) sets of variables related to background, outside responsibilities, educational status, affective reactions to college, and academic performance and (2) intent, commitment to the intent to stay, and continuation status. Fourth, for the total sample and for students who intend to stay, we will examine the intercorrelations among attitude, subjective norm, investment, satisfaction, alternative value, cross-impact, intent, commitment to the intent to stay, and continuation status. Fifth, we will cross-classify continuation status by intent and by commitment to the intent to stay. Finally, we will use a multivariate technique appropriate for a dichotomous criterion variable, logistic regression, to test the hypothesized model of institutional turnover among students intending to stay.

Method

Sampling

A random sample was drawn of 40 sections of 100-level general studies courses offered in the evening. All instructors agreed to participate except for a few who had scheduled special class sessions (e.g., speech instructors who had planned student presentations). These courses were replaced by other sections of courses that were randomly selected. The courses that were included in this study are listed in Table 3. Note that, if

selected, multiple sections of a course were included (e.g., PSY 101).

The survey was administered during class sessions between the 12th and 14th week of the spring 1989 semester. To be eligible, students had to be enrolled part-time (carrying < 12 credit hours) and had to be working at a paid job, part-time or full-time. We decided to exclude students who were not working because the survey included several items pertaining to work and because 92 percent of the students carrying 12 or fewer credit hours in the Mesa Community College study were working.

A total of 518 surveys was returned to the instructors. Because of missing data on the survey items, (N = 18), omission of student identification number (N = 36), incorrect student identification number (N = 26), and attainment of a certificate or degree at the end of the spring 1989 semester (N = 12), data from 92 students were discarded. Analyses were based upon the data provided by the remaining 426 students.

Questionnaire

The 70-item questionnaire appears in the appendix. This instrument was designed to measure many variables in a 30-minute period. Consequently, it was necessary to allocate, at most, only a few items to measure each variable. To reduce the burden on the reader, several variables that were unrelated to intent, commitment to intent, and continuation status were excluded from the report. For example, we do not report on life satisfaction (see item No. 59). Below, we present information on the

variables specified in our hypothesized model of institutional turnover among students intending to stay. (See Figure 2.)

Attitude. Based upon a study of job turnover (Prestholdt, Lane, & Mathews, 1987), we decided to assess attitude toward enrolling at Phoenix College in the fall (see item No. 11) and attitude toward not enrolling at Phoenix College in the fall (see item No. 61). The correlation between the attitude ratings was -.45. After we recoded the responses, we computed the attitude score by subtracting the rating of the attitude toward not enrolling from the rating of the attitude toward enrolling. Higher scores are associated with a more positive attitude towards enrolling in the fall at Phoenix College.

Subjective norm. Similarly, we assessed the subjective norm pertaining both to enrolling (see item No. 15) and to not enrolling (see item No. 54) at Phoenix College in the fall. The correlation between the subjective norm ratings was -.31. After we recoded the responses, we computed the subjective norm score by subtracting the rating of subjective norm related to not enrolling from the rating of subjective norm related to enrolling. Higher scores are associated with a greater perceived social approval from others for enrolling in the fall at Phoenix College.

Investment. Four items were used to measure investment (see items No. 7-10). An internal consistency reliability analysis indicated that all items were contributing to measuring investment (coefficient alpha = .78). Therefore, investment

scores were formed by computing the mean of the responses to the four items. Higher scores are associated with being more invested with Phoenix College.

Alternative value. Three items were used to measure alternative value (see items No. 12-14). An internal consistency reliability analysis indicated that item No. 13 was not contributing to measuring alternative value. Consequently, this item was deleted. The correlation between the remaining two items was .47. Alternative value scores were formed by computing the mean of the responses to items No. 12 and 14. As scores get higher, an alternative to Phoenix College has increasing value.

Satisfaction. Satisfaction scores were formed by subtracting the cost scores from reward scores. Four items were used to measure reward (see items No. 3-6), and four items were used to measure cost (see items No. 62-65). An internal consistency reliability analysis on the reward items indicated that item No. 3 on the survey was not contributing to measuring reward. Consequently, this item as well as the parallel cost item (item No. 62) was deleted. The coefficient alphas were .66 and .57 for the reward and cost measures, respectively. Reward scores and cost scores were formed by computing the mean of responses to three items (items No. 4, 5, and 6 for reward and items No. 63, 64,and 65 for cost). The correlation between the reward and cost scores was -.08. Higher scores are associated with greater positive affect toward Phoenix College.

Cross-Impact. Six items were used to measure the cross-

impact of personal projects (see items No. 44-49). Typical college-related personal projects included getting an "A" in a course, registering for summer school, and deciding on a major. Common work-related personal projects included getting a pay raise, completing a special project, and obtaining a different work schedule. Frequently mentioned family-related projects included increasing my child's sense of responsibility, helping my children with their homework, and considering whether or not to change residences. An internal consistency reliability analysis indicated that all items were contributing to measuring cross-impact (coefficient alpha = .82). Therefore, cross-impact scores were formed by computing the mean of the responses to the six items. Higher scores are associated with perceiving the personal projects as having a positive influence on each other.

Intent. Intent was measured by one question (see item No. 66) which asked students to declare whether they intended not to enroll at Phoenix College in the fall (assigned a value of 0) or to enroll at Phoenix College in the fall (assigned a value of 1).

Commitment to intention to stay. Students indicating that they intended to stay were asked to respond to one question (see item No.67) which asked them to rate how strong their commitment was to their decision to enroll at Phoenix College in the fall. Higher scores were associated with a stronger commitment to enroll at Phoenix College in the fall.

Student Information System

Spring 1989 semester GPA. Spring 1989 semester GPA was

extracted from the District student information system. The minimum and maximum values were zero and four, respectively.

Continuation status. Continuation status was extracted from the District student information system. The determination of whether students did or did not continue in the fall of 1989 was based upon their enrollment status at the end of the drop-add period. Students who turned over were assigned a value of 0 whereas students who continued were assigned a value of 1.

Results

Univariate Frequency Distributions: Background-Related Factors

Univariate frequency distributions for background variables, outside responsibilities, educational status, and affective reactions to college are presented in Table 4. Approximately one-third of the sample was less than age 25. The majority of the students were women (62 percent) and white (81 percent). Approximately 40 percent of the sample had an annual family income of $20,000 or less.

Ninety percent of the students were working more than 30 hours per week. The majority of the students were not married and did not have any children. Among members of the sample who had children, the median age of the youngest child was 3.5 years old. The modal number of hours spent on household tasks was 0 to 10 hours.

The majority of the students were carrying 4 to 6 credit hours and were enrolled at Phoenix College in the fall of 1988.

Approximately 80 percent of the sample spent 10 or fewer hours per week on homework. Only 16 percent of the sample did not have a major. Students varied considerably in the type of major they were pursuing. Approximately 65 percent of the students felt that they had adequate finances to attend college, and 73 percent felt that they had an easy commute to college. Students were less positive about academic advisement than about assistance provided by instructors. Only 43 percent of the students endorsed the item pertaining to adequate academic advisement. Students were fairly evenly divided in terms of the priority they assigned to college, relative to family and work. Relatively few students (15 percent) were dissatisfied with Phoenix College. However, the majority of students did not endorse the item concerning loyalty to Phoenix College.

On the positive side, we found that the majority of students (a) have majors, (b) do not perceive finances and commuting to be obstacles to attending college, (c) feel that instructors give extra help if desired, and (d) are at least moderately satisfied with Phoenix College. On the negative side, only 43 and 40 percent of the sample endorsed the items pertaining to adequacy of academic advisement and loyalty, respectively. Given that the modal student is working more than 30 hours at a paid job and is taking fewer than 7 credit hours, it is hardly surprising that she does not feel very loyal to Phoenix College and does not perceive that academic advising is adequate.

Univariate Frequency Distributions: Model-Related Factors

The univariate frequency distributions for variables used in testing the model of institutional turnover are presented in Table 5. Over 65 percent of the students had positive attitudes and positive subjective norms with respect to continuing at Phoenix College. Fewer than 10 percent of the students were not satisfied with and not invested in Phoenix College. More students perceived that college, family, and work personal projects facilitated (24 percent) than hindered (6 percent) each other. However, 94 percent of the students perceived that the best alternative to enrolling at Phoenix College had at least moderate value. Given this distribution, it is interesting to examine the college plans of students intending to leave.

As can be seen in Table 6, 90 percent of the students intending to leave had plans to attend another college. Among students planning to transfer, 67 percent intend to enroll at a 4-year college or university. In the Mesa Community College study, 68 percent of low credit load students intending to leave planned to transfer to another college. Among Mesa Community College students planning to transfer, 76 percent intended to enroll at a 4-year college or university.

Of the 28 Phoenix College students intending to transfer to ASU, 50 percent enrolled at ASU, 21 percent continued at Phoenix College, and the remaining 29 percent did neither. Among those students who enrolled at ASU, 79 percent completed the fall 1989 semester.

The data presented above potentially shed light on the responses made to the question concerning loyalty to Phoenix College. Perhaps, many students view Phoenix College as a means rather than as an end, with respect to their long-range educational goals. Because the majority of students probably expect to eventually transfer to a four-year college or university without graduating from Phoenix College, their loyalty to Phoenix College is modest. Furthermore, the transfer aspirations of many Phoenix College students probably enhance the perceived value of being enrolled at a four-year college or university. Among students intending to leave, the mean alternative value score was higher for 4-year colleges and universities ($\underline{M}$ = 4.26) than for community colleges ($\underline{M}$ = 3.85).

Eighty-two percent of the students in the present study indicated that they intended to stay. Among students intending to stay, 82 percent were committed strongly to their decision to return to Phoenix College. Eighty-nine percent of the students attained a GPA for the spring 1989 semester above 1.99. Sixty-two percent of the total sample continued from the spring 1989 to the fall 1989 semester.

The base rate for intent to stay was .82 in the present study and .84 for students carrying fewer than 13 credit hours in the Mesa Community College study. The base rate for continuation was identical for the two samples (.62). Academic performance was a serious problem for only 12 percent of Phoenix College students.

The distribution for commitment to intention to stay was strongly, negatively skewed (82 percent were either "strongly" or "very strongly" committed to their intention to stay). Therefore, in subsequent analyses, students who had "very weak," "weak", and "neither weak or strong" commitments to their intention to stay were assigned a value of 0 whereas students who had "strong" and "very strong" commitments to their intentions to stay were assigned a value of 1.

Obstacles to Staying at Phoenix College

The number of times school-related and non-school-related obstacles were mentioned by students is presented in Table 7. The courses being offered and their scheduling were the most frequently mentioned school-related barriers. Similarly, time/scheduling at work were cited frequently as non-school-related barriers. Among the non-school-related barriers, lack of money was mentioned most often. Again, it is hardly surprising that issues related to time and scheduling emerge among part-time working students.

Correlates of Intent, Commitment to Intent to Stay, and Continuation Status

In Table 8, we present correlations between background variables, outside responsibilities, educational status, affective reactions to college and academic performance, and intent, commitment to the intent to stay, and continuation status. Correlations were computed for the total sample and for students who intend to stay. In general, the correlations in

Table 8 are very small. Using .15 as a cutoff, the only correlates of intent in the total sample were age of youngest child (r = .26) and loyalty (r = .18). For the total sample, enrollment at Phoenix College in the fall of 1988 was positively related to continuation in the fall of 1988 (r = .21).

For students who intend to stay, enrollment at Phoenix College in the fall of 1988 (r = .20), easiness of the commute (r = .19), college satisfaction (r = .38), and loyalty (r = .27) were correlated with commitment to the intent to stay. Spring 1989 semester GPA (r = .24) and enrollment at Phoenix College in the fall of 1988 (r = .18) were positively correlated with continuation status.

Consistent with the findings of the Mesa Community College study, background variables, outside responsibilities, and educational status (with the exception of prior enrollment history at the specific community college) do not contribute much to predicting institutional turnover in the total sample or among students intending to stay.

Interrelations among Model Variables

In Table 9, we present, for the total sample, the correlations among the variables involved in our model of institutional turnover. Four variables were substantially correlated with intention: (a) attitude (r = .55), (b) subjective norm (r = .32), (c) satisfaction (r = .31), and (d) alternative value (r = -.35). Intent was the strongest correlate of continuation status (r = .41). In addition, attitude, subjective

norm, satisfaction, and investment were somewhat related to continuation status (range of rs from .18 to .35). Among the predictors, the largest correlation (r = .45) was between attitude and subjective norm.

In Table 10, among students intending to stay, we present the correlations among the variables involved in our model of institutional turnover. The strongest correlate of commitment to the intent to stay was attitude (r = .43). Four variables were somewhat related to continuation status: (a) attitude (r = .20), (b) investment (r = .18), (c) commitment to the intent to stay (r = .29), and (d) spring 1989 semester GPA (r = .24). Among the predictors, the largest association (r = .30) was between subjective norm and attitude and subjective norm and satisfaction.

As expected, in the total sample, intention was the strongest correlate of continuation status and, in the intend-to-stay subsample, commitment to the intent to stay was the strongest correlate of continuation status. Attitude exhibited the strongest association with intent (in total sample) and with commitment to intent to stay (in intend-to-stay subsample).

Cross-Classification of Intent by Continuation Status

In Table 11, we present the frequencies for the cells that are formed when intent (leave vs. stay at Phoenix College in the fall) is cross-classified by continuation status (turnover vs. continue at Phoenix College in the fall). Given that students intended to leave, the conditional probability of staying was

.21. Given that students intended to stay, the conditional probability of leaving was .28. The majority of students who turned over in the fall had indicated in the spring that they intended to stay (61 percent). The odds ratio was 9.75, indicating that students who indicated in the spring an intention to stay were over nine times more likely to continue in the fall than students who indicated in the spring an intention to leave.

In Table 12, we compare the results of the present study with the results from the Mesa Community College study. There, it can be seen that the results are very similar for the Mesa Community College subsample carrying 1 to 12 credit hours and the present sample (carrying 1 to 11 credit hours). Further, it is clear that these results do not generalize to the Mesa Community College subsample carrying 13 or more credit hours.

Cross-Classification of Commitment to the Intent to Stay with Continuation status

In Table 13, for students intending to stay, we present the results of cross-classifying commitment to the intent to stay with continuation status. Given that students had a weak commitment to the intent to stay, the conditional probability of continuing was .44. In contrast, among students with a strong commitment to the intent to stay, the conditional probability of continuing was .78. The odds ratio was 4.5 to 1, indicating that students who had a strong commitment to the intent to stay were over four and one-half times more likely to continue than students who had a weak commitment to the intent to stay.

Testing the Model of Unintended Institutional Turnover

Prior to testing the model, we decided to drop cross-impact as a predictor variable because it was not correlated with commitment to intent to stay or with continuation status. Because we are interested in motivational determinants of institutional turnover, we excluded students with semester GPAs below 2.00. Thus, the analyses presented ahead are based upon 309 students who intended to stay and who attained semester GPAs above 1.99.

Two stepwise logistic regression analyses of the data were performed using the BMDP4F procedure. In stepwise logistic regression analysis, all predictors are entered into the model and then considered for removal. If removed, predictors are considered for reentry after other predictors have been added to the model. Entry and reentry of variables is determined by their contribution, net of the other predictors, to enhancing the fit of the model to the data. In the analyses reported ahead, we established a criterion of p greater than .051 for removal and a criterion of p less than .02 for reentry.

The first null hypothesis we tested was that the dependent variable, commitment to the intent to stay, is independent of the additive effects of attitude, subjective norm, investment, satisfaction, and alternative value. As indicated in Table 14, attitude ($p < .001$) and subjective norm ($p < .01$) significantly improved the fit of the model to the data. Removal of attitude would have increased the chi square value by 46.12 and removal of

subjective norm would have increased the chi square value by 6.80. For the predictors excluded from the model, all p values were above .05. Alternative value came closest to entering the model. However, inclusion of alternative value would have reduced the chi square value by only 3.43.

The second null hypothesis we tested was that continuation status was independent of the additive effects of commitment to the intent to stay, attitude, subjective norm, investment, satisfaction, and alternative value. Again, all predictors were entered into the model and then considered for removal ($p > .051$) and reentry ($p < .02$). As can be seen in Table 15, commitment to the intention to stay ($p < .001$) and investment ($p < .01$) significantly improved the fit of the model to the data. Removal of commitment to the intention to stay and investment would have increased the chi square value by 18.29 and 6.71, respectively. For the predictors excluded from the model, all p values were above .25.

On a post hoc basis, we explored the joint effects of commitment to the intention to stay and (a) attitude, (b) subjective norm, (c) satisfaction, (d) investment, and (e) alternative value on continuation status. For example, it seems plausible that, as alternative value increases, commitment to the intention to stay exerts a greater influence on continuation status. The results of the logistic regression analysis provided no support (lowest $p > .30$) for the hypothesis that the effects of commitment to the intention to stay on

continuation status varied with attitude, subjective norm, satisfaction, investment, or alternative value.

The results of the three logistic regression analyses are summarized graphically in Figure 3. Predictors from the theory of reasoned action clearly outperformed the predictors from the theory of investment with respect to accounting for variance in commitment to the intention to stay. As expected, commitment to the intention to stay was the strongest predictor of continuation status. Unexpectedly, investment exerted a direct effect on continuation status. No evidence was found for interaction effects between commitment to the intention to stay and the other variables in the model with respect to predicting continuation status.

Conclusions

Statistical Profile of Student Turnover

In Figure 4, we depict the associations between intentions and institutional continuation among part-time students with semester GPAs above 1.99. The figure is based upon a unit of 100 students. Our findings indicate that 82 students intend to stay whereas 18 students intend to leave. Among those who intend to leave, 15 students intend to transfer whereas 3 students do not intend to transfer. Among students who intend to transfer, 12 turn over and 3 continue. Among students who do not intend to transfer, 3 turn over and 0 continue.

Among students who intend to stay, 68 are strongly committed

and 14 are weakly committed to the intention to stay. Among weakly committed students, 7 turn over and 7 continue. Among strongly committed students, 13 turn over and 55 continue.

Recommendations

The statistics reviewed above raise interesting questions pertaining to policies and perspectives on community college turnover among part-time students with adequate academic performance. Throughout this report we have deliberately referred to student departure as institutional turnover rather than dropping out. We have done this because many students who leave community colleges never intended to attain degrees from them and because many of these students transfer to four-year colleges and universities. Given the mission of the community college, student transfer to four year colleges and universities should be viewed as a positive, as opposed to a negative, outcome. Therefore, we conclude that it is neither in the best interest of students nor in the best interest of community colleges to attempt to persuade students who are planning to transfer to a four-year college or university to continue at the same community college.

Although community colleges may view student transfer to other community colleges and technical schools less positively than transfer to a four-year college or university, we do not believe that they should attempt to persuade students who are planning to transfer to other community colleges and technical schools to continue at the same community college. On the one

hand, this persuasive effort may be self-serving for the institution without giving appropriate consideration to what is in the student's best interest. On the other hand, because the student has already decided to leave, this effort is unlikely to be successful. Instead, we recommend that efforts to retain students should be directed toward students who intend to stay. Because these students intend to stay, there is a shared interest between the institution and the student.

Assuming that retention programs should focus on students who intend to stay, we now consider the issue, "What are the determinants of commitment to the intention to stay?" Our findings indicate that attitude is the best, cross-sectional predictor of commitment to the intention to stay. From the present study, however, we do not know the specific antecedents of a positive attitude toward returning to Phoenix College.

According to Tinto (1987), the antecedents of a positive attitude toward the institution are social and academic integration. Social and academic integration refer to the extent that the student perceives that she or he is embedded in the social and academic life of the institution. Tinto maintains that effective retention programs provide opportunities for students to become better integrated into the social and academic life of the institution.

Ethnographic research conducted on the motivational orientations of community college students, however, suggests that this approach may not work for part-time students attending

urban community colleges. Attinasi, Stahl, and Okun (1982) found that the modal student was a "requirement meeter." Requirement meeters were very concerned about being efficient students. They viewed time as a scarce commodity. Attinasi et al. (1982, p. 379) noted that students "often used phrases with economic connotations such as (a) 'spend time,' (b) 'time is valuable,' (c) 'time is precious,' and (d) 'don't waste time.'" Consequently, it is not clear that part-time students carrying 4 to 6 credit hour and working 30 or more hours per week would become more strongly committed to the community college if more opportunities were provided for social and academic integration.

One variable which may improve the efficiency of "requirement meeters" and facilitate their commitment to the intention to stay is that of planning. In the area of weight loss, for example, Schifter and Ajzen (1985) found that planning played a crucial role in the intention-behavior relation. That is, the development of a plan correlated significantly with the amount of weight lost. In addition, planning interacted with intention to predict weight loss--as planning increased, the intention-weight loss relation increased.

With respect to institutional turnover, student planning may be facilitated through academic advisement. The questionnaire item pertaining to academic advisement and the open-ended probe indicate that students feel that the advising process at Phoenix College should be improved. (From an efficiency perspective, "good" advisement would insure that students were enrolling in

courses that they needed or wanted and that these courses were available at convenient times.) The correlations between perceptions of the adequacy of academic advisement and investment, commitment to the intention to stay, and continuation status were not substantial (see Table 8, columns 3 and 4). However, among students with semester GPAs above 1.99 who intend to stay, perceived adequacy of advisement was correlated .33 with college satisfaction (see survey items No. 56-58). College satisfaction, in turn, was significantly related to commitment to the intent to stay (r = .33). Therefore, we believe that improving the advising process may bolster commitment to the intent to stay via college satisfaction among part-time students intending to stay.

One intervention that may prove useful is to identify students who intend to stay and have them develop enrollment plans in March (prior to early registration for the fall). If these enrollment plans were reviewed and returned with feedback to the students, college satisfaction and commitment to the intent to stay might be strengthened and, in turn, the institutional turnover rate reduced. We recommend that both weakly and strongly committed students be included in efforts to pilot test this intervention so that the institution can assess whether the benefits of the plan vary with strength of commitment to the intention to stay.

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Table 1

Description of Variables in the Mesa Community College Study

Variable	Classification According to Bean and Metzner's Model
Age	Background and defining variable
Gender	Background and defining variable
Credit load	Background and defining variable
Hours spent working	Environmental variable
Marital Status	Environmental variable
Number of Children	Environmental variable
Number of negative life events	Environmental variable
Hours spent on homework	Academic variable
Spring 1987 semester GPA	Academic outcome
Depression	Psychological outcome
College satisfaction	Psychological outcome
Intent	Intent to leave
Continuation Status	Dropout

Table 2

Cross-Classification of Students by Credit Load, Intent, and Continuation Status

	Low Credit Load Students		High Credit Load Students		All Students	
Intent	Continuation Status		Continuation Status		Continuation Status	
	Turnover	Continue	Turnover	Continue	Turnover	Continue
Leave	26	10	23	1	49	11
Stay	60	134	12	50	72	184
Odds Ratio	5.81		95.83		11.38	

Table 3

Courses Selected for Inclusion in the Phoenix College Study

ARH 100	
ARH 102	
BIO 181	
BIO 182	
CHM 130	
CHM 151	
COM 110	(2)
CPD 102	
ECN 112	(2)
ENG 101	
ENG 102	(2)
ENH 110	
FON 141	(2)
HES 101	
HES 152	
HIS 103	
HIS 104	
MAT 155	(3)
MAT 165	
PHI 101	
PHI 103	
PHY 101	
PHY 112	
PHY 116	
PSY 101	(4)
RDG 101	
SOC 101	(3)
SOC 130	
SOL 101	

TOTAL = 40

Table 4

Univariate Frequency Distributions for Survey Variables Related to Background Variables, Outside Responsibilities, Educational Status, and Affective Reactions to College (N = 426)

Survey Item Number	Variable	Percentage
	BACKGROUND VARIABLES	
28	Age	
	<25	34
	25 - 29	28
	30 - 34	15
	>34	23
29	Gender	
	Female	62
	Male	38
30	Ethnicity	
	White	81
	Hispanic	10
	"Other" Ethnicity	9
60	Family Income	
	$10,000 or less	9
	$10,001 to $20,000	30
	$20,001 to $30,000	24
	$30,001 to $40,000	15
	<$40,000	21
	OUTSIDE RESPONSIBILITIES	
2	Hrs. Working at Paid Job	
	1 - 10 hrs.	1
	11 - 20 hrs.	3
	21 - 31 hrs.	5
	31 - 40 hrs.	49
	>40 hrs.	41
31	Married, Living with Spouse	
	No	64
	Yes	36

32	Number of Children Living with You	
	0	74
	1	13
	2	7
	3	4
	4 or more	<1
33	Age of Youngest Child	
	>1	22
	1-2	17
	3-4	14
	5-6	13
	7+	34
34	Hrs. Spend on Household Tasks	
	0 - 10	60
	11 - 20	32
	21 - 30	6
	> 31	2

EDUCATIONAL STATUS

1	Credit Load	
	1 - 3	25
	4 - 6	45
	7 - 9	22
	10 - 11	8
19	Enrolled at PC Last Semester	
	No	36
	Yes	64
21	Hrs. Spend on Homework	
	0 - 5	43
	6 - 10	38
	11 - 15	12
	16 - 20	4
	>20	2
24	Have a Major	
	No	16
	Yes	83
25	Type of Major	
	Allied Health	21
	Liberal Arts	16
	Occupational	29
	"Other Major	35

26	Have Finances to Go to College	
	Disagree Strongly	8
	Disagree	11
	Neither Disagree Nor Agree	16
	Agree	39
	Agree Strongly	26
27	Easy Commute to College	
	Disagree Strongly	7
	Disagree	12
	Neither Disagree Nor Agree	8
	Agree	42
	Agree Strongly	31
17	Adequate Academic Advisement	
	Disagree Strongly	8
	Disagree	17
	Neither Disagree Nor Agree	32
	Agree	32
	Agree Strongly	11
18	Instructors Give Extra Help if Desired	
	Disagree Strongly	2
	Disagree	7
	Neither Disagree Nor Agree	24
	Agree	42
	Agree Strongly	24
50-52	Goal Priority of College Relative to Family and Work	
	First (Highest)	43
	Second	34
	Third (Lowest)	23

AFFECTIVE REACTIONS TO COLLEGE

53	Loyal toward PC	
	Strongly agree	11
	Agree	29
	Neither Agree nor Disagree	50
	Disagree	6
	Strongly Disagree	5
56-58	Mean College Satisfaction with PC Score	
	(1 - 2.99 = Not at All or a Little)	15
	(3 - 3.99 = Moderately)	43
	(4 - 5 = A Lot or Greatly)	42

Table 5

Univariate Frequency Distributions for Variables use in Testing the Model of Unintended Turnover (N = 426)

Variable	Values	Percentage
Attitude	4 = Extremely Desirable	18
	3 = Very Desirable	17
	2 = Moderately Desirable	21
	1 = Slightly Desirable	14
	0 = Neutral	18
	-1 = Slightly Undesirable	6
	-2 = Moderately Undesirable	4
	-3 = Very Undesirable	1
	-4 = Extremely Undesirable	2
Subjective Norm	4 = Extremely Positive	11
	3 = Very Positive	14
	2 = Moderately Positive	23
	1 = Slightly Positive	17
	0 = Neutral	24
	-1 = Slightly Negative	6
	-2 = Moderately Negative	2
	-3 = Very Negative	1
	-4 = Extremely Negative	1
Satisfaction	(3 - 4 = Extremely Positive)	16
	(2 - 2.99 = Very Positive)	25
	(1 - 1.99 = Moderately Positive)	30
	(0 - .99 = Slightly Positive)	20
	(< 0 = Negative)	8
Investment	(1 - 2 = Almost Nothing or a Little)	6
	(2.1 - 3.5 = Moderate)	57
	(3.6 - 5 = A Lot or Great)	37
Cross-Impact	(1 - 2 = Negative)	4
	(2.1 - 3.5 = Neutral)	72
	(3.6 - 5 = Positive)	24
Alternative Value	(1 - 2 = Low	6
	(2.1 - 3.5 = Moderate)	57
	(3.6 - 5 = High)	37
Intend to Enroll Next Fall	Leave	18
	Stay	82

Commitment to Intention to Stay*	Very Weak	2
	Weak	4
	Neither Weak nor Strong	12
	Strong	36
	Very Strong	46
Spring 1989 GPA at PC	0 - 1.99	11
	2 - 2.99	23
	3 - 4	66
Fall 1989 Enrollment at PC	Turnover	38
	Continue	62

*Asked only if intention was to stay.

Table 14

Chi Square and Significance Values Associated with Stepwise Logistic Regression Model of Commitment to the Intention to Stay (N = 309)

Predictor	Decrease in Chi Square if Entered	Increase in Chi Square if Removed	df	p-level
Attitude		46.12	1	.000
Subjective Norm		6.80	1	.01
Satisfaction	1.06		1	.30
Investment	2.44		1	.12
Alternative Value	3.43		1	.06

Table 15

Chi Square and Significance Values Associated with Stepwise Logistic Regression Model of Continuation Status (N = 309)

Predictor	Decrease in Chi Square if Entered	Increase in Chi Square if Removed	df	p-level
Commitment to Intent to Stay		18.29	1	.000
Attitude	.70		1	.40
Subjective Norm	.23		1	.63
Satisfaction	.17		1	.68
Investment		6.71	1	.001
Alternative Value	1.13		1	.28

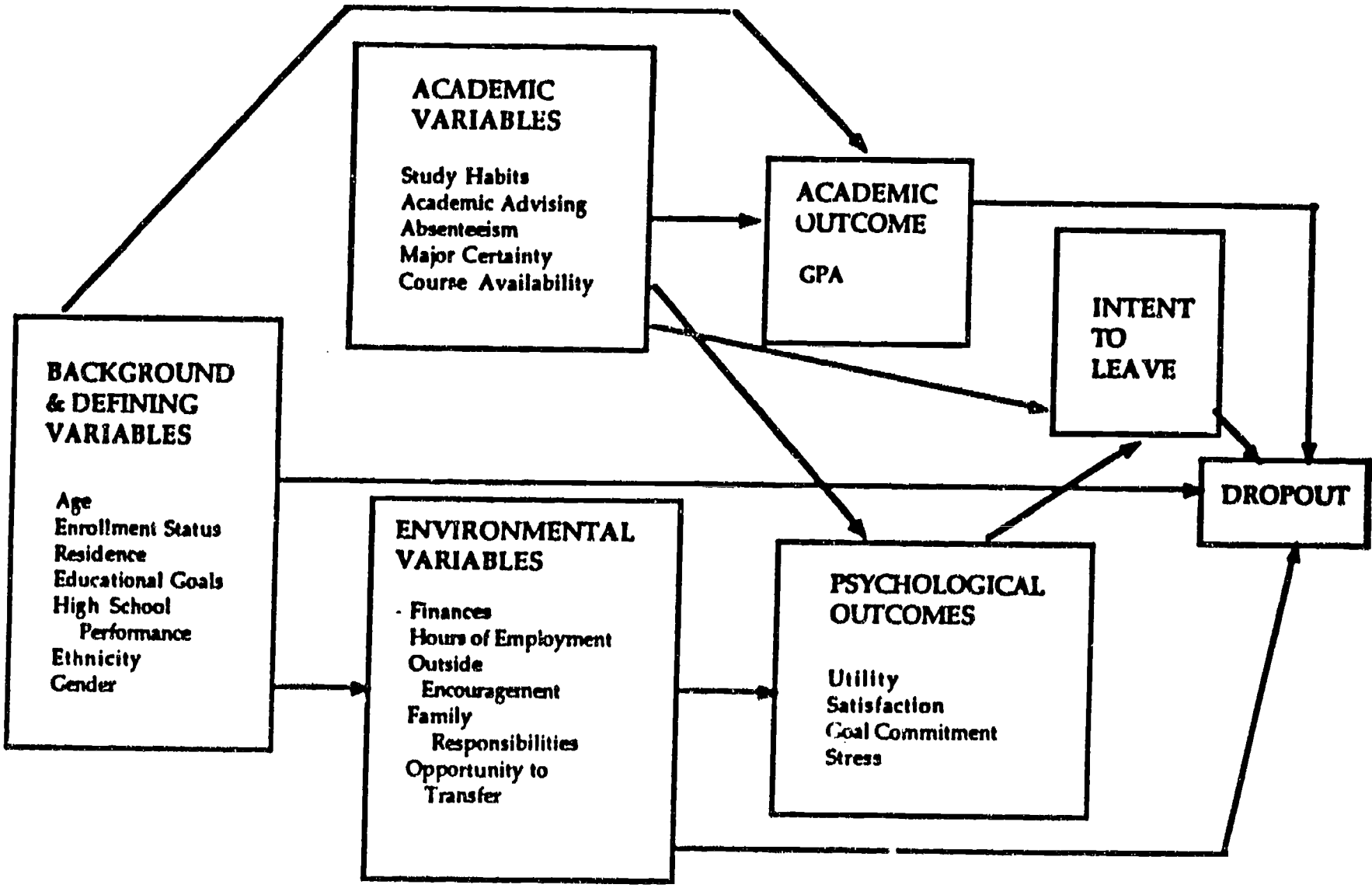

Figure 1. Bean and Metzner's Model of Nontraditional Student Attrition.

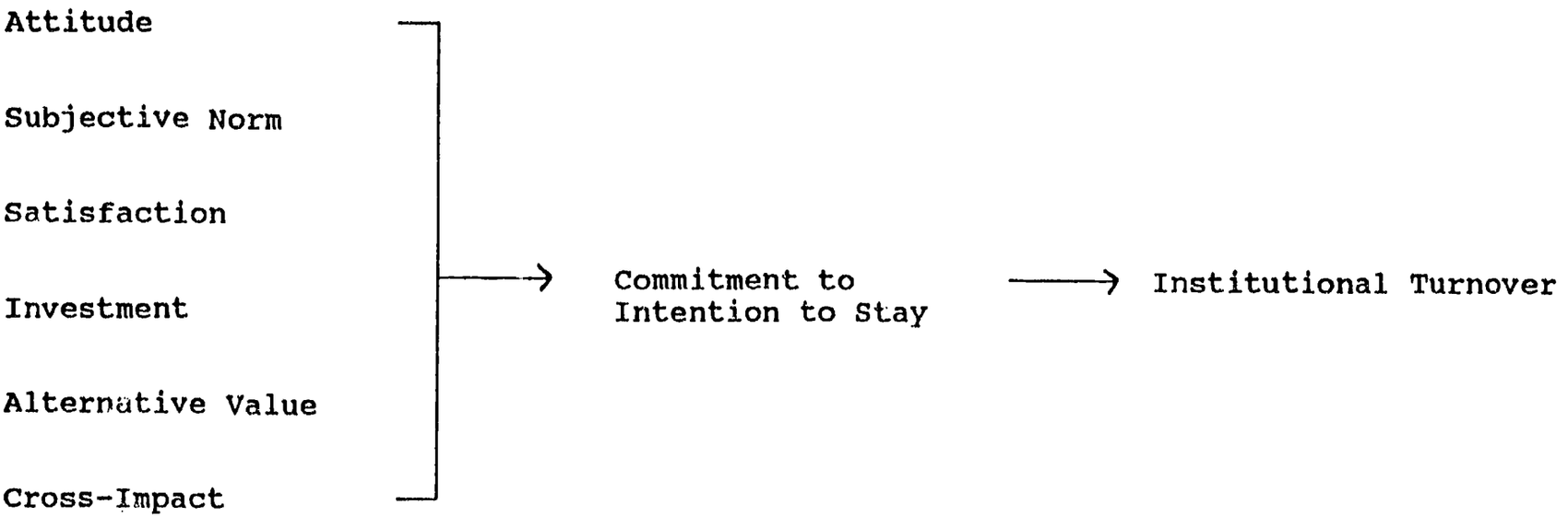

Figure 2. Hypothesized Model of Institutional Turnover Among Students Intending to Stay.

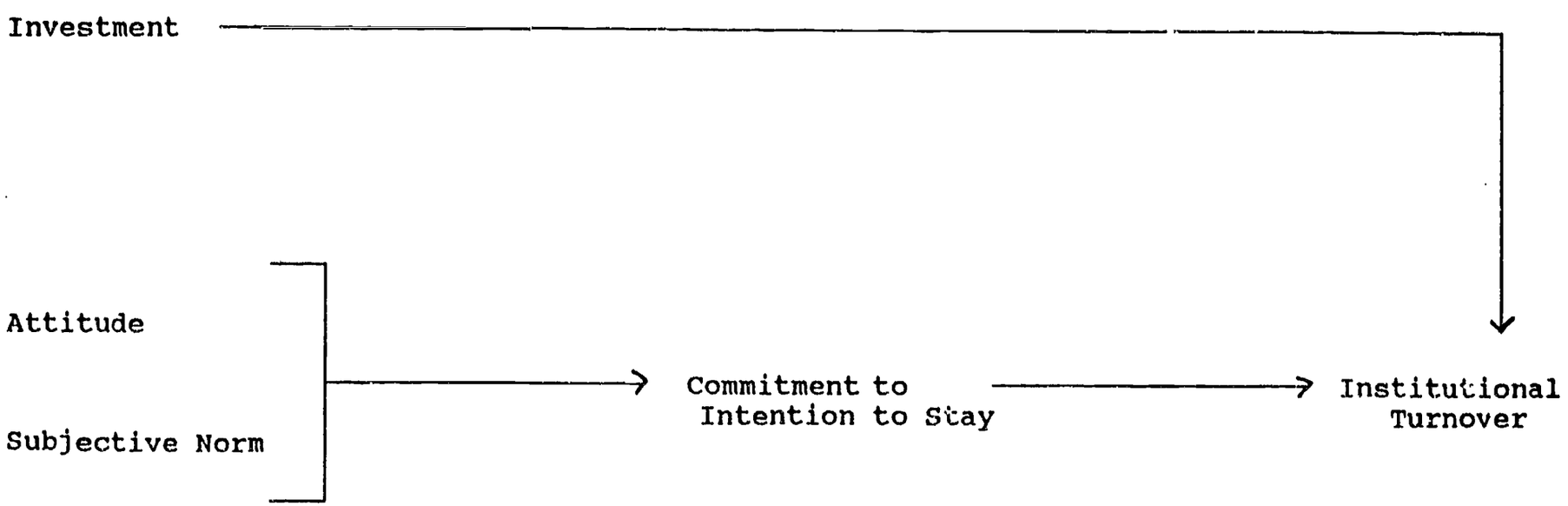

Figure 3. Empirically Generated Model of Institutional Turnover Among Students Intending to Stay with Semester GPAs Above 1.99.

Table 6

Univariate Frequency Distribution for College Plans Among Students Intending to Leave (N = 78)

College Plans	Percentage
Enroll at Another Community College	25
Enroll at a Technical College	5
Enroll at ASU*	36
Enroll at Another 4-year College or University	24
Not Enroll at any College	10

*Of these 28 students, 39 percent completed the fall 1989 semester at ASU.

Table 7

Obstacles to Staying at Phoenix College (N = 229)

SCHOOL-RELATED OBSTACLES	
Classes	**Frequency**
Class Offerings	39
Scheduling	40
Lack of Honors Program	4
Not Transferable to 4-Year Institution	16
Personnel	
Instructors	16
Advisement	20
Support Staff	8
Facilities	
Bookstore - Hours	1
Parking	8
Lighting	2
Library	1
Location	4
Buildings	1
"Other"	
Failing Current Classes	3
Graduating	5
Acceptance to a Program	2

NON-SCHOOL-RELATED OBSTACLES	
Work	
Time/Scheduling	23
Change in Career	3
Family	
Neglect	17

Financial	
Lack of Money	36
Personal	
Moving	7
Burnout	6
Personal Decision	4

Note: Some students mentioned more than one obstacle.

Table 8

Correlates of Intent, Commitment to Intent, and Continuation Status

Correlate	Total Sample Intent	Total Sample CS*	Intent = Stay C Intent**	Intent = Stay CS
BACKGROUND VARIABLES				
Age	.08	.02	.05	-.03
Gender	-.06	-.06	-.01	-.05
White vs. All Others	-.10	-.05	.03	.05
Hispanic vs. All Others	.10	.01	.00	-.07
Family Income	-.01	.03	.01	.06
OUTSIDE RESPONSIBILITIES				
Hrs. working at paid job	.13	.07	.08	.02
Married	.05	-.05	.07	-.05
Number of children	.04	.01	.08	.00
Age of youngest child	.26	.12	.09	.00
Hrs. spent on household tasks	.06	-.02	.07	-.01
EDUCATIONAL STATUS				
Credit load	.02	.10	.10	.12
Enrolled at PC in fall	.11	.21	.20	.18
Hrs. spent on homework	.01	.09	.10	.10
Have a major	-.04	.07	.05	.07
Allied Health vs. all others	-.01	-.07	-.01	-.11
Liberal Arts vs. all others	-.04	-.04	.05	-.03
Occupational vs. all others	.04	.09	-.02	.09
Finances	.09	.09	.12	.06
Commute	.02	.01	.19	.04
Academic advisement	-.03	-.02	.14	.01
Extra help from instructors	-.02	-.09	.14	-.02
College #1 goal priority	-.11	.00	.12	.06
AFFECTIVE REACTIONS				
College Satisfaction	.07	.08	.38	.09
Loyalty	.18	.10	.27	.08
ACADEMIC PERFORMANCE				
Semester GPA	-.05	.14	.09	.24

*CS = Continuation status

**C Intent = Commitment to intent to stay

Table 9

Correlation Matrix for Variables in Model of Turnover: Total Sample

	Attitude	Subjective Norm	Satisfaction	Investment	Alternative Value	Cross-Impact	Intent	Semester GPA	CS
Attitude	X	.45	.42	.19	-.36	.09	.55	.05	.35
Subjective Norm		X	.39	.14	-.31	.14	.32	-.05	.18
Satisfaction			X	.24	-.26	.25	.31	-.05	.21
Investment				X	-.06	.10	.14	.01	.23
Alternative Value					X	-.04	-.35	.04	-.12
Cross-Impact						X	.03	-.08	.03
Intent							X	-.05	.41
Semester GPA								X	.14
CS									X

Table 10

Correlation Matrix for Variables in Model of Turnover: Intend to Stay Subsample

	Attitude	Subjective Norm	Satisfaction	Investment	Alternative Value	Cross-Impact	CI	Semester GPA	CS
Attitude	X	.30	.29	.15	-.15	.05	.43	.15	.20
Subjective Norm		X	.30	.12	-.15	14	.22	-.04	.05
Satisfaction			X	.20	-.15	.21	.23	-.06	.10
Investment				X	-.06	.07	.22	.03	.18
Alternative Value					X	-.03	-.18	.04	.04
Cross-Impact						X	.03	-.07	.06
Intent							X	.13	.29
Semester GPA								X	.24
CS									X

Table 11

Cross-Classification of Intent by Continuation Status: Total Sample

Continuation Status	Intent		
	Leave	Stay	
Turnover	62	99	161
Continue	16	249	265
	78	348	426

Table 12

Statistics from Three Samples: Intent by Continuation Status Cross-Classification

Statistic	Mesa CC > 12 Credit Hrs.	Mesa CC 1 - 12 Credit Hrs.	Phoenix C 1 - 11 Credit Hrs.
Conditional Probability of Staying Given Intent Equal Leave	.04	.28	.21
Conditional Probability of Leaving Given Intent Equal Stay	.19	.31	.28
Percentage of Turnover That Was Unintended	.34	.70	.61
Odds Ratio	95.83	5.81	9.75

Table 13

Cross-Classification of Commitment to Intent to Stay by Continuation Status: Intend to Stay Subsample

Continuation Status	Strength of Commitment to Intention to Stay		
	Weak	Strong	
Turnover	35	64	99
Continue	27	222	249
	62	286	348

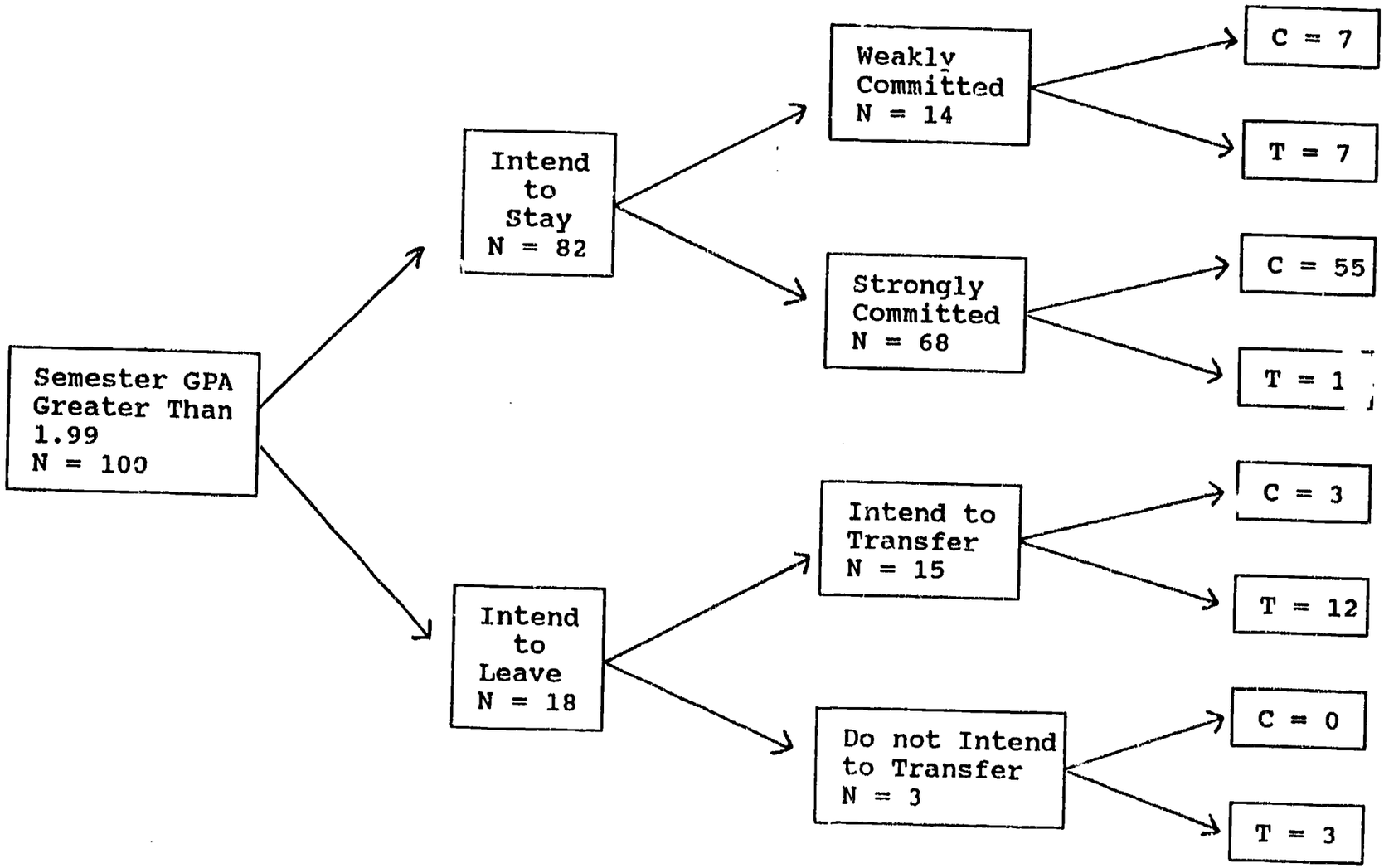

Figure 4. Associations Between Intentions and Institutional Continuation Among Part-Time Students.

APPENDIX

SURVEY OF PART-TIME, WORKING STUDENTS AT PHOENIX COLLEGE

Now we would like to ask you some questions about your educational status.

19. Were you enrolled as a student at PC last semester?

(a) yes
(b) no

20. Were you enrolled as a student at another college last semester?

(a) yes
(b) no

21. During a typical week, how many hours do you spend (out of class) on your courses at PC?

(a) 0-5 hours
(b) 6-10 hours
(c) 11-15 hours
(d) 16-20 hours
(e) 21 or more hours

22. How many credit hours are you currently carrying at other colleges and universities?

(a) 0
(b) 1-3 credit hours
(c) 4-6 credit hours
(d) 7-9 credit hours
(e) 10 or more credit hours

23. When are you currently attending classes at PC?

(a) evening only
(b) day and evening

24. Do you know what you intend to major in?

(a) yes [Please answer question 25.]
(b) no [Please skip question 25.]

25. In what area do you intend to major?

(a) allied health area
(b) liberal arts area
(c) occupational area
(d) "other" area

For the next two questions, use the following scale:

(a) disagree strongly
(b) disagree
(c) neither disagree nor agree
(d) agree
(e) agree strongly

26. I already have or will be able to obtain the finances to return to PC in the fall.

27. It is an easy commute for me to get to and from PC.

Now we would like to ask you some questions about your background.

28. What is your age?

(a) 19 years old or younger
(b) 20-24 years old
(c) 25-29 years old
(d) 30-34 years old
(e) 35+ years old

29. What is your gender?

(a) female
(b) male

30. With which ethnic group do you identify?

(a) White
(b) Black
(c) Hispanic
(d) Indian (Native American)
(e) Other

31. Are you currently married, living with your spouse?

(a) yes
(b) no

32. How many children and/or stepchildren do you have living with you on a full-time basis?

(a) 0 [Please skip to question 34.]
(b) 1 [Please answer the next question.]
(c) 2 [Please answer the next question.]
(d) 3 [Please answer the next question.]
(e) 4+ [Please answer the next question.]

33. How old is the youngest child who lives with you on a full-time basis?

(a) less than 1 year old
(b) 1-2 years old
(c) 3-4 years old
(d) 5 6 years old
(e) 7 years old or older

34. During a typical week, how many hours do you spend on household tasks?

(a) 0-10 hours
(b) 11-20 hours
(c) 21-30 hours
(d) 31-40 hours
(e) more than 40 hours

The next 18 questions pertain to your personal goals. In this section, you will be asked to tell us about your college, work, and family goals. We are interested in your medium range goals as opposed to your short or long term goals. Medium range goals are goals you have had for the past few months that you are currently trying to attain. Examples of medium range goals include getting a good grade in a course, obtaining a pay raise at work, and helping your baby learn to walk.

In responding to questions 35-37, use the following scale:

(a) almost none at all
(b) a little
(c) a moderate amount
(d) a lot
(e) a very great amount

College Medium Range Goals

Please write in the space provided on your work sheet the current medium-range college-related goal that is most important to you.

Keep your most important current medium-range college-related goal in mind in answering the next 3 questions.

35. How much control do you feel over whether you will attain this college-related goal?

36. How much strain do you feel over whether you will attain this college-related goal?

37. How involved do you feel when you work on this college-related goal?

Please continue to use the following scale in responding to questions 38-40:

(a) almost none at all
(b) a little
(c) a moderate amount
(d) a lot
(e) a very great amount

Work Medium Range Goals

Please write in the space provided on your work sheet the current medium-range work-related goal that is most important to you.

Keep your most important current medium-range work-related goal in mind in answering the next 3 questions.

38. How much control do you feel over whether you will attain this work-related goal?

39. How much strain do you feel over whether you will attain this work-related goal?

40. How involved do you feel when you work on this work-related goal?

Please continue to use the following scale in responding to questions 41-43:

(a) almost none at all
(b) a little
(c) a moderate amount
(d) a lot
(e) a very great amount

Family Medium Range Goals

Please write in the space provided on your work sheet the current medium-range family-related goal that is most important to you.

Keep your most important current medium-range family-related goal in mind in answering the next 3 questions.

41. How much control do you feel over whether you will attain this family-related goal?

42. How much strain do you feel over whether you will attain this family-related goal?

43. How involved do you feel when you work on this family-related goal?

For questions 44-49, please use the following scale:

(a) very negative
(b) negative
(c) neither negative nor positive
(d) positive
(e) very positive

44. How has working on your most important college-related goal impacted on the progress you are making toward attaining your most important work-related goal?

45. How has working on your most important college-related goal impacted on the progress you are making toward attaining your most important family-related goal?

46. How has working on your most important work-related goal impacted on the progress you are making toward attaining your most important college-related goal?

47. How has working on your most important work-related goal impacted on the progress you are making toward attaining your most important family-related goal?

48. How has working on your most important family-related goal impacted on the progress you are making toward attaining your most important college-related goal?

49. How has working on your most important family-related goal impacted on the progress you are making toward attaining your most important work-related goal?

We are interested in the priority you assign to your most important college, work, and family goals. Use the letters "a," "b," and "c" once and only once in answering questions 50-52.

50. Of the three goals you listed on your work sheet, which goal is the most important to you?

(a) the college goal
(b) the work goal
(c) the family goal

51. Of the three goals you listed on your work sheet, which goal is the second most important to you?

(a) the college goal
(b) the work goal
(c) the family goal

52. Of the three goals you listed on your work sheet, which goal is the least important to you?

(a) the college goal
(b) the work goal
(c) the family goal

In answering questions 53-55, use the following scale:

(a) strongly agree
(b) agree
(c) neither agree nor disagree
(d) disagree
(e) strongly disagree

53. I feel loyal to PC.

54. Most people who are important to me think I should not enroll at PC in the fall.

55. I have control over the decision not to enroll at PC in the fall.

In answering questions 56-58, use the following scale:

(a) not at all
(b) a little
(c) a moderate amount
(d) a lot
(e) a very great amount

56. How much do you like being a student at PC?

57. How pleasant do you find it to be a student at PC?

58. How much do you enjoy being a student at PC?

59. How satisfied are you with your life as a whole these days?

(a) very satisfied
(b) satisfied
(c) neither satisfied nor dissatisfied
(d) dissatisfied
(e) very dissatisfied

60. What was your total family income for last year?

(a) $10,000 or less
(b) $10,001 - $20,000
(c) $20,001 - $30,000
(d) $30,001 - $40,000
(e) $40,001 or more

61. How desirable is it for you <u>not</u> to enroll at PC in the fall?

(a) very desirable
(b) desirable
(c) neither desirable nor undesirable
(d) undesirable
(e) very undesirable

We would like to ask you four questions about the disadvantages of enrolling at PC in the fall. For questions 62-65 use the following scale:

(a) not at all
(b) a little
(c) a moderate amount
(d) a lot
(e) a very great amount

62. Will it be harmful for your financial situation if you enroll at PC in the fall?

63. Will it be harmful for your self-esteem if you enroll at PC in the fall?

64. Will it be harmful for your career if you enroll at PC in the fall?

65. Will it be harmful for your family if you enroll at PC in the fall?

Finally, we are interested in whether you intend to enroll at Phoenix College (PC) this fall.

66. I intend:

(a) not to enroll at PC next fall. [Please skip to question 69.]
(b) to enroll at PC next fall. [Please answer questions 67 and 68.]

67. How strong is your commitment to your decision to enroll at PC next fall?

(a) very weak
(b) weak
(c) neither weak nor strong
(d) strong
(e) very strong

68. How likely are you to carry out your decision to enroll at PC next fall?

(a) very unlikely
(b) unlikely
(c) neither unlikely nor likely
(d) likely
(e) very likely

[If you answered question 68, please skip question 69 and 70 and go directly to the last page marked comments.]

69. What do you intend to do next fall?

(a) I intend to enroll at another community college.
(b) I intend to enroll at a technical school.
(c) I intend to enroll at ASU.
(d) I intend to enroll at a 4-year college or university other than ASU.
(e) I don't intend to be a college student.

70. Will you receive a degree or certificate from PC before the fall 1989 semester?

(a) yes
(b) no

[Please go to the last page marked comments.]

COMMENTS

To help future students we would like to know what obstacles you currently, or potentially, face that may keep you from enrolling next fall at PC. What can PC do in the future to assist students with these obstacles? Please record your comments on the other side of your work sheet.

After you have completed your comments, please check to make sure that you have answered each of the 70 questions and that your entries are dark. Also verify that you have entered your student identification number and blackened in the appropriate circles and that your name does not appear on the IBM answer sheet. Then please turn in your: (1) IBM answer sheet; (2) work sheet; (3) survey booklet; and (4) pencil. Thank you for your cooperation in participating in this study.

SURVEY OF PART-TIME, WORKING

STUDENTS AT PHOENIX COLLEGE

The purpose of this survey is to identify factors that contribute to whether Phoenix College students who work and attend college part-time maintain continuous enrollment. We intend to use our findings to help future students at PC maintain continuous enrollment.

We define part-time students as students who are currently enrolled at Phoenix College for fewer than 12 credit hours. We define working as currently having at least one paid (part-time or full-time) job. Only part-time students who are working should complete this survey. If you are not working at all for pay or if you are taking 12 or more credits at Phoenix College, then please DO NOT complete this survey. Also if you have already completed this survey in another class, DO NOT fill it out again.

So that we can determine whether you enroll for the Fall 1989 semester at Phoenix College, we need to know your student identification (or Social Security) number. Turn to Side Two of the answer sheet and rotate the sheet so that the box containing space for your student ID appears on the lower left-hand side of the sheet. Please enter your student ID in the space provided under the heading "ID Number." When you are done, blacken in the numbers that correspond to your student ID. For example, if your student ID begins with a zero, you would blacken in the zero in the first column. Proceed in this way to blacken in the other 8 numbers in your student ID. Then turn back to Side One of the answer sheet and rotate it so that the words, Side One, appear in the upper right-hand corner.

Please mark your answers on the IBM answer sheet. Read the directions for marking answers. Use the letters appearing above the circles and ignore the "T's" and "F's" appearing inside the circles. You should work down the top half of the first column of your IBM Answer Sheet in answering questions 1-10, then proceed to the top half of the second column to answer questions 11-20. When you get to question 61, you should go to the bottom half of the first column. Use the pencil we have provided. The survey should take no longer than 30 minutes to complete.

Please answer the questions in order unless you are instructed otherwise. It is important that you be as honest as you can in answering the questionnaire. Access to this information will be limited to the investigators of this study (Professors Okun, Ruehlman, and Karoly of ASU). Information from questionnaires will be reported in such a way that it will not be possible to identify individuals. These measures are taken to protect the confidentiality of your answers.

First, we are interested in how many credit hours you are currently carrying and how many hours you are working. If you are currently enrolled for 6 credit hours at PC you would blacken in the "b" on the IBM answer sheet across from item no. 1. If you are currently enrolled for 10 credit hours at PC you would blacken in the "d" on the IBM answer sheet across from item no. 1.

1. How many credit hours are you currently carrying at PC?

   (a) 1-3 credit hours
   (b) 4-6 credit hours
   (c) 7-9 credit hours
   (d) 10-11 credit hours

2. During a typical week, how many hours do you work on your paid job(s)?

   (a) 1-10 hours
   (b) 11-20 hours
   (c) 21-30 hours
   (d) 31-40 hours
   (e) more than 40 hours

Now we would like to ask you some questions about the advantages of enrolling at PC in the fall. For questions 3-6, use the following scale:

   (a) not at all
   (b) a little
   (c) a moderate amount
   (d) a lot
   (e) a very great amount

3. Will it be beneficial for your financial situation if you enroll at PC in the fall?

4. Will it be beneficial for your self-esteem if you enroll at PC in the fall?

5. Will it be beneficial for your career if you enroll at PC in the fall?

6. Will it be beneficial for your family if you enroll at PC in the fall?

For question 7-10, use the following scale:

(a) almost nothing at all
(b) a little
(c) a moderate amount
(d) a lot
(e) a very great amount

How much have you invested in attending PC in terms of:

7. money spent?

8. time allocated?

9. coursework completed?

10. emotional energy?

11. How desirable is it for you to enroll at PC in the fall?

(a) very desirable
(b) desirable
(c) neither desirable nor undesirable
(d) undesirable
(e) very undesirable

12. How <u>interesting</u> do you think it would be for you to attend a different college in the fall instead of PCC?

(a) very interesting
(b) interesting
(c) neither interesting nor boring
(d) boring
(e) very boring

13. How <u>hard</u> do you think it would be for you to attend a different college in the fall instead of PCC?

(a) very hard
(b) hard
(c) neither hard nor easy
(d) easy
(e) very easy

14. How <u>useful</u> do you think it would be for you to attend a different college in the fall instead of PCC?

(a) very useful
(b) useful
(c) neither useful nor useless
(d) useless
(e) very useless

For Questions 15-18, use the following scale:

(a) strongly agree
(b) agree
(c) neither agree nor disagree
(d) disagree
(e) strongly disagree

15. Most people who are important to me think that I should enroll at PC in the fall.

16. I have control over the decision to enroll at PC in the fall.

17. I have adequate academic advisement at PC.

18. Instructors at PC give me extra help to do better in their classes, if I want it.