To develop a comprehensive picture of successful Arizona community college transfer students and to determine differences between two-year college transfer, four-year college transfer, and native university students, a study was conducted of the characteristics, goals, and outcomes of students graduating with a baccalaureate degree from four major Arizona universities.

Questionnaires were mailed to 930 students who received a baccalaureate degree in spring 1990, and usable responses were received from 519 graduates of whom 176 were identified as community college transfers, 11 as four-year college transfers, and 332 as native university students. Analyses of the responses revealed the following: (1) for community college transfer students, common objectives for attending their college were to take a program to prepare for transfer (25.1%), earn a transfer degree (24.6%), and earn a bachelor's degree (16.4%); (2) 164 of the community college transfer students were "very satisfied" with their transfer education, with females giving slightly higher ratings than males; (3) the most frequently cited factors for choosing a transfer institution were location (88%) and cost efficiency (82%), while factors in baccalaureate university selection included location (94%) and academic reputation (93%); and (4) mean final semester grade point averages were 3.31 for two-year college transfers, 3.23 for native students, and 3.06 for four-year college transfers. Detailed results, correspondence, and the survey instrument are appended. (MAB)
THE ARIZONA STUDENT SUCCESS PROJECT

A Report to the ARIZONA STATE COMMUNITY COLLEGE BOARD
Summer, 1993

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ARIZONA STUDENT SUCCESS

A Comparative Study of Community College Transfer, Four-Year College Transfer, and Native University Students

A Final Report to the State, Its Leadership, and Its Citizens

Quentin J. Bogart, Ph.D., Senior Researcher
M. J. Price, Ed.D., Principal Researcher
Arizona State University

SEPTEMBER, 1993
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Executive Summary

The Director of the Arizona Community College Board in late August 1990 commissioned a study to compare the state's community college transfers (CC Transfers), four-year transfers, and native students. The study population selected was the Spring, 1990, baccalaureate graduating classes at Arizona State University (ASU), Grand Canyon University (GCU), Northern Arizona University (NAU), and the University of Arizona (U of A). A mail survey questionnaire was sent to a sample of 930, from which 519 usable responses were received. The number of graduates responding from each university was: ASU (215), GCU (32), NAU (93), and U of A (179).

The participants' primary objectives for attending their transfer college were: (1) to complete a transfer program and (2) to earn a degree. The ASU participant transfer group indicated having transfer as a principal objective, while to earn a degree was the goal of transfer participants from GCU, NAU and UofA. Females indicated that they attended the college to earn a degree while males wanted to pick-up a few courses to transfer.

The overall primary objective for attending their baccalaureate university was reported by participants as being to earn a baccalaureate degree (71%). A similar response was reported by classification groups, by university, by gender, and by ethnic group.

The highest response percentages regarding the "level of educational expectation" at the time Transfer participants entered their primary college were: to finish college (60%), to obtain two or more years of college (13%), and enter/finish graduate/professional school (12%).

When asked to identify the highest level of education they expected to attain when entering the baccalaureate university, participants indicated that their goal was to earn a baccalaureate degree (71%). The same was true for all comparison groups with the exception of Native Americans who had a higher percentage of participants planning to attend graduate school.

The participating graduates were invited to express their satisfaction with the transfer college preparation they had received in relation to having taken the right courses, sufficient preparation for the rigor of papers, exams and readings, and the general knowledge and skills required for university work. The overall satisfaction level was 86%. Females were slightly more satisfied with their preparation than were males. Blacks and Native Americans were the most satisfied with Asians being the least satisfied.

When asked about encouragement by the transfer college during their enrollment there, 69% of the transfer participants believed that the community college had encouraged them in
positive ways as they prepared to transfer. Many reported they had become more interested in learning new things as a result of the college's encouragement (81%). A higher percentage of males reported that they were encouraged to pursue additional education (73% versus 67%).

Information was sought about their use of transfer college resources relating to transfer with 83% of that group indicating they were help with information about prerequisite course requirements. Eighty-four per cent used printed information.

The Associate degree (AA) was held by 17% of the participants, 8% completing it for transfer purposes. More females completed AA's, and the percentage of AA's overall was correlated with the increase of age. Sixty-one per cent felt that their AA had been of benefit to them.

The most frequent reason given by participant when selecting a transfer college was location (88%), this factor was followed by cost efficiency (82%). Location was also frequently selected by comparison groups, by university, by gender, and by ethnic group.

The baccalaureate university was selected by location (94%) and reputation of academics at university (93%). The classification group also selected reputation of academics at university, as well as the ability to live at home. When analyzed by university group, location was reported as playing the most important role in making a selection with the exception of those responding from GCU who indicated location as a second place reason for selection.

Seventy per cent of the transfer participants planned their courses to fit a specific university's requirements. The highest per cent of those transfers who had planned their courses to meet the baccalaureate university transfer requirements (79%) were in the ASU group.

It was reported by 28% of the transfer graduates that they had taken courses which they thought would transfer and which later were not accepted by the baccalaureate university. Conversely, 10% had courses which they thought would not transfer but which did in fact transfer.

The C.C. Transfers performed more than comparably with the other classification group members when grade point averages (GPA) were considered. The final semester GPAs were CC Transfers (3.31), Natives (3.23), and four-year college transfers (3.06). C.C. Transfers who transferred between 24 and 44 credits from their primary transfer college had a slightly higher GPAs than those transferring 45 or more credits (3.40 versus 3.27). The GPAs for the university
groups were: GCU (3.33), U of A (3.31), NAU (3.22), and ASU (3.20). The GPA for females was 3.28, and for males it was 3.20.

Eighty-three per cent of the natives had future schooling plans for attending graduate/professional school. C.C. Transfers planned to attend graduate/professional school (81%), however, 5% of this group expected to attend a 2-year college.

Selected demographics for this sample of Arizona university graduates include:

<table>
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<tr>
<th>Gender/Sex</th>
<th>308 Females (59%) and 202 Males (39%)</th>
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<tr>
<td>Age</td>
<td>Participants ranged in age from 16 to 63, with 70% being between the ages of 20 and 24. The mean ages for the classification groups were: CC Transfers (28.7), four-year transfers (24.1) and natives (22.9).</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Asians (22), Blacks (6), Hispanics (34), Native Americans (7), and Whites (441).</td>
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The results of this study reinforce much of the contemporary research on community college transfer student performance which indicates that once the "shock" of the transfer activity is over, those students who transfer from the community college compete favorably when compared with native university students. In fact, the Student Success study seems to substantiate the notion that not only do community college transfers compete with native university students, but by the end of their final semesters they tend to outperform their native student colleagues as well. These data when considered in combination with the overall strong satisfaction ratings of transfers with the community college experience, provides substantial evidence that Arizona's community colleges are, indeed, fulfilling the mission of providing a quality experience for those students whose ultimate goal is the achievement of the bachelor's degree.
INTRODUCTION

This report on Arizona Student Success was originally commissioned by the executive staff of the State Board of Directors for Community Colleges of Arizona in August/September, 1990. The study was triggered by a transfer research project conducted in the state of Washington which was widely publicized and circulated in community college circles. The document before you focuses on the analyses of data gathered from community college transfer, university transfer, and Native University Students who graduated from four selected universities in Arizona.

Importance of the Study

Ever since Dorothy Knoll's and Leland Medsker's classic study, From Junior to Senior College, focusing on experiences and progress of two-year college students transferring to four-year colleges and universities was published in 1965, educators and other leaders have had more than a casual interest in the transfer process and its effect on students. As a result, individual state agencies, universities, and affiliated groups have been following the transfer issue--many conducting their own special research on the topic.

Some state legislatures have even developed laws aimed at easing the transfer process with the hope of eliminating many of the problems associated with this issue. Florida is perhaps the best illustration of such legislation.

Student success has become a special national and state preoccupation in the past decade. However, A Nation at Risk (1983), the widely publicized report about the condition of public education, launched a new round of criticism and concern. As a result, Arizona legislators, business leaders, and others representing the general population have joined the movement to examine and improve education at all levels. Starting with "A Performance Audit of the State Board of Directors for Community Colleges" (Az. Auditor General's Office, June, 1987) and followed by an array of published and other research data including: Arizona: the State and Its Educational System (Harold L. Hodgkinson, Institute of Educational Leadership, 1988), No Challenge Too Large, No Step to Small (ABOR's Task Force on Excellence, Efficiency, and Competitiveness, 1988), Toward the Year 2000 (ABOR's Strategic Plan, 1990), and the Report of Governor J. Fife Symington's Task Force on Educational Reform (1991), Arizonans have been deluged by studies and plans aimed at updating them on the condition of education and on plans for improving its future. (A listing of these and other sources on the topic of transfer and student success may be found in the review of the literature and the reference section of the dissertation, Arizona Successful Transfer and Native Students: A Comparison of Characteristics, Pathways, and Outcomes, by Dr. M.J. Price on file in ASU's Hayden Library and with University...
Continued interest by Arizona's political and educational leaders in community college student success—particularly transfer student success—caused this study to be commissioned.

Support for the Study

An appropriation of $8,000 to the State Community College Board from the 40th Arizona Legislature provided initial funding for this study. Those funds were exhausted early in 1991. From that point to this, the study has been supported from regular state board budgetary sources for such expenditures as equipment rental, needed supplies, and underwriting a modest hourly charge by an ASU technician working on her own time to input the survey data into the SPSS-PC and MAC statistical programs. Other ASU specialists from the faculty and student microcomputer consulting services as well as the office of institutional studies, have provided advice and labor on a gratis basis. Once the original research stipend was depleted, the principal researcher—for the most part—has donated her time. The senior researcher has contributed all of his time and other costs associated with the effort since the beginning of the project. Because resources supporting the study have been limited, the ability of the researchers to retain technical services when required has caused a number of lengthy delays. The research team is indebted to the Executive Director of SBDCCA and his staff and to various technical support offices at ASU for their assistance, patience, and understanding.

Purpose of the Study

The purpose of this study was to develop a comprehensive picture of the successful Arizona community college transfer student. In addition, the researchers hoped to determine if important differences existed among selected characteristics of successful Arizona community college transfer students, Arizona four-year college transfer students, and Arizona native university students earning baccalaureate degrees from Arizona universities.

Definition of Key Terms

Three key terms which require special definition for the purposes of this research are "Transfer Student", "Student Success", and "Primary Transfer Institution". A "Transfer Student" was defined as one who transferred at least 24 semester hours of work from his/her primary transfer institution to the university. "Student Success" was defined as the completion and receipt of the bachelor's degree. "Primary Transfer Institution" was defined as the two or four year college at which the "Transfer Student" earned 24 or more semester hours of credit which was taken in transfer by the university from which he/she earned his/her degree.
METHODOLOGY

The study was designed to determine differences among groups of transfer and native students earning bachelor's degrees from four of Arizona's major universities by examining their demographics, related educational factors, and academic outcomes. A general sketch of the Arizona baccalaureate student was developed as well as data on student observations and recommendations about their college experiences.

Developing the Questionnaire

The original idea for Arizona's study of student success, as noted earlier, came from a similar research endeavor conducted by the State of Washington's Board for Community College Education in 1988. The Arizona project was patterned after it. A questionnaire was developed based on Washington's telephone survey. However, because the Washington study was designed as a telephone interview questionnaire which involved only student self-reporting, and the Arizona instrument as a mail-distributed survey with responses matched to each participant's university academic records, the Arizona study represented a considerable modification. The Arizona survey instrument was submitted to a jury of educators and others for suggested changes. It was pilot tested early in 1991 using 30 students from ASU's Fall, 1990 graduating class.

The final version of the questionnaire consisted of two parts—the first section (Part A), to be completed by all participants, which contained 67 items, and the second section (Part B), which consisted of 60 items, designed for responses from two and four year college transfers who transferred at least 24 semester hours of credit from their primary institutions of attendance. The final page of the questionnaire was designed for voluntary subjective comments by each participant. (See Appendix C.)

The Study Sample

The Spring, 1990 graduating classes of Arizona State University, Grand Canyon University, Northern Arizona University, and the University of Arizona formed the basic population from which the random sample of graduates was selected for the study. Prior to the selection of the sample from each institution, officials at Arizona State University, Northern Arizona University, and the University of Arizona supplied selected computer generated demographic and other data for each of their Spring, 1990, graduates. Grand Canyon University data were manually collected by the principal researcher.
Each university, with the exception of Grand Canyon, supplied the research team with a special listing of its institutional computer codes. Using this listing, the researchers placed the institutional codes into categories to enable each participating university to sort and place all members of its Spring, 1990, graduating class into one of three groups: (a) Native University Students, (b) Community College Transfer Students, and (c) Four-year College Transfer Students. With the assistance of the Arizona State University institutional research staff, three sets of random numbers were developed and used by the research team to select the study participants at each of the three state universities. Due to the small number, Grand Canyon University participants were selected using a standard table of random numbers.

University Endorsement

The Executive Director of the State Board of Directors for Community Colleges of Arizona sent letters to the presidents of Arizona State University (ASU), Grand Canyon University (GCU), Northern Arizona University (NAU), and the University of Arizona (U of A), asking them to lend their names to the study. All four chief executives supported the study and signed cover letters to accompany questionnaires mailed to their respective graduates noting the study's importance and endorsing it. (See Appendix B.)

Developing the Basic Data

The researchers worked with members of the professional staff, ASU's Office of Institutional Analysis, as well as a member of the Division of Computing Services at ASU to identify, collect, and organize basic data for use in the study. ASU was used as the primary computer assistance provider because the senior study researcher is a member of its faculty and because the principal researcher, M. J. Price, is a doctoral student at the University. Therefore, ASU was accessible to the research team. Once the basic data format was developed at ASU, similar data were requested from the Registrar's Office, and Computer Services at NAU, from the Registrar and Student Information Services at the U of A, and the Registrar's Office at GCU. (The researchers are especially indebted to all those who assisted in the study from the four universities noted in this report for their friendly assistance and their dedication to the success of the project. The staff members of ASU's Office of Institutional Analysis were especially helpful—in spite of the heavy demand placed on them for their services from other units.)

All three state universities provided important basic data about the participants selected for the study; however, because the data storage and retrieval systems differ greatly among ASU, NAU, and U of A, the researchers encountered a number of major problems in developing a uniform base of information about the research population from each of these three institutions. In
addition, GCU presented a unique situation for data gathering because at the time the initial data for the study were collected, GCU's student records and information were not computerized. Therefore, GCU's information required manual extraction from student files. The researchers were required to do a limited amount of manual manipulation to compile selected student data on the sample groups from NAU and the U of A as well.

**Questionnaire Distribution**

During March, April, and May, 1991, the materials to be used in the study were refined and printed.

A postcard was developed to be sent to the entire student sample telling them of their selection for participation in the study and indicating that they would be receiving questionnaires to complete and return within the next week or two.

Postcards were mailed to 1,000 selected graduates beginning May 23, 1991. Of these, 24 were returned to the researchers as being non-deliverable, while many others were returned with new or corrected addresses. This process allowed the researchers to correct many out-of-date or inaccurate addresses in time for use with the questionnaire mailing.

The initial mailing of 976 questionnaires accompanied by a cover letter signed by the Arizona Community College Board Executive Director and the Principal Researcher, an endorsement letter from the appropriate university president, and a stamped return envelope was mailed beginning on June 6, 1991. Members of the sample group consisted of 391 ASU graduates, 53 GCU graduates, 155 NAU graduates, and 326 U of A graduates. A second postcard was sent on June 24, 1991, to those in the sample who had not responded to the first mailings. These were followed by a second round of questionnaires mailed to non-respondents on July 18, 1991. A third follow-up mailing of questionnaires was made to non-respondents August 16, 1991. No further effort to increase the number and percentage of study respondents was made.

It should be noted that a special premium was offered via a drawing procedure to encourage responses from graduates selected for the study. These premiums were supplied by three of the four universities participating in the study. The senior researcher provided the premium for the fourth participating institution. The premiums included sports blankets from ASU and U of A, a special clock from GCU, and a night's lodging for two in the Inn at NAU. The response code number of the four recipients (three females and one male) were physically
drawn from the participant pool of each university, then the codes were matched with the name and address of the participant. A letter of award was mailed to those selected. With the exception of the certificate providing the night’s lodging at the Inn at NAU, all premiums were personally delivered to the recipient with its receipt acknowledged in writing. The NAU award was mailed to its recipient because he had moved to another state.

Recording, Coding, and Processing the Data

The student data supplied by each of the universities were placed in the ASU mainframe computer using the Wylbur format. Several problems (as noted earlier) were encountered during this step because coding procedures and the data processing format employed varies from university to university. For several reasons, the data secured from the universities by computer diskette required an inordinate amount of time to place in a usable format. This kind of problem reoccurred at many points in the study as data on the mainframe were downloaded for use on the study team’s micro computers.

A technician recorded the responses from the questionnaires for university group on a microcomputer using the SPSS-PC statistical program format. Once this was done, the data were transferred over to the SPSS-MAC format and matched with the computer data bases from the participating universities for final data analysis. Open ended questionnaire responses were recorded and placed in a usable form from SPSS to Microsoft Word. (Note: SPSS-MAC is a fairly new and challenging statistical program. To use it profitably, one should have intensive instruction in the program. Unfortunately, the researchers have had to learn the program as the data analysis phase proceeded, triggering more frustrations than might normally be encountered. This also contributed to a lengthening of the project’s timeline by several months.)

Sample Demographics

As just noted, the responses were analyzed using the SPSS for the Macintosh statistical program. The major findings are reported in the following pages employing a narrative with selected graphics.

The reader should use caution in accepting these figures because much of the data were based on respondent self-reporting (as was the case with the Washington study). Although the researchers have attempted to reconcile institutional student records with each participant’s completed questionnaire, the varied institutional data collecting formats by which the data were reported leaves ample opportunity for matching errors. In addition, the researchers have tried to
identify and eliminate data reported in Part B of the survey instrument by native students who mistakenly completed the transfer portion of the questionnaire.

Data on Responses and Participants

Of the 976 graduates selected for the study, 46 questionnaires were returned as undeliverable. This left 930 of the graduates selected as possible participants. The final number of respondents was 577 making the overall response 62%. Only 519 (89.9%) of the returned questionnaires were determined to be usable for purposes of this study—leaving 58 which were unusable either because they contained no responses or because they were completed in an impractical or an inaccurate fashion or they had a previous bias. Based on this, the usable response rate was 55.8% (519 of 930). The number of usable questionnaires returned by the graduates of each university as well as the number of questionnaires mailed were as follows: ASU 215 of 391, GCU 32 of 53, NAU 93 of 155, and U of A 179 of 326.

The total sample size and the number and percentage of respondents, by institution, is presented in Figure 1 below. The rate of participation ranged from 54.9% by both ASU and U. of A. graduates to 60.4% by Grand Canyon University graduates and 60.0% of those selected from NAU.

Figure 1

![Sample Size, Number & Per Cent Return](image)

It is interesting to note that the two smaller universities in the study, enjoyed the higher rates of return. (Perhaps there is an untested theory here that the smaller the institution, the more commitment its graduates have to follow-up studies which they believe will aid the university.)
Gender (Sex) of Respondents

Female respondents outnumbered male respondents 308 to 202 with 9 others not reporting. Expressed by percentage—59.3% were women, 38.9% were men, with 1.7% whose gender was not recorded in the respective university databases. Respondents classified as community college transfers numbered females 98 (62%) and males 60 (38%). This demographic was missing in 18 cases in the group. Native student participants included 200 (60.2%) females and 132 (39.8%) males. Other university transfers included three females and five males which was the only group dominated by male participants with three missing cases.

Age of Respondents

The ages of those participating in the study ranged from 16 to 63. Three participants reported being less than 20 years old and as the range indicates the youngest was 16, while only five indicated they were age 50 or older. Table I presents the respondents by age grouping. More than 70% of those who participated fell in the 20 to 24 year old age group. Those in the 25 to 29 year old age group comprised 14%, while those in the 30 to 39 age category made up 12% of the total. The 30 to 34 and 35 to 39 year old age categories represented 4% and 3% respectively.

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<td>11.6</td>
<td>2.5</td>
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<td>.2</td>
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</table>

*Note: Nine participants did not indicate their ages.

The researchers also examined the mean and median age as well as the range of each of the three groups studied. The community college transfer student group had an average (mean) age of 28.7 years, a median age of 26.0 with an age range of 20 to 63 (N=176 minus 6 missing cases); the four-year college transfer group's mean age was 24.1 years with a median age of 24.0 and a range of 22 to 28 (N=113), while the native university student mean age was 22.9 years and a median age of 22.0 and an age range of 16 to 48 (N=332-0). The combined groups average age was 24.9 with a median age of 23.0 and a range 16 to 63 (N=519-9).
The average age of the students in the combined transfer groups at baccalaureate graduation was 28.9 at all four universities studied. Specifically, at graduation the average Transfer Student age by institution was: ASU 28.7, GCU 35.4, NAU 27.7, and U of A 27.8. Native University Students by institution had an average age at graduation of ASU 23.1, GCU 27.6, NAU 23.5, and U of A 21.9. The preceding data reveal significant differences in average age by Transfer Group, and by university at graduation.

Ethnicity of Respondents

Table II presents the distribution of participants by ethnicity and the institutions which they attended. Arizona Community College Transfer Student participants are identified both by the community college from which they transferred as well as by the Arizona university to which the transfer was made.

Of the total respondents, Anglos represented the largest ethnic group of respondents with 420 (87%). Those of Hispanic origin numbered 30 (6.2%). Asians totaled 21 (4.3%), Native Americans 7 (1.4%), and Blacks 5 (1%). The ethnicity of 12 others was missing from the student population.

**TABLE II**

<table>
<thead>
<tr>
<th>COMMUNITY COLLEGE TRANSFER GROUP</th>
<th>NATIVE GP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C.C./Univ.→</strong></td>
<td><strong>AVC</strong></td>
</tr>
<tr>
<td><strong>Ethnic Group</strong></td>
<td></td>
</tr>
<tr>
<td>ASIANS</td>
<td>9</td>
</tr>
<tr>
<td>BLACKS</td>
<td>9</td>
</tr>
<tr>
<td>HISPANICS</td>
<td>9</td>
</tr>
<tr>
<td>NATIVE AM</td>
<td>9</td>
</tr>
</tbody>
</table>

*NOTE: There are twelve [12] missing cases which cannot be identified as to either the student's primary transfer community college or his/her ethnicity because of the manner in which the data were reported on the records of two of the participating universities. The inclusion of these 13 cases increases the c.c. transfer participant "N" from 164 to 176.*
records data; however, it is presumed that most, if not all, of these were Anglo. **Community College Transfer Respondents**—The total number of Arizona community college transfer respondents was 176. Anglos again had the largest number of respondents 146 (83%), Hispanics respondents numbered 15 (8.5%), Asians 5 (2.8%), Native Americans 2 (1.1%), and Blacks 2 (1.1%). In 6 cases, the records did not reveal ethnicity. (Figures rounded to the nearest percent.)

**Native University Respondents**—Of these 332 respondents, Anglos numbered 289 (87%). Hispanics 18 (5.4%). Asians 16 (4.8%). Native Americans 5 (1.5%). Blacks 4 (1.2). Figures have been rounded to the nearest percent.

**Classification of Respondents**

Of the total group studied, 332 (64.3%) were classified as Native University Students (that is they started and remained at the university throughout their college study). Students who started at a community college and who transferred at least 24 semester hours of credit to the university numbered 176. This represented 31.8% of those responding. Transfers from other universities totaled 11 or 2.1%—four others in this category provided incomplete data.

**Community College Transfers**

Using the university generated data bases, a tabulation of Arizona community colleges and districts which were represented in the transfer student group was developed. The reader should keep in mind that to meet the definition of a community college transfer, the participant had to transfer at least 24 semester hours from one Arizona community college. It should be noted also that the individual university data bases omitted the names of the primary transfer institution in 12 of the 176 cases.

A quick visual review of the data bases revealed that in two or three instances, community college students had transferred 24 or more semester hours from more than one Arizona community college. In such instances, the community college where the student had transferred the most credit was designated as the institution of primary transfer.

Early in the study it was decided with input from the person who then held the title of SBDCCA Executive Director that out-of-state community college transfers would not be separated out from the "native student" group because of the lack of student record data on them and the extremely small number participating in the study. Any "confounding" which might have occurred as a result of this grouping practice was negligible at best.

(Several respondents who were classified as Native University Students had completed 20 to 23 semester hours of work at an Arizona community college. By definition prior to the data
gathering process, these respondents were not considered to be part of the Community College Transfer Group. However, the research team eliminated any Part B responses made by those participants not meeting the study definition for "Community College Transfer Student" even though some had transferred as many as 23 semester hours of credit from two-year colleges.)

Table III provides an initial picture of the districts/colleges and the number of transfers

<table>
<thead>
<tr>
<th>Institution</th>
<th>ASU</th>
<th>GCU</th>
<th>NAU</th>
<th>U of A</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arizona Western</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Central Arizona</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Cochise</td>
<td>1</td>
<td></td>
<td></td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Eastern Arizona</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Maricopa District</td>
<td>80</td>
<td>11</td>
<td>11</td>
<td>7</td>
<td>109</td>
</tr>
<tr>
<td>Glendale C. C.</td>
<td>18</td>
<td>6</td>
<td>4</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Mesa C. C.</td>
<td>35</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>Phoenix College</td>
<td>19</td>
<td></td>
<td>3</td>
<td>4</td>
<td>26</td>
</tr>
<tr>
<td>Rio Salado</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Scottsdale</td>
<td>8</td>
<td>2</td>
<td>1</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Mohave</td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pima</td>
<td>1</td>
<td>2</td>
<td></td>
<td>16</td>
<td>19</td>
</tr>
<tr>
<td>Yavapai</td>
<td>1</td>
<td>1</td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Univ. Did Not Desig.</td>
<td>11</td>
<td></td>
<td></td>
<td>13</td>
<td>24</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td>97</td>
<td>13</td>
<td>19</td>
<td>48</td>
<td>178</td>
</tr>
</tbody>
</table>

representing them in the study. Community college transfer students included in the study came from eight of ten Arizona community college districts. Only Navajo County (Northland Pioneer College) and Coconino County Community College Districts were not represented--Navajo district was not represented strictly due to chance via the randomized selection process and Coconino because it was not in existence at the time the research project was conducted. Thirteen Arizona community colleges were represented as primary colleges of transfer for purposes of the study.

Maricopa County Community College District by virtue of its size provided the largest number of transfer students participating with 109. A somewhat distant second was Pima district with 19 transfers. The districts with the fewest transfers were Mohave and Pinal with one each.
The college represented by the largest number in the transfer group was Mesa Community College with 40, followed by Glendale Community College with 29 and Phoenix College with 26. Of the MCCCD college group, Rio Salado Community College had the fewest, two.

Review of the Various Groups in the Sample by Name and Size

The reader may find it helpful to refer to Table IV when reviewing the study. Because the researchers found percentages to be of greatest help in analyzing much of the data, most of the figures are reported as percentages rather than frequencies and, therefore, the number of participants in each of the groups used to analyze the findings are presented concisely in Table IV.

**TABLE IV**

**GROUPS IN SAMPLE**

**BY NAME AND SIZE**

Total Sample Size N=519

<table>
<thead>
<tr>
<th>Category Name</th>
<th>Group Name</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification Groups</td>
<td>C.C. Transfer Students</td>
<td>N=176</td>
</tr>
<tr>
<td></td>
<td>Native University Students</td>
<td>N=332</td>
</tr>
<tr>
<td></td>
<td>4-Year College Transfers</td>
<td>N=11</td>
</tr>
<tr>
<td>University Groups</td>
<td>ASU</td>
<td>N=215</td>
</tr>
<tr>
<td></td>
<td>GCU</td>
<td>N=32</td>
</tr>
<tr>
<td></td>
<td>NAU</td>
<td>N=93</td>
</tr>
<tr>
<td></td>
<td>UofA</td>
<td>N=179</td>
</tr>
<tr>
<td>Gender Groups</td>
<td>Females</td>
<td>N=308</td>
</tr>
<tr>
<td>(9 Undeclared)</td>
<td>Males</td>
<td>N=202</td>
</tr>
<tr>
<td>Ethnic Groups</td>
<td>Asian</td>
<td>N=21</td>
</tr>
<tr>
<td></td>
<td>Black</td>
<td>N=5</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>N=30</td>
</tr>
<tr>
<td></td>
<td>Native American</td>
<td>N=7</td>
</tr>
<tr>
<td></td>
<td>Anglo</td>
<td>N=456</td>
</tr>
<tr>
<td>Age Groups</td>
<td>Age Range 16-19</td>
<td>N=3</td>
</tr>
<tr>
<td>(9 Undeclared)</td>
<td>Age Range 20-24</td>
<td>N=358</td>
</tr>
<tr>
<td></td>
<td>Age Range 25-29</td>
<td>N=72</td>
</tr>
<tr>
<td></td>
<td>Age Range 30-39</td>
<td>N=59</td>
</tr>
<tr>
<td></td>
<td>Age Range 40-49</td>
<td>N=13</td>
</tr>
<tr>
<td></td>
<td>Age Range 50-59</td>
<td>N=4</td>
</tr>
<tr>
<td></td>
<td>Age Range 60+</td>
<td>N=1</td>
</tr>
</tbody>
</table>

Having provided the reader with the background of the study, data on the sample, and the major demographics related to the participants, an analysis of the data collected is in order.
ANALYSIS OF THE DATA

The following portion of the report presents the analysis of the data gathered via questionnaire by the research team. Because the major thrust of the research was on community college transfer student success, data gathered which may be of special interest to Arizona's community colleges are featured.

The presentation of the findings are by category and do not necessarily follow the format of the questionnaire used in gathering the data. The principal categories include: Selection of Institution, Objective for Enrolling, Highest Level of Educational Expectation, Transfer Preparation, Transferability of Courses, Encouragement by Primary Transfer College, Grade Point Average, Academic Major, Graduation Age, Financing College Study, Family Income, Primary Occupation During Enrollment, Family Education, Impressions Related to the College Experience.

The readers should keep in mind when looking at the survey instrument (see Appendix C) that questions with a "B" prefix pertain to the individual respondent's experiences with the Primary Transfer College--the institution from which he/she transferred, and that those with an "A" prefix pertain to the respondent's experiences at the university from which he/she graduated.

Influences on Institutional Selection

Questions B.6-22 and A.8-24 focused on factors which influenced respondents in their selection of the institutions they attended.

Primary Transfer College Selection Criteria (Questions B.6-B.22)

The most often noted responses for the student's selection of his/her primary transfer college in the combined "Very Important" and "Somewhat Important" categories by the total C. C. Transfer Group (N=176) was Liked College Location (88%) and Cost Efficient Way to Baccalaureate (82%). Others factors noted by more than half of those responding were: Able to Live at Home (70%), Academic Reputation (69%), Close to Home (67%), and Availability of Specific Program and Time Efficient Way to Baccalaureate (both 65%). Figure 2, Part One and Two, presents these data. Because of the many factors participants were asked to rate on several of the questions, it was necessary to construct many of the figures in two parts--one following the other. Figure 2 is one of these.

In the "Not Important" category, respondents indicated that Could Not Meet Admission Standards (94%) and Able To Be Away From Home (90%) had little or no
bearing on the selection of the primary transfer institution. Also, *Advised by a Parent* (67%) and *Friends Attending* (66%) had little influence on the selection of the primary transfer college.

Figure 2

**SELECTION CRITERIA FOR PRIMARY TRANSFER COLLEGE BY C.C. TRANSFER STUDENT GROUP**

**PART ONE**

<table>
<thead>
<tr>
<th>Degree of Importance</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avail.of Fin.Aid</td>
<td>30.1%</td>
<td>11.0%</td>
<td>23.5%</td>
</tr>
<tr>
<td>Avail.of Spec.Prog.</td>
<td>29.0%</td>
<td>17.9%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Acad.Reputation</td>
<td>24.3%</td>
<td>14.9%</td>
<td>19.0%</td>
</tr>
<tr>
<td>Friends Attending</td>
<td>27.9%</td>
<td>19.2%</td>
<td>18.2%</td>
</tr>
<tr>
<td>Advised by Counselor</td>
<td>15.2%</td>
<td>10.7%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Close to Home</td>
<td>31.2%</td>
<td>22.5%</td>
<td>22.5%</td>
</tr>
<tr>
<td>Improve Basic Skills</td>
<td>39.2%</td>
<td>28.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>To See If Do Well</td>
<td>39.2%</td>
<td>28.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Able to Live at Home</td>
<td>41.1%</td>
<td>31.0%</td>
<td>31.0%</td>
</tr>
</tbody>
</table>

**PART TWO**

<table>
<thead>
<tr>
<th>Degree of Importance</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Training</td>
<td>32.1%</td>
<td>22.3%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Where C'd. Hr Belonged</td>
<td>17.1%</td>
<td>11.8%</td>
<td>11.8%</td>
</tr>
<tr>
<td>Advised by Parent</td>
<td>33.2%</td>
<td>22.3%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Could Not Meet Adm. Stds.</td>
<td>33.2%</td>
<td>22.3%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Able To Be Away Fm. Home</td>
<td>33.2%</td>
<td>22.3%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Time Eff. Way to Bacc.</td>
<td>24.3%</td>
<td>14.9%</td>
<td>14.9%</td>
</tr>
<tr>
<td>Cost Eff. Way to Bacc.</td>
<td>39.2%</td>
<td>28.5%</td>
<td>28.5%</td>
</tr>
<tr>
<td>Liked College Location</td>
<td>39.2%</td>
<td>28.5%</td>
<td>28.5%</td>
</tr>
</tbody>
</table>
When data on selection of primary transfer college, displayed in Figure 3, were analyzed by university from which the transfer student graduated, three factors appeared to dominate the

Figure 3

(PART ONE)

![Bar Chart: Availability of Financial Aid, Academic Reputation, Friends Attending, Advised by Counselor, Close to Home, Improved Basic Skills, To See II Do Well, Able to Live at Home]

(PART TWO)

selection by participants. These data are displayed in Figure 3. *Liked college's location,* was identified by 93% of ASU participants, 86% of those from GCU and 84% of those from U of A. *Cost efficient way to get a bachelor's degree* was marked by 88% from ASU, 84% from U of A, 67% from NAU, and 57% from GCU. *Availability of specific program* was identified as a determining factor by 82% of the respondents attending U of A, 62% at ASU, 57% at NAU, and 50% of those attending GCU, and *Could not meet admissions standards* was the least important factor influencing the primary college selection decision of respondents graduating from all four universities. *Able to live away from home* was the next least frequently selected of the factors.

There were also three factors which were significant by gender or sex of the respondent. Figure 4 reveals a favored response by both females and males was *Liked the college's location,* 94% female and 87% male. *Able to return home frequently* was more significant for females (76%) than for males (58%). *To be where I could feel I belonged* was selected by 55% of females as compared with 30% for males. Females were more interested in *Availability of financial aid* (54% to 34%).

**Figure 4**

**SELECTION OF PRIMARY TRANSFER COLLEGE by Gender**

**Part I**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Female</th>
<th>Gender</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liked the college's location</td>
<td>94%</td>
<td></td>
<td>87%</td>
</tr>
<tr>
<td>Able to return home frequently</td>
<td>76%</td>
<td></td>
<td>58%</td>
</tr>
<tr>
<td>To be where I could feel I belonged</td>
<td>55%</td>
<td></td>
<td>30%</td>
</tr>
<tr>
<td>Availability of financial aid</td>
<td>54%</td>
<td></td>
<td>34%</td>
</tr>
</tbody>
</table>
The significant differences for primary transfer college by ethnicity are found in Figure 5, Part One and Part Two.

The response, *Able to return home frequently*, was marked 100 per cent by Asians, Blacks and Hispanics, 65 per cent by Whites, and 50 per cent by Native Americans. *Able to live at home* was chosen 100 per cent by Asians, Blacks and Hispanics, 66 per cent by Whites and 50 per cent by Native Americans. *To be where I could feel I belonged* was selected as affirmative by Asians (60%), Blacks (100%) and Hispanics (54%). Native Americans were neither affirmative or negative at (50%), while Whites indicated this as not important (57%). *Did not meet admissions standards of first choice college* was very negative for Asians, Hispanics, Native Americans and Whites (80%, 95%, 100%, and 96%). Only one Black participant responded to this item and that was affirmative.
Figure 5

SELECTION CRITERIA
PRIMARY TRANSFER COLLEGE
BY ETHNIC GROUP

(PART ONE)

Asians | Blacks | Hispanics | Native Americans | Whites
--- | --- | --- | --- | ---
Available Aid | 80 | 60 | 50 | 50
Acad. Prof. | 60 | 60 | 60 | 60
Acad. Depression | 40 | 60 | 60 | 60
Friends Attending | 40 | 60 | 60 | 60
Advised by Counselor | 40 | 60 | 60 | 60
Close to Home | 40 | 60 | 60 | 60
Improves Basic Skills | 60 | 60 | 60 | 60
To Serve Will Do Well | 60 | 60 | 60 | 60
Able to Live at Home | 60 | 60 | 60 | 60

(PART TWO)

Asians | Blacks | Hispanics | Native Americans | Whites
--- | --- | --- | --- | ---
Job Training | 100 | 100 | 100 | 100
Where I Feel Belonged | 80 | 80 | 80 | 80
Advised by Parent | 80 | 80 | 80 | 80
Could Not Meet Admissions | 80 | 80 | 80 | 80
Able to Be Away from Home | 80 | 80 | 80 | 80
Time Effort, Way to Be | 80 | 80 | 80 | 80
Cost Effort, Way to Be | 80 | 80 | 80 | 80
Likely to College Location | 80 | 80 | 80 | 80
The most popular criteria for choosing a baccalaureate university is graphically depicted in Figure 6. More than 50% of the project's combined participants indicated the following factors:

**Figure 6**

**SELECTION CRITERIA**

**BACCALAURATE UNIVERSITY**

**ALL PARTICIPANTS**

*(PART ONE)*

**Total Participant Responses** *(PART TWO)*

---

**Legend:**
- Avail. of Fin. Aid
- Avail. of Spec. Prog.
- Acad. Reputation
- Friends Attending
- Advised by Counselor
- Close to Home
- Improve Basic Skills
- To See If I Do Well
- Able to Live at Home

---

**Legend:**
- Job Training
- Where Did Feel Belonged
- Advised by a Parent
- Could Not Meet Adm. Stds.
- Able to Be Away From Home
- Time Efficient Way to Bac.
- Cost Efficient Way to Bac.
- Liked College Location

---

19

---

32
influenced this decision: Liked the college's location (94%), Reputation of academics at university (93%), Availability of specific program (87%), Cost efficient way to get baccalaureate degree (83%), Time efficient way to get baccalaureate degree (66%), Able to return home frequently (65%), Availability of training for a job (62%), and To be where I could feel I belonged (60%). These data are presented graphically in Figure 6, Part One and Part Two. Did not meet admission standards of first-choice college was selected as the least important response (88%) followed by To see if I would do well in college (70%).

The following criteria registered readings at or below the .05 significance level:

Able to be away from home
Able to return home frequently
Friends going to university
Availability of specific program
Reputation of academics at university
Able to be away from home
Advised by a parent
Able to return home frequently
Friends going to university
Availability of specific program
Reputation of academics at university

The choice of university by Classification Group was significantly different for 12 of the 17 university selection criteria. A visual presentation using the three Classification Group's responses related to university selection is found in Figure 7, Part I and Part Two.

Figure 7
SELECTION CRITERIA FOR BACCALAUREATE UNIVERSITY BY CLASSIFICATION GROUP (PART ONE)
C.C. Transfers' top choices of selection criteria for their baccalaureate university were *Reputation of academics at university* (100%), *Availability of specific program* (80%), *Time efficient way to get baccalaureate degree* (80%) and *Cost efficient way to get baccalaureate degree* (70%). The least important responses were, *Did not meet admission standards for first choice college* (100%) and *To see if I would do well in college* (80%).

Natives selected *Reputation of academics at university* (92%), *Availability of specific program* (86%) and *Cost efficient way to get baccalaureate degree* (84%). Their choices for least important were, *Did not meet admission standards for first choice college* (86%) and *Able to live at home* (71%).

Nine of the seventeen criteria for selecting their baccalaureate university, by university, were statistically significant. Following is a listing of these:

- Availability of specific program
- Availability of training for a job
- To be where I could feel I belonged
- Able to be away from home
- Cost efficient way to get a baccalaureate degree
- Reputation of academics at university
- Friends going to the university
- Able to return home frequently
- Able to live at home

Ranking of selection factors by university group is found in Figure 8, Parts One and Two. ASU participants indicated the important criterion choices were: *Liked the university's location* (95%), *Academic Reputation* (95%), *Cost effective way to get
Figure 8

SELECTION CRITERIA FOR BACCALAUREATE UNIVERSITY BY UNIVERSITY GROUP (PART ONE)

(PART TWO)
baccalaureate degree (85%), and Time efficient way to baccalaureate (67%). The highest rated not important selections were To see if I would do well in college (73%) and Advised by a counselor (65%).

GCU respondents chose Availability of specific program (100%), Reputation of academics at the university (100%), Liked the university's location (91%) and Availability of training for job a job (84%). The most selected not important were Did not meet admission standards of first choice university (86%), Friends going to the university (84%) and Able to be away from home (81%).

The graduates from NAU picked the same top four items as those from ASU. Their percentages were 97, 91, 87 and 89. Chosen as not important were Did not meet admissions standards of first choice university (91%), Able to live at home (79%) and To see if I would do well in college (72%).

The U of A group favored: Liked the university location (92%), Reputation of academics at university (90%), Availability of specific program (86%) and Cost effective way to get baccalaureate degree (84%). Their highest negative choices were Did not meet admission standards of first choice university (90%), To see if I would do well in college (65%) and Able to live at home (65%).

**Principal Objectives**

**Principal Objective for Enrollment in Primary Transfer College (Question B.3)**

The principal objectives guiding the enrollment of C. C. Transfers in their respective primary transfer colleges were: To take a program to prepare to transfer. (25.1%) and To earn a transfer degree... (24.6%) as revealed in Figure 9. These were followed by To pick up a few courses for transfer (17.5%) and To earn a bachelor's degree (16.4%).

These objectives continued to be rated as important when the community college transfer group was analyzed by university grouping as seen in Figure 10. C. C. Transfers graduating from GCU, NAU, and the U of A reported To earn a transfer degree as their objective for attending their primary transfer colleges while C. C. Transfers graduating from ASU overwhelmingly indicated that their objective for entering the primary transfer college was To take a program to prepare for transfer . . .
A comparison of the responses by Gender is presented in Figure 11, females most frequently had as their objective for attending the primary transfer college To earn a transfer degree, 30% compared with 15% for males, while a higher percentage of males indicated their objective was To pick up a few courses for transfer, 26% compared with 13% for females.
Figure 11
PRINCIPAL OBJECTIVE FOR ENROLLMENT IN PRIMARY TRANSFER COLLEGE BY GENDER

Comparisons by ethnicity presented in Figure 12 show all groups sharing the objectives, *To earn a transfer degree* and *To take program to transfer*, at the 24% to 29% level.

Figure 12
PRINCIPAL OBJECTIVE FOR ENROLLMENT IN PRIMARY TRANSFER COLLEGE BY ETHNIC GROUP
Principal Objective for Enrollment in Baccalaureate University (Question A.1)

The overwhelming reason indicated as the principal objective for enrolling in the university was *To earn a baccalaureate degree*, for the total Classification Group, 71%; by university grouping, 66%; by gender, 69%; and by ethnic group, 68%. There were no significant differences in the groups for this variable.

Course Selection at Primary Transfer College (Question B.4)

Seventy per cent of the respondents (N=176) reported that they planned their courses to fit a specific university's requirements; 16% did not use the transfer requirements of a specific university in planning their course schedules, and 14% did not know to which institution they would transfer when they selected their courses. Figure 13 graphically displays the factors community college transfer students consider in selecting their programs of study at their primary colleges. There was a significant difference by University in the responses on the course planning question by the transfer group members. Responses grouping them by university are found in Figure 14.

Figure 13

COURSE SELECTION FOR SPECIFIC COLLEGE/UNIVERSITY REQUIREMENTS

- **13.8%**: Did Not Plan for Specific Coll.
- **16.1%**: Did Not Plan for Trf. Reqs.
- **70.1%**: Planned Courses for Trf. Reqs.
ASU had the highest percentage of graduates in the study reporting that they planned courses for specific transfer requirements (79%), with U of A next (67%), followed by GCU (57%), with NAU having the lowest (47%).

**Highest Level of Educational Expectation**

**Primary Transfer College (Question B.2)**

Reporting on the highest level of education transfer students planned when attending the primary transfer college, the highest percentage of participants chose *To finish college (4 or 5-year degree)*, 62%; *Two or more years of college including the A.A. Degree*, 14%; and *Graduate or Professional School*, 13%, as shown in Figure 15.

**Baccalaureate University (Question A.2)**

Once the respondents reached the university, their desired highest educational goal was *To finish college (4 or 5-year degree)* with 71% of the participants indicating this was the goal, followed by *To attend graduate or professional school*, selected by 25% of those responding to this item.

Figure 16 graphically presents those data related to this item. There were significant differences for Classification, University, Ethnic and Age Groups.
Figure 15
HIGHEST LEVEL OF EDUCATION PLANNED AT
BEGINNING OF PRIMARY TRANSFER COLLEGE WORK

- Grad. HS or GED: 61.7%
- Voc. Trade Sch.: 13.7%
- Less than 2 Yrs. Coll.: 12.6%
- Two/more Yrs. Coll. Incl. AA: 6.3%
- Fin. Coll. (4-5 Yr. Deg.): 4.6%
- Grad./Prof. School: 1.1%

Figure 16
HIGHEST LEVEL OF EDUCATION PLANNED AT
BEGINNING OF UNIVERSITY EXPERIENCE

- Less than 2 Yrs. Coll.: 72.68%
- Two/more Yrs. Coll. Incl. AA: 25.89%
- Fin. Coll. (4-5 Yr. Deg.): 0.8%
- Grad./Prof. School: 0.6%
The highest level of education planned by the participants once they reached the university by each of the Classification Groups is found in Figure 17. Four-year Transfers (N=11) and Natives had the largest percentages of those who expected *To attend graduate or professional school* with 36% and 28% respectively. Seventy-seven percent of the C.C. Transfers had the goal, *To finish college (4 or 5-year degree)*, followed by Natives with 69%. Quite obviously, once enrolled in the university very few, if any, of the participants believed that their highest level of education would be the completion of lower division studies.

As presented in Figure 18, only at ASU were the responses scattered across the entire spectrum. At all universities the greatest percentage selected *To finish college (4 or 5-year degree)*. GCU had the smallest percentage (13%) who marked *To attend graduate or professional school* (13%) and the U of A had the largest (31%).

Native Americans had the highest percentage planning *To attend graduate or professional school*, 71%, as pictured graphically in Figure 19. This group responded even more strongly to this item as compared with the item representing "finishing college".
Figure 18
HIGHEST LEVEL OF EDUCATION PLANNED AT BEGINNING OF UNIVERSITY EXPERIENCE BY UNIVERSITY GROUP

Figure 19
HIGHEST LEVEL OF EDUCATION PLANNED AT BEGINNING OF UNIVERSITY EXPERIENCE BY ETHNIC GROUP
Only 17% of the Blacks responding to this item planned "graduate or professional school" as their highest level of education.

Figure 20 reveals that the youngest and oldest participants had the highest percentages of

**Figure 20**

**HIGHEST LEVEL OF EDUCATION PLANNED AT BEGINNING OF UNIVERSITY EXPERIENCE BY AGE GROUP**

<table>
<thead>
<tr>
<th>Age Category</th>
<th>16-19</th>
<th>20-24</th>
<th>25-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-59</th>
<th>60-69</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than Two Yrs. Coll.</td>
<td>0.3</td>
<td>0.3</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>2+ More Yrs. Coll. Incl. AA</td>
<td>68.7</td>
<td>68.7</td>
<td>68.7</td>
<td>68.7</td>
<td>68.7</td>
<td>68.7</td>
<td>68.7</td>
</tr>
<tr>
<td>Fin. Coll (4-5 Yr. Deg.)</td>
<td>29.1</td>
<td>29.1</td>
<td>29.1</td>
<td>29.1</td>
<td>29.1</td>
<td>29.1</td>
<td>29.1</td>
</tr>
<tr>
<td>Grad./Prof. School</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
<td>0.3</td>
</tr>
</tbody>
</table>

To attend graduate or professional school (100%). (It should be noted that the numbers in these groups were quite small, three and one.) As might be expected, the largest numbers of participants (those in the five age-related groups representing ages 20 through 59) planned To finish college (4 or 5-year degree).

**Future Schooling Plans by Respondents Completing Bachelor's Degree**

(Question A.66)

Future schooling plans were significantly different for Classification Groups. As Figure 21 illustrates, 83% of the Native University Students who responded had plans to attend A graduate or professional school, with very few expecting to attend A two-year college (0.6%). Eighty-one percent of the transfers students (those basically from community colleges) also planned to attend A graduate or professional school, however, 5% of them displayed some interest in returning to A two-year college following graduation. Although no reason was requested as to why this response was given, logic would seem to support reasons such as "to gain a needed skill", "to pursue continuing education", "to change career", "to fulfill terms of employment", et cetera. The responses to the question of future education tended to confirm the expected.
Considering the current popularity of the community college as a community-based resource for continuing education and retraining, the percentages of participants indicating the possibility of future attendance at the community college were surprisingly low and the "comments" portion of the question provided the researchers with little added insight on the matter.

Figure 21
FUTURE SCHOOLING PLANS
BY CLASSIFICATION GROUP

Transfer Preparation

Many resources are helpful to community college students as they prepare to transfer from their primary transfer institutions to the university. These factors include such resources as advisement and counseling in several forms, testing, career planning, printed literature, and information on financial aid, transfer requirements and deadlines. This section of the report deals with the participant responses related to the use of these various resources at the community college.

The largest percentage of C. C. Transfer study participants, 86%, reported using Information about prerequisite course requirements provided at primary transfer college. Other resources which were reported as helpful to students preparing for transfer were: Printed information, 84%; Advisors, 77%, and Advisors who were knowledgeable about transfer, 76. Additional community college resources reported as being used and helpful to the transfer group included: Information on application closing dates, 60%; Placement testing, 55%; Transfer information related to all Arizona colleges, 54%; Counseling, 51%, and Financial Aid Information, 47%.
Resources reported with the least frequency by participants focused on Job placement, 23%; Campus clubs and organization, 23%; and College days, 21%. Figure 22 presents the types of resources available to C.C. Transfer Students and the extent to which this group used them.

Figure 22
RESOURCES AVAILABLE AND USED
FOR TRANSFER PREPARATION

Satisfaction with Transfer Preparation (Questions B.39-B.41 and A.44-A.45)

The great majority of community college transfer participants (N=164) were "very satisfied" with their preparation for transfer from their primary two-year college to the university. Figure 23 presents the responses related to the degree of satisfaction expressed by participants. A majority of the participants were very satisfied with their General knowledge level of their preparation. More than half of those responding to this question were also "very satisfied" that they had taken the Right courses (54%). Slightly less than half of the participants believed that they had been Prepared for the rigor of course work at the university (48%). Between 36% and 29% of those responding indicated being somewhat satisfied with the courses, rigor of preparation, and level of general knowledge. Less than 17% of the total transfer participant group registered satisfaction levels from "neutral" through "very dissatisfied" and of these, less than 2% fell in the "very dissatisfied" category leading the research team to believe that most of thetransfer students
were reasonably well pleased with the classroom and other instruction they received while attending Arizona’s community colleges.

**Figure 23**

**SATISFACTION WITH TRANSFER PREPARATION AT PRIMARY TRANSFER COLLEGE**

Females were somewhat more satisfied with their transfer preparation than males, 86% to 84%. Both recorded the highest satisfaction with *having the right set of courses*. Blacks and Native Americans were the most satisfied at 100 per cent and Asians were the least satisfied at 73 per cent.

Only 25% of the C.C. Transfer student group reported participating in any of the clubs and organizations available to them at the Primary Transfer College. Forty-five per cent of the C.C. Transfers indicated that they had personal contacts outside of the classroom with faculty and/or other staff while attending the primary transfer college.

**Transferability of Courses (Questions B.42-B.43)**

Two items on the questionnaire focused on the ability of the transfer group participants to transfer courses to the university. Twenty-eight percent of the 173 participants who responded to question B.42 indicated that they took courses at their primary transfer college which they thought would transfer, but found out later they would not. By university the largest percentage of course
transfer problems were reported by participants from GCU and NAU with 35% each, while 25% of the ASU transfer group and 20% of the U of A transfer group indicated they had experienced some course transfer problems.

Question B.43 dealt with students who took course which they thought would not transfer to the university, but did. This item was answered by 175 participants with 10% reporting that they had received credit for courses they believed would not transfer.

Associate Degrees Held by Participants (Questions A.6-A.7)

Analysis of data related to preparation for transfer would not be complete without a discussion of those transfer students earning Associate Degrees. Eighty-two participants in the C. C. Transfer Group or 17% of those studied reported completing the requirements for the Associate Degree. Of those reporting holding the Associate Degree, 8% reported completing it for transfer purposes. Another 6% indicated they earned the Associate Degree for other reasons, and 4% completed it in relation to their careers. Figure 24 represents a pie chart of these data.

Differences at the .05 level were significant among the grouping categories represented by university, gender, and age. As graphically shown in Figure 25, 39% of the GCU participants responding to question A-6 had earned an Associate Degree. Of the GCU participants reporting having earned the Associate Degree, 13% completed it for transfer purposes, 10% completed it for a job, and 16% for other reasons. Almost 20% of the ASU participants reported holding the Associate Degree with 10% completing it for transfer. More than 13% of both the NAU and the U of A participants held two year degrees.
Twenty percent of the females in the transfer group completed Associate Degrees as compared with 12% for males. Figure 26 depicts these data. Approximately 9% of the females and 6% of the males who reported having an Associate Degree earned it for transfer purposes.

The participants in the 16-19 year old group (N=3) held no Associate Degrees. The 60 year old participant (N=1) used the Associate Degree for transfer. Figure 27 reveals a significant
pattern with a higher percentage of Associate degrees held by participants in the older age categories.

Figure 27
RECEIPT OF ASSOCIATE DEGREE BY PURPOSE AND AGE

When asked if the Associate Degree was helpful to them, 62 participants (61%) checked the "yes" response while 39 others (39%) checked the "no" response. The pie chart labeled Figure 28 addresses the participants' perception of the Associate Degree's value.

Figure 28
PARTICIPANTS' PERCEPTION OF THE ASSOCIATE DEGREE
Encouragement by Transfer College (Questions B.44-B.47)

There was agreement between the Arizona and Washington studies in that over two-thirds of those responding reported that the community college had encouraged them to pursue their higher education goals. Sixty-nine percent of those responding to this question either strongly agreed or agreed that their primary transfer college encouraged them in their educational pursuits as indicated in Figure 29.

Figure 29

POSITIVE EDUCATIONAL ENCOURAGEMENT
AT PRIMARY TRANSFER COLLEGE

29.87%

25.37%

5.29%

39.46%

- Agree Strongly
- Agree
- Disagree
- Disagree Strongly

The largest Arizona group response, 81%, was that—*As a result of attending this college, I became more interested in learning about new things than before.*

There were significant differences in responses to this item by university group for *This college encouraged me to plan to transfer* and *This college encouraged me to attempt to reach for higher goals than I had set for myself in the past*. Figure 30 presents data analyzed by university group. There were significant differences by *gender* and *ethnicity* for *As a result of attending this college I was encouraged to pursue additional education*. 
Of the NAU participants, 67% "agreed" that their transfer college encouraged them to make transfer plans. Seventy-one percent of U of A participating graduates reported being encouraged to Reach for higher educational goal, while 54% of the GCU graduates reported being supported by their primary transfer colleges on the "goals" item. Over 60% of the responses to the "encouragement" items by ASU and U of A participants revealed their perceived support on all four measures of support by their primary transfer colleges. Figure 31 indicates a higher percentage of male participants reported being encouraged to pursue further education than did female participants—73% and 67% respectively.

Blacks marked a higher percentage of the item, As a result of attending this college, I was encouraged to pursue additional education (100%), followed by Whites (71%), and Hispanics (64%). Native Americans showed the least (50%). Figure 32 displays Encouragement at the Primary Transfer College by Ethnic Group.
Figure 31
ENCOURAGEMENT AND GENERAL SUPPORT FACTORS
AT PRIMARY TRANSFER COLLEGE
BY GENDER

Figure 32
ENCOURAGEMENT AND SUPPORT FACTORS
AT PRIMARY TRANSFER COLLEGE
BY ETHNIC GROUP
Grade Point Average

Final Semester of Baccalaureate

The final semester GPAs for baccalaureate graduates in the Spring, 1990, of the four Arizona universities participating in the study showed significant differences by Classification and University groups, and by Sex, and Age categories. (Final semester GPAs are used because the four universities differed in the time frames for which they calculated GPAs. However, all recorded them in a uniform fashion for each baccalaureate degree recipient in the final semester.)

Final Semester GPA by Classification Group

The Spring, 1990, C.C. Transfer baccalaureate graduates outperformed Native university graduates on final semester GPA. C.C. Transfers had significantly higher scores with a mean of 3.31, compared to 3.23 for Natives. Figure 33 graphically depicts the GPA means for these groups.

![Figure 33](image)

Figure 33: Final Baccalaureate Semester Grade Point Averages by Classification Group

There were no significant differences between C.C. Transfers who transferred 24-44 credits and those who transferred 45 or more credits, with the two groups sharing the same final semester mean GPA, 3.29. Comparisons are made between these two classifications of Transfer Students and the total Native University Student Group in Figure 34.
There were significant differences in final semester GPAs among the participants from the four universities. The means (averages) were ASU 3.20, GCU 3.33, NAU 3.22 and UofA 3.31. C.C. Transfers graduating from ASU and the UofA had wider GPA ranges than did those participants graduating from GCU and NAU--some in the low 2.00s, but the ASU and UofA C.C. Transfer group also had a higher percentage of participants with GPAs of 4.00. Four per cent more of the study participants in the C.C. Transfer student group recorded final semester grade point averages of 4.0 than did those in the Native university student group.

Compared with the Native student group, the C.C. Transfers participants at each university recorded higher mean GPAs. C.C. Transfers had the highest mean final GPA at each of the universities except GCU. Final baccalaureate semester mean GPAs by Classification Group by university are found in Table V.
TABLE V
FINAL BACCALAUREATE SEMESTER MEAN GPAs
BY CLASSIFICATION GROUP AND UNIVERSITY

<table>
<thead>
<tr>
<th>University</th>
<th>Native</th>
<th>C.C. Transfer</th>
<th>Four Year Transfer</th>
<th>ALL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASU</td>
<td>3.16</td>
<td>3.27</td>
<td>2.84</td>
<td>3.20</td>
</tr>
<tr>
<td>GCU</td>
<td>3.31</td>
<td>3.28</td>
<td>3.91</td>
<td>3.33</td>
</tr>
<tr>
<td>NAU</td>
<td>3.23</td>
<td>3.26</td>
<td>2.72</td>
<td>3.22</td>
</tr>
<tr>
<td>UofA</td>
<td>3.28</td>
<td>3.40</td>
<td>-----</td>
<td>3.31</td>
</tr>
</tbody>
</table>

Final Semester GPA by Gender

Final semester GPAs revealed additional significant differences when analyzed by Gender. Female participants recorded average GPAs of 3.28, as compared with 3.20 for males.

Both C.C. Transfer females and males had mean final semester GPAs which were higher than those of Natives university participants. Female C.C. Transfers outperformed their Native female student colleagues in the final semester with mean GPAs of 3.33 compared to 3.26. Male C.C. Transfers earned mean GPAs of 3.25 while the males in the Native group earned a mean final semester GPA of 3.18.

Final Semester GPA by Age

There were significant differences in the final semester mean GPA by age. One hundred per cent of the participants in both the youngest and the oldest age categories had final semester mean GPA of 3.25 and above (N=4). The age category with the highest percentage of 4.00 GPAs was the 40-49 group (N=13). The mean GPA by the seven age categories in the order from the youngest to the oldest, were 3.79, 3.19, 3.34, 3.36, 3.59, 3.42, and 3.31. Figure 35 illustrates the relationship of these mean GPAs by age category.

Final Semester GPA by Ethnicity

There were no significant differences in the final semester mean GPAs by ethnic group. The mean GPAs by ethnic group were: Asian, 3.31; Black, 2.82; Hispanic, 3.15; Native American, 2.94; and White or Anglo, 3.26.
Figure 35
Final Semester Grade Point Average by Age Category

Years of Study Prior to Entering Baccalaureate University (Question A.53)

Figure 36 presents the data gathered from the question A.53 answered by all participants which asks, *When you first entered this institution, how many years had it been since you first started taking courses which led to your bachelor's degree.* Significant differences were identified between Classification, University, and Ethnic groups relating to this question. Ninety-three per cent of the Native University Students reported having entered the baccalaureate university within five years of the time they started their study toward Bachelor's Degree compared to 75% of the Transfer Student Group.

NAU had the highest percentage of participants entering the university quickly, 54%, and GCU had the lowest, 13%.
Differences according to Ethnicity showed patterns of Asians transferring within 10 years, Blacks within 14, Hispanics within 16, Native Americans within 12, and Whites/Anglos within 21 years.

Figure 36
YEARS OF STUDY PRIOR TO ENTERING
BACCALAUREATE UNIVERSITY
BY CLASSIFICATION GROUP

Academic Major

Elementary Education was the most favored major for all Classification Groups with 9% of the study participants indicating that they selected this major. It was popular with C.C. Transfers, 12%. It was the second choice among Native University Student participants. Other popular majors with the C.C. Transfer group were: Accounting, 6%; Management, 5%; Nursing, 5%; Psychology, 5%; Finance, 3%; Art, 2%; and Biology, 1%. The Native University Students selected Psychology, 5%; Art, 5%; Nursing, 3%; Management, 3%; and Biology, 2%. Figure 37 displays these percentages developed from data received in response to question A.30.
Figure 37
MOST FREQUENTLY CHOSEN GRADUATING MAJOR
BY CLASSIFICATION GROUP

Figure 38 reveals the Mean Ages of each Classification by University group. Age differences at the time of graduation with the baccalaureate degree were significant both by Classification Group and by University.
Financing Higher Education Studies

Financing Studies at the Primary Transfer College (Questions B.51-B.58)

When asked how they financed their primary transfer college studies, 75% of the participants classified as C.C. Transfers responded that they *Earned money while taking courses*. Forty-nine per cent reported that they *Used savings* and 45% responded that *Parents paid for some or all costs*.

There were significant differences by University group on the responses, *Had a scholarship*, and *Had other state or federal assistance*. The response, *Parents paid for some or all costs*, was significant by Gender and by Ethnic group. Figure 39 graphically illustrates these responses selected by the students about the financing of their transfer college work.

Figure 39

**METHOD USED FOR FINANCING STUDIES AT PRIMARY TRANSFER COLLEGE**

![Bar chart showing method of financing studies at primary transfer college](image-url)
By University group, 36% of C.C. Transfers who attended GCU reported *Had a scholarship* (this was the largest percentage among the University groups identifying this method), followed by UofA with 35%. ASU had the smallest per cent reporting receiving scholarship assistance at the Primary Transfer College with 19%. GCU also had a higher percentage (55%) identifying the item, *Had other state or federal assistance*.

Responses by Gender group to the item, *Parents paid for some or all costs*, was higher for men, 57%, than for women, 42%. Related to working as a method of financing study at the Primary Transfer College, the most frequent response for both sexes was that they *Earned money while taking courses*--78% by men and 73% by women. Analysis by Ethnic group revealed that Black participants were the only group included in the study that reported not receiving financial assistance from their parents.

(The reader will recall that earlier in this report in presenting the findings on Transfer Preparation under the listing of resources available and used at the primary transfer college, *Financial aid information* was known about and used by 47% of the respondents. Under the Selection of Primary Transfer College Criteria section of the questionnaire, *Availability of financial aid* was identified as "Very important" or of "Some importance" by 47% of those responding.)

Financing Studies at the Baccalaureate University (Questions A.32-A.39)

The three most commonly reported sources for financing studies at the university by all participants were: *Earned money while taking courses* (work), 79%, *Parents paid for some or all costs*, 69%, and *Savings*, 53%.

Significant differences by Classification Group occurred in the analysis of the following items: *Parents paid for some or all costs*, *Had a scholarship*, *Had other state or federal assistance*, and *Received state or federal aid from this college*.

Native University Students reported the largest percentage of *Parent(s) paid for some or all costs* with 82%. C.C. Transfers had the least, 42%. C.C. Transfers, as a Classification Group, had the smallest percentage reporting that they financed their university studies via scholarships, 39%. However, 51% (the highest percentage among these groups reporting) *Received state or federal aid from this college*, 51%. The responses by Classification Group are shown in Figure 40.
There were significant differences by University group for Parents paid for some or all costs, Had a private loan, and Had a scholarship.

ASU and GCU had smaller percentages of Parents paid for some or all costs, 63% and 52% respectively. At the same time, they responded with higher percentages of Had a private loan, 20% (ASU) and 22% (GCU). NAU and GCU recorded the higher percentages of participants who Had a scholarship, 71% and 59% respectively.

(In the section of this paper reporting on reasons for selecting the university, Availability of financial aid was considered on a combined value basis as "Very important" or "Somewhat important" by a higher percentage of C.C. Transfer student as compared to Native University Students, 50% versus 26%. The same held true for the response, Cost efficient way to get baccalaureate degree, 60% versus 47%.)

Significant differences by Gender were identified with the item, Parents paid for some or all costs, with 73% of the males reporting receiving that kind of support compared to 68% for females. By Ethnic group, significant difference were registered on the three items: Received state or federal aid from this college, Had a scholarship, and Parents paid for some or all costs. (A recent doctoral dissertation at Arizona State University by M. Fenske...
supports the finding that larger percentages of ethnic minorities rely upon state and federal aid to finance their studies at the university.) By Ethnic grouping, a higher percentage of Native American participants, 86%, Had a scholarship.... Fifty-seven per cent of the Hispanic students studied Received state or federal aid from this college, while Whites/Anglos recorded the lowest percentage on this response, 39%. Asians and Whites ranked at the top on the response, Parent(s) paid for some or all costs, 71% each, while 43% of the Native Americans studied reported receiving help from their parents.

Family Income (Question A.62)

Total 1989 family income was significantly different for the C.C. Transfer and Native university student groups with 43% of the C.C. Transfers reporting family incomes under $20,000 versus only 27% of the Native university group. Thirty-nine per cent (39%) of the Native university student group reported family incomes $50,000 or more, compared to only 15% of the C.C. Transfer group with family incomes in this range. Family income by Classification Group is pictured in Figure 41.

Figure 41

TOTAL 1989 FAMILY INCOME
BY CLASSIFICATION GROUP

- Natives
- CC Trfs.
- 4-Yr. Trfs.

Figure 42 graphically depicts 1989 Family Income by University grouping and by Classification.
White and Black participants reported 1989 family incomes in the higher ranges than did other Ethnic group members. Percentages by Ethnic group/income range is found in Figure 43.
Primary Occupation During College Enrollment

Primary Occupation Prior to Beginning Courses for Baccalaureate Degree (Question A.54)

Seventy-two per cent (72%) of all those participating in this study reported being A student as their primary occupation prior to beginning study for the baccalaureate degree. In addition, 17% reported being Employed full-time, almost 7% more were Employed part-time, 3% reported being A homemaker, with the remainder, 1.5%, In military service. Figure 44 graphically presents these prior occupations.

Figure 44

PRIMARY OCCUPATION PRIOR TO BEGINNING COURSES FOR THE BACCALAUREATE DEGREE ALL PARTICIPANTS

There were significant differences in the "prior occupations" when analyzed by Classification Group as shown in Figure 45. The greatest percentage of Native University Students, 85%, reported being "A student", as their "primary prior occupation" while C.C. Transfer student group members indicated they were "A student", 41%. A sizable percentage of CC Transfers reported being "Employed full-time", 37%, with 13% of the C.C. Transfers indicating they were Employed part-time. Of significance is the fact that more than twice the percentage of the participants reporting their "primary prior occupation" as A homemaker were in
the Four-Year Transfer student group, 18%, while 7% of those responding in the C.C. Transfer group indicating this "primary prior occupation".

Figure 45

PRIMARY OCCUPATION PRIOR TO BEGINNING COURSES FOR THE BACCALAUREATE DEGREE
BY CLASSIFICATION GROUP

Prior occupation by Gender was significant. Men were more likely to have been A student, 75%, compared to 68% of the women. Three per cent of the males indicated they were In military service, while only 0.3% of the females responded with military service as a "primary prior occupation". Men (17%) reported being Employed full-time, compared to women (15%). Females were Employed part-time more often than males, 9% to 3%. Four per cent of the women were A homemaker, with no men indicating this "prior occupation".

Prior occupation was also significant by Ethnic group. Blacks and Asians were more likely to have been Employed part-time, 33% and 18% respectively. Native Americans reported being In military service more often, 14%. Whites, Native Americans, and Hispanics provided the highest percentages in Employed full-time, 17%, 14%, and 12% respectively.
Primary Occupation at the University (Question A.56)

Data collected on "primary occupation while a student at the university" yielded the following responses from the total participant group: Employed part-time, 56%; Not employed, 16%; and Employed full-time, 12%. Figure 46 shows the "primary occupation at the university" for all the respondents.

The primary occupation while attending the university was significantly different by Classification Group. As a group, 19% of the C.C. Transfers participants reported being Employed full-time, with 9% indicating being a Full-time homemaker, while only 7% reported being Not employed. Primary occupation while attending the university by Classification Group is displayed in Figure 47.
There were significant differences in the students' primary occupations by the University attended. The overall most frequent response by members of all Classification Groups was \textit{Employed part-time}. GCU had the highest percentage of participants, 10%, reporting their occupation as \textit{Work study}, with an additional 10% responding \textit{Full-time homemaker}. ASU was the only University group responding with the occupation, \textit{Full-time military} (0.1%). Sixty-one per cent (61%) of the UofA participants were \textit{Employed part-time}, with another 20% reporting, \textit{Not employed}. NAU had the highest percentage of participants responding, \textit{Full-time employment}, 18%.

Primary occupations at the university were significantly different by Gender. Females reported most frequently falling in the categories of \textit{Employed part-time}, 58%; \textit{Work study}, 7%, and \textit{Full-time homemakers}, 6%. Males were more likely to be \textit{Employed full-time}, 14% or \textit{Not employed}, 17%.

Significant differences occurred by Ethnic group too. A higher percentage of Blacks indicate they were on "Work-study", 33%. Asians had a slightly higher percentage reporting, \textit{Employed part-time}, 59%, with Whites a close second, 58%. Hispanics indicated with greater frequency being \textit{Full-time homemakers}, 12%. Native Americans led in \textit{Employed full-time}, 14% and \textit{Not employed}, 29%.
Family Status

Family Status During Primary Transfer College Final Year (Question B.59)

Significant differences by Gender were indicated in the responses about family status during the last year of the participant's study at the primary transfer college. Females were more likely to live: With parents, 44%; With spouse and dependent children, 20%; With spouse without dependent children, 13%; and Alone with dependent children, 3%. Males recorded the following percentages: living With parents, 42%; With non-related adults, 20%; Alone, 13%; and On campus, 8%. Figure 48 delineates these differences.

Figure 48
FAMILY STATUS DURING LAST YEAR
AT PRIMARY TRANSFER COLLEGE
BY GENDER

Family Status During Baccalaureate University Final Year (Question A.56)

Figure 49 compares Family Status during the participants' last year at the primary transfer college with the last year at the baccalaureate university. Notable differences between the primary transfer college and baccalaureate university were compared in living: With parents, 42% versus 17 percent; and With spouse and dependent children, 19% during the last year at the primary transfer college versus 10% during the last year at the baccalaureate university. Significant differences were found in both categories.

Figure 49

56
COMPARISONS OF FAMILY STATUS DURING LAST YEAR
AT PRIMARY TRANSFER COLLEGE AND
BACCALAUREATE UNIVERSITY
ALL PARTICIPANTS

There were significant differences in family status by Classification and University groups and by Gender and Ethnic groups.

By Classification Group--most Native university student participants reported living: *With non-related adult(s)*, 33%, followed by *On Campus*, 16%. C.C. Transfer student participant responses were evenly distributed with 21% responding that they lived: *With spouse and dependent children*, 21%, *With non-related adult(s)*, 19% and *With parents*, 18%. When viewing the combined responses of participants from all four universities, 24% reported living *With non-related adult(s)*, and *With parents*, 17%.

Data by Gender group revealed a higher percentage of females living *On campus*, 14%, and *With spouse and dependent children*, 12%. More males indicated they lived *With non-related adult(s)*, 34%, and *Alone*, 13%.

Responses analyzed by Ethnic group, showed that these groups tended to live *With parents*--Asians, 50%; Blacks, 32%; Hispanics, 27%; Whites, only 15%; and Native Americans, not at all. Of group members, a higher percentage of Native Americans *Lived on campus*,
14%, with a sizable percentage of Hispanics reporting *Lived with spouse and dependent children*, 27%.

**Family Education**
*(Question A.58 and B.59-B.60)*

Forty-two per cent (42%) of the C.C. Transfer participant group reported, *I was the first* in the family to earn a baccalaureate degree. Twenty-six per cent (26%) of the Native university student group indicated a similar circumstance. However, an even higher percentage of the Native university participant group, 34%, reported that *Both parents have degrees*. A graphic comparison of these data related to family education level appears in Figure 50.

**Figure 50**
**FAMILY MEMBERS HAVING RECEIVED BACCALAUREATE DEGREES BY CLASSIFICATION GROUP**

<table>
<thead>
<tr>
<th>Classification</th>
<th>I was first</th>
<th>Parent</th>
<th>Both parents</th>
<th>Sibling(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natives</td>
<td>25.8</td>
<td>29.2</td>
<td>33.8</td>
<td>37.5</td>
</tr>
<tr>
<td>CC Trfs.</td>
<td>41.5</td>
<td>27.5</td>
<td>30</td>
<td>32.7</td>
</tr>
<tr>
<td>4-Yr. Trfs.</td>
<td>4.0</td>
<td>10</td>
<td>15.8</td>
<td>30</td>
</tr>
</tbody>
</table>

By Gender, 35% of the females reported that they were the *First in the family*. Males were more likely to answer *Both parents have degrees*, 36%, or *Brother(s) or sister(s) have a degree*, 44%. Of the Ethnic group participants, Native Americans reported the highest percentages of first in the family to get a degree, 71%. Hispanics were second, 50%, and Asians were last, 7%.
When family members holding degrees were compared by 1989 family income levels, 41% of those from families with incomes "Under $20,000" responded "was the first" in family to get a degree. In the "$50,000 and over" bracket, only 18% of the participants indicated I was the first to earn a baccalaureate degree, while 45% of those who reported the highest range family incomes responded that Both parents have degrees. A graphic display of the data related to baccalaureate degrees held and family income is found in Figure 51.

Figure 51
FAMILY MEMBERS HOLDING BACCALAUREATE DEGREES
BY INCOME RANGE

Thirty per cent (30%) of ASUs participants in the study disclosed, I was the first in my family to obtain a baccalaureate degree. GCU had the most responses, 31%, A parent has a degree, while 29% of the NAU participants reported Both parents have degrees. Those responding from the UofA indicated the higher percentage of siblings holding degrees with 32%.

When considering their mother's education level, 32% of the respondents reported Some college or trade school, followed by 27% who had Graduated from high school and 20% who had Finished college at 4-year level. Fathers' level of education showed less
There were significant differences by Classification Group and by Gender and Age categories as related to the educational levels attained by both the mother and the father of participants. The differences were significant by participant Gender for mothers and by participant Age category for both the fathers, and the mothers. Thirty per cent of the Native university student group had fathers who had earned a "Master's or other advanced degree" compared to 12% for C.C. Transfers. Of the Native University Students group's mothers, 23% reported that they had \textit{Finished college at the 4-year level}, while only 15% of the mothers of C.C. Transfers reported reaching the baccalaureate educational level. Data collected on the level of educational attainment by the fathers and mothers by Classification Group of participants are presented in Figure 53.
Fathers of both male and female respondents had more *Masters or other advanced degrees*, 21 and 29%, compared to 8 and 11% for mothers. The parents of males showed more advanced degrees than the parents of females.

There were significant differences in family education by Ethnic group. Black and Asian participant groups reported the highest percentage of fathers holding a *Master's or other advanced degree* with 50% and 33% respectively. Twenty-four per cent (24%) of the mothers of the Asian group participants had *Finished college at 4-year level*.

**Impressions Related to College Experience**

Four questions on the survey instrument asked the participants to provide the researchers with subjective feedback on problems and factors which either impeded or facilitated their collegiate success at either the Primary Transfer College or at the Baccalaureate University. A brief summary of these subjective responses on these items by study participants is presented here. The recommendations for the C.C. Transfer participant group on question B.48 based on their experiences while enrolled at the Primary Transfer College are emphasized.
Criticisms of the Collegiate Experience

The areas of concern most reported by all participants were: finances (or lack of them), scheduling (including number of class sections, closed classes, number of terms specific courses were offered, and the time of day they were offered), advising (including quality, accessibility, attitudes of advisors), teaching (including quality, availability, and faculty and institutional priorities), and the educational bureaucracy (including "Red Tape", attitudes of support and other personnel, and accessibility to decision makers and to helpful information). Following are selected examples of some of these responses. Many of them had to do with participant experiences at the Baccalaureate University.

I. Finances - "Difficulty in earning enough $ fast enough to pay such large bills"
   "Having to work 2 jobs each semester to afford to go to school"
   "Financial assistance - you would really get the run around"

II. Scheduling - "Classes being closed due to shortage of professors/money"
   "Unavailability of certain required courses each semester"
   "Two of the courses required to complete my degree were canceled at the last minute thereby delaying my graduation date one semester"

III. Advising - "Poor advisement. Could see 3 advisors & get 3 different answers. Last semester surprises pop up about courses needed"
   "The lack of assistance or concern on behalf of academic advisors"
   "Getting correct info(rmation) from counselors"
   "Advisement was almost non-existent. It was only through the 'grapevine' that I was able to find out what I needed . . . for graduation."
   "Poor advice from "official" advisors, their poor advice cost me another full academic year."

IV. Teaching - "Poor instructors - not that these people aren't intelligent, there are many smart people who are bad teachers."
   "Some TERRIBLE teachers/professors made dropping classes necessary and delayed completion."
   "Many professors were more concerned with research than teaching."
   "Ill-prepared teachers that lacked motivation to teach courses at night."
   "Lack of interest (from professors) due to large classes."
V. Bureaucracy- "It seemed that the rules were designed to "get rid of" students rather than help them."
  "Administration & red tape"
  "Lack of understanding of the xxx employees, on who at xxx does what. The administration process is very confusing."
  "University staff not dealing with students on a personal basis but as a number and burden basis."

Suggestions for Improving the Collegiate Experience

The participating graduates were invited to make recommendations that might be used in strengthening the areas which provided the most difficulty to them in successfully completing their degree programs. The most frequently reported subject was finances, followed by scheduling, advising, and teaching. Suggestions are quoted by topic directly from the completed survey instruments.

I. Finances - "More paying jobs...preferably in field of study."
  "Better, clearer ways to apply for financial aid."
  "More grants/scholarships for students working their way through college"
  "More financial assistance for students who are middle class."
  "Less of an advisorial relation with students and more partial scholarships based on need and fewer full riders and sports scholarships."

II. Scheduling - "Better selection of night courses."
  "Make REQUIRED courses available both fall and spring semesters."
  "To have classes at night and better dept. coordination to not offer two required classes at same time."
  "Hire more profs to keep classes open, or restructure classes to accommodate all."
  "Classes that are required for many programs should be offered more than one section at more than one time."

III. Advising - "Statewide coordination between community colleges and universities (as far as required courses for major)."
  "Make sure that advisors are people that have the TIME and ability to correctly advise students who truly need help."
  "Have professors serve as advisors."
  "Have transfer students meet with an advisor of their choice before admission."
"Advisors that are readily available and well-informed on new guidelines and requirements."

IV. Teaching - "Hire more vital, enthusiastic professors to teach basic math courses, or dispose of the math requirement altogether."

"Make all professors and TA's take a brief course in effective teaching methods."

"More teachers and assistants."

"I believe instructors should be screened by a faculty committee and by a student committee."

"Reduce the student-to-faculty ratio. Bring in new professors who are more enthusiastic about the subjects they teach."

"Hire better qualified instructors and reward them appropriately."

"Attend a CC first."

Suggestions for Improving Services at Primary Transfer College

More than a hundred study participants offered suggestions for the improvement of the Primary Transfer College experience. They focused on two major themes which continually reoccurred in various student statements. (A portion of these unedited suggestion are presented in an appendix to this report.)

The first theme encouraged the development of better coordination among the levels of education--especially between community college faculty and advisors and university faculty and advisors.

The second theme called for better informed community college advisors on the requirements for transfer to the university and to couple advisement with accurate and up-to-date literature related to the transfer process.
SUMMARY

The purpose of this study was to compare the state's community college transfers (C.C. Transfers), four-year transfers, and native students. The study focused on a sample from the Spring, 1990, graduating classes at Arizona State University (ASU), Grand Canyon University (GCU), Northern Arizona University (NAU), and the University of Arizona (UofA). A questionnaire was sent to a sample of 930 graduates with 519 usable responses completed and returned. The study sample included the following number of graduates: ASU (215), GCU (32), NAU (93), and UofA (179).

The C.C. Transfer participants' primary objectives for attending their transfer college were reported as (1) to take a transfer program and (2) to earn a degree. The overall primary objective for attending the baccalaureate university reported by all participants was to earn a baccalaureate degree. The educational expectation of transfer participants upon entering their primary college was to: finish college, obtain two or more years of college, and/or enter/finish graduate/professional school. Graduates reported overall satisfaction with their transfer college preparation related to taking the right courses, having sufficient preparation for the rigor of papers, exams and reading, as well as with the general knowledge and skills they received in preparation for university work.

Transfer participants believed their primary college had encouraged them in their academic endeavor by preparing them for transfer and by stimulating them to become more interested in learning new things. The Associate degree (AA) was earned by 17% of the participants for transfer purposes. More females completed AA's, and the percentage of AA's held appears to increase with the age of the participant. Two-thirds of those holding the AA believe it was of benefit to them. The principal reason given by participants for selecting their transfer college was location and cost efficiency. Participants selected their baccalaureate university because of its location and reputation.

Twenty-eight per cent of the transfer graduates reported having taken courses which they thought would transfer, but which later were not accepted by the baccalaureate university. Conversely, 10% took courses which they thought would not transfer but which did in fact transfer. The C.C. Transfers performed more than comparably with the other Classification Group members when grade point averages (GPA) were considered. The final semester GPAs were 3.31 for C.C. Transfers, 3.23 for Native University Students, and 3.06 for Four-year College Transfers. Slightly more C.C. Transfers participants (4%) recorded 4.00 GPAs in their final semester than did those in the native university student group studied.
The results of this study reinforce much of the contemporary research on community college transfer student performance which indicates that once the "shock" of the transfer activity is over, those students who transfer from the community college compete extremely favorably when compared with Native University Students. In fact, the Student Success study seems to substantiate the notion that not only do community college transfers compete with Native University Students, but by the end of their final semesters they tend to outperform their native student colleagues as well. These data when considered in combination with the overall strong satisfaction ratings of transfers with the community college experience, provides substantial evidence that Arizona's community colleges are, indeed, fulfilling the mission of providing a quality experience for those students whose ultimate goal is the achievement of the bachelor's degree.
APPENDIX A

Graduates' Suggestions for Improved Transfer Services
GRADUATES' SUGGESTIONS FOR IMPROVED TRANSFER SERVICE

The graduates were asked *What recommendation could you make to this college which would result in improved service to student who will eventually transfer?* Selected verbatim replies are listed below.

- More math tutors
- Make coordinated efforts w/Univ. advisors to make sure of transfer credits.
- Coordinate programs w/4-yr college & advise students accordingly (I understand this is now done).
- Nothing
- Show or advertise options to students.
- Be honest in that the Comm. College environment is not nearly as challenging as the Univ.
- Classes that will transfer and a set of guidelines for classes . . . best taken during CC years.
- Get advisors that know what they're doing.
- None
- None
- Better communication w/4-yr colleges- advisor was not sure about courses needed/which would transfer
- More encouragement to the students to seek assistance in this.
- Better advisors (more informed about what transfers to Universities in Arizona.
- Talk w/College you transfer TO to make sure the Jr.(Coll.) classes transfer, don't just believe the JC.
- Coordinate more closely . . . (with) the universities.
- More accurate & up-to-date info on requirements in specific colleges such as Education.
- Post more (advertise more) info about what credits transfer/HOW to transfer.
- Understanding and knowing what classes will or will not transfer to a 4-year college.
- None
- Continued encouragement--they (the C.C.) did fine when we students asked for help.
- Nothing more specific to offer
- Counselors grossly unaware of Univ. reqs. & relied strictly on handouts.
- Impossible to get answers.
- Freshman need to be informed on options/classes each semester when degree unknown/avoid wasting time
- None
- Use of same books as the University.
- Make students work harder? Less "job training" more learning of things we won't get in "real world"
- Minority recruitment
- Have a way to let students know it's time to go! ASU advisor told me I had too many hours at . . . (C.C.)
- Better information about what courses transfer to 4-yr universities.
- No comments
- A knowledgeable advisor. Clearly advise student concerning transfer credit/so don't waste time & $.
- None
- Teacher accountability
- No accommodation. I did not need services. I followed . . . (univ.) catalogue.
- Be specific, explicit, and clear about exactly what classes are needed.
- Should list classes that transfer to specific colleges such as Engineering.
- Make tuition more affordable.
- CC's doing excellent job/advising inc. ASU, but ASU needs more contact regarding reqs, reps at CC's.
- Improve campus appearance to make it more appealing to local HS seniors & improve scholastic level.
- None. The info is there & I got it. It's only when students are lazy that they don't get the info.
- Look closer at student's previous education to see if any previous college credits can be used.
- Have counselors better prepare students who know they will transfer, or have org. provide counselors
- No problems - no recommendations
- Encourage students to meet general studies requirements to obtain degree.
- Keep up the good work
- All advisors (or at least more) should be knowl. of reqs for transfer to local universities.
- Have Counselors/advisors strongly recommend select major by 2nd yr, specify req'd. transfer courses.
- Be tougher on lazier, immature students. Don't let them goof off. Some are coddled at CC's.
- Better counseling
  - (1) Accurate transfer info (2) Counselors that don't (try to) push you into an AA degree.
- None
- Let new students know exactly what they need to do to get a 2-yr degree in 2 yrs., avoid wasting time
- Cont. to provide students w/knowl. advisors so students won't waste time on classes they don't need.
- The... degree at the Community College should have included more math classes.
- Have booklets & seminars on what you need to do to transfer.
APPENDIX B

Cover Letters and Post Cards
Used in the Study
Dear ASU 1990 Graduate,

Congratulations on earning your degree. Because you have successfully completed that degree we need your insight and assistance. We are conducting a research study to compare community college students with others at baccalaureates graduation. The presidents of ASU, GCU, NAU, and U of A endorse the study.

You have been selected to be in a group from which a sub-group will be mailed questionnaires within two weeks. Your responses will be held confidential and accumulated with all others in the report.

We hope you will complete and return it as soon as you can, because the universities and community colleges will use this information to better serve future students. Thank you in advance for your assistance.

Wayne M. McGrath, Director
Arizona Community College Board

M. J. Price, Research Associate and
Arizona State Univ. Graduate Student
May 29, 1991

Dear 1990 ASU Graduate:

As described in our previous postcard, we are enclosing the questionnaire which seeks to compare community college transfer students with four-year native students at the time of graduation. The Arizona Community College Board is sponsoring the project, and the presidents of Arizona State University, the University of Arizona, Northern Arizona University and Grand Canyon University have all endorsed it.

Since you have successfully completed your degree, you can provide insight and assistance that will help us to better serve future students. Therefore, we hope you will complete the questionnaire and return it at your earliest opportunity. This questionnaire is for research purposes only and your answers will be held confidential. All answers will be merged together so that no individual will be identified in the report.

A stamped, self-addressed envelope is enclosed for you to use to return the completed survey.

An identification number has been placed in the upper right corner of your questionnaire's cover page. It will be used in a drawing for an ASU sports blanket. To be eligible to win the ASU prize, you must return your completed questionnaire.

We appreciate your assistance in helping us to better serve Arizona's students.

Sincerely,

Wayne M. McGrath
Executive Director

M. J. Price
Research Associate and
ASU Graduate Student

Enclosures
April 15, 1991

Dear ASU Graduate:

I hope you will take a moment to complete and return the enclosed questionnaire prepared on behalf of the Arizona Community College Board. We appreciate and value your experiences and insights into higher education in Arizona. Your participation in this survey will provide important information to the University as well as to the state’s community colleges.

Thank you for your help and cooperation.

Sincerely,

Lattie F. Coor
President

LFC:hi
4a3

Enclosure
May 29, 1991

Dear 1990 Grand Canyon Graduate:

As described in our previous postcard, we are enclosing the questionnaire which seeks to compare community college transfer students with four-year native students at the time of graduation. The Arizona Community College Board is sponsoring the project, and the presidents of Grand Canyon University, Arizona State University, the University of Arizona, and Northern Arizona University have all endorsed it.

Since you have successfully completed your degree, you can provide insight and assistance that will help us to better serve future students. Therefore, we hope you will complete the questionnaire and return it at your earliest opportunity. This questionnaire is for research purposes only and your answers will be held confidential. All answers will be merged together so that no individual will be identified in the report.

A stamped, self-addressed envelope is enclosed for you to use to return the completed survey.

An identification number has been placed in the upper right corner of your questionnaire's cover page. It will be used in a drawing for a Grand Canyon University commemorative clock. To be eligible to win the GCU prize, you must return your completed questionnaire.

We appreciate your assistance in helping us to better serve Arizona's students.

Sincerely,

Wayne M. McGrath
Executive Director

M. J. Price
Research Associate and ASU Graduate Student

Enclosures
OFFICE OF THE PRESIDENT

April 3, 1991

Dear Graduate:

The Arizona Community College Board's research project being conducted by one of ASU's current students has been endorsed by this office. We hope that you will set aside the time to complete and return the enclosed questionnaire. It will provide useful information to the university as well as to the state's community colleges. We need the benefit of your experiences.

Thanks for your cooperation.

Sincerely,

Bill Williams
President

BW:jh
May 29, 1991

Dear 1990 NAU Graduate:

As described in our previous postcard, we are enclosing the questionnaire which seeks to compare community college transfer students with four-year native students at the time of graduation. The Arizona Community College Board is sponsoring the project, and the presidents of Northern Arizona University, Arizona State University, the University of Arizona, and Grand Canyon University have all endorsed it.

Since you have successfully completed your degree, you can provide insight and assistance that will help us to better serve future students. Therefore, we hope you will complete the questionnaire and return it at your earliest opportunity. This questionnaire is for research purposes only and your answers will be held confidential. All answers will be merged together so that no individual will be identified in the report.

A stamped, self-addressed envelope is enclosed for you to use to return the completed survey.

An identification number has been placed in the upper right corner of your questionnaire's cover page. It will be used in a drawing for a complimentary overnight stay for two at the Inn at NAU. To be eligible to win this prize, you must return your completed questionnaire.

We appreciate your assistance in helping us to better serve Arizona's students.

Sincerely,

Wayne M. McGrath
Executive Director

M. J. Price
Research Associate and
ASU Graduate Student

Enclosures
Dear Graduate:

The Arizona Community College Board's research project being conducted by one of ASU's current students has been endorsed by this office. We hope that you will set aside the time to complete and return the enclosed questionnaire. It will provide useful information to the university as well as to the state's community colleges. We need the benefit of your experiences.

Thank you for your cooperation.

Sincerely,

[Signature]

Eugene M. Hughes
President

EMH:pv

Enclosure
May 29, 1991

Dear 1990 U of A Graduate:

As described in our previous postcard, we are enclosing the questionnaire which seeks to compare community college transfer students with four-year native students at the time of graduation. The Arizona Community College Board is sponsoring the project, and the presidents of University of Arizona, Arizona State University, Northern Arizona University and Grand Canyon University have all endorsed it.

Since you have successfully completed your degree, you can provide insight and assistance that will help us to better serve future students. Therefore, we hope you will complete the questionnaire and return it at your earliest opportunity. This questionnaire is for research purposes only and your answers will be held confidential. All answers will be merged together so that no individual will be identified in the report.

A stamped, self-addressed envelope is enclosed for you to use to return the completed survey.

An identification number has been placed in the upper right corner of your questionnaire's cover page. It will be used in a drawing for a U of A blanket. To be eligible to win the U of A prize, you must return your completed questionnaire.

We appreciate your assistance in helping us to better serve Arizona's students.

Sincerely,

Wayne M. McGrath
Executive Director

M. J. Price
Research Associate and
ASU Graduate Student

Enclosures
Dear Wildcat:

I want to encourage you to complete and return the enclosed questionnaire. It is going to selected graduates of all three Arizona universities as part of a tri-university study.

In order to serve the people of Arizona as well as we can, and in order to improve our programs, we need to know about the experiences and opinions of our graduates. I endorse this study and hope that our own University of Arizona graduates will be fully represented in the data that is collected.

Cordially,

Henry Koffler
President

HK:nv
Enclosure
ARIZONA STATE COMMUNITY COLLEGE BOARD (602)255-4037
June 24, 1991

Dear U of A Grad:

Two weeks ago a questionnaire requesting information about your college experience was mailed to you. If you have already completed and returned it to us, please accept our thanks.

Because you were selected as part of a limited sample of 1990 U of A grads, your response is extremely important— if not crucial—to the success of this research. Also, we want to include you in the drawing for the U of A sports blanket.

If by some chance you did not receive the questionnaire, or it got misplaced, please contact the State Board office, give us your name and current address, and we’ll send you one. Again, your cooperation is appreciated.

Sincerely,

Wayne McGrath
Executive Director

M. J. Price
Researcher

3225 N. CENTRAL AVENUE, SUITE 1220, PHOENIX, AZ 85012
July 18, 1991

Dear 1990 ASU Graduate:

Three weeks ago we wrote to you seeking your insight and assistance to compare community college transfer students with four-year transfer students, and native students at the time of graduation. As of today, we have not received your completed questionnaire.

We are writing to you again because of our belief that because you have successfully completed your degree, your answers will be helpful to future students by providing important information to our colleges and universities. The university presidents have endorsed the study because they also feel it will be helpful.

We have placed a number in the upper right corner of the questionnaire which will be placed in a drawing for an ASU sports blanket. This is a way we have to thank you for returning the completed questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed along with a stamped, self-addressed envelope. Your responses are confidential and no identification of any participant will be reported.

Thank you for your assistance. Your contribution will help us to better serve Arizona's students.

Sincerely,

Wayne M. McGrath
Executive Director

M. J. Price
Research Associate
ASU Graduate Student

Enclosures
July 18, 1991

Dear 1990 GCU Graduate:

Three weeks ago we wrote to you seeking your insight and assistance to compare community college transfer students with four-year transfer students, and native students at the time of graduation. As of today, we have not received your completed questionnaire.

We are writing to you again because of our belief that because you have successfully completed your degree, your answers will be helpful to future students by providing important information to our colleges and universities. The university presidents have endorsed the study because they also feel it will be helpful.

We have placed a number in the upper right corner of the questionnaire which will be placed in a drawing for a GCU clock. This is a way we have to thank you for returning the completed questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed along with a stamped, self-addressed envelope. Your responses are confidential and no identification of any participant will be reported.

Thank you for your assistance. Your contribution will help us to better serve Arizona's students.

Sincerely,

Wayne M. McGrath
Executive Director

M. J. Price
Research Associate and ASU Graduate Student
July 18, 1991

Dear 1990 NAU Graduate:

Three weeks ago we wrote to you seeking your insight and assistance to compare community college transfer students with four-year transfer students, and native students at the time of graduation. As of today, we have not received your completed questionnaire.

We are writing to you again because of our belief that because you have successfully completed your degree, your answers will be helpful to future students by providing important information to our colleges and universities. The university presidents have endorsed the study because they also feel it will be helpful.

We have placed a number in the upper right corner of the questionnaire which will be placed in a drawing for a nights stay for two at the Inn at NAU. This is a way we have to thank you for returning the completed questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed along with a stamped, self-addressed envelope. Your responses are confidential and no identification of any participant will be reported.

Thank you for your assistance. Your contribution will help us to better serve Arizona's students.

Sincerely,

Wayne M. McGrath
Executive Director

M. J. Price
Research Associate and ASU Graduate Student

Enclosures
July 18, 1991

Dear 1990 UofA Graduate:

Three weeks ago we wrote to you seeking your insight and assistance to compare community college transfer students with four-year transfer students, and native students at the time of graduation. As of today, we have not received your completed questionnaire.

We are writing to you again because of our belief that because you have successfully completed your degree, your answers will be helpful to future students by providing important information to our colleges and universities. The university presidents have endorsed the study because they also feel it will be helpful.

We have placed a number in the upper right corner of the the questionnaire which will be placed in a drawing for a UofA sports blanket. This is a way we have to thank you for returning the completed questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed along with a stamped, self-addressed envelope. Your responses are confidential and no identification of any participant will be reported.

Thank you for your assistance. Your contribution will help us to better serve Arizona’s students.

Sincerely,

Wayne M. McGrath  
Executive Director

M. J. Price  
Research Associate and  
ASU Graduate Student

Enclosures
APPENDIX C

The Arizona Student Success Survey Instrument
Different Paths to Academic Success

NOTE: if you earned a Baccalaureate Degree prior to the one you received in the Spring, 1990, do not complete this questionnaire. Instead, please circle the statement immediately below, tear off this cover page, and return it in the enclosed self-addressed, stamped envelope. Thank you.

I have a previous Baccalaureate Degree.

If the Baccalaureate Degree you received in the Spring, 1990, was your first, please proceed with the questionnaire.
**Instructions**

1. Circle the number of the response(s) which best fits your college experience.
2. Follow the special instructions in bold print.
3. Note that there is a "skip pattern" used throughout the questionnaire, making it unnecessary for you to answer every question.
4. Section "A" asks questions about your baccalaureate university unless stated otherwise.
5. Section "B" is for those who were transfer students (defined as having transferred 24 or more credit hours.)

**Major Definitions**

**COLLEGE** - means university, four-year college, community college, or junior college.

**FOUR-YEAR STUDENT** - a college/university student who has never transferred or who has transferred less than 24 semester hours.

**TRANSFER STUDENT** - a college/university student who has transferred 24 or more semester hours of credit from a two-year or four-year college to a baccalaureate degree granting institution.
These questions pertain to your Baccalaureate University experience unless stated otherwise.

First, we would like to know about your planning for college, your goals and choices.

A.1 What was your principal objective for enrolling in courses at this baccalaureate institution? (Circle one number only)
1 To obtain a job
2 To help me with my job
3 To pick up a few courses for transfer to another school
4 To take a program to prepare for transfer to another 4-year school
5 To earn a baccalaureate degree
6 Other (Specify) ________________________________

A.2 What was the highest level of education you planned to attain when you began college work at this institution? Was it:
1 Less than two years of college
2 Two or more years of college
3 To finish college (4 or 5-year degree)
4 To attend graduate or professional school
5 Other (Specify) ________________________________

A.3 What source(s) of information did you use to help select your courses? (For example: advisor, counselor, catalogue, friends, parents, etc.)

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
A.4 If you were a four-year student at this university (defined as having less than 24 transfer hours), how long had you been certain of your major? Had you decided:

1. Since beginning college
2. Since before junior year
3. Since before senior year
4. During the senior year
5. I had 24 or more transfer hours from at least one college

A.5 If you transferred (defined as having 24 or more credit hours) from another college, how long had you been certain of your major? Had you decided:

1. Since beginning college
2. Not at the beginning, but before transferring
3. At time of transfer, but not before transferring
4. Not until after transferring
5. During the senior year
6. I did not transfer 24 or more hours

A.6 Did you receive an associate degree at any of your previous colleges?

1. No (Skip to A.8)
2. Yes, associate degree for purposes of transfer
3. Yes, associate degree for purposes of a job
4. Yes, associate degree (Not specified as 2 or 3)

A.7 Did completing the associate degree provide any benefits to you in the completion of your four-year degree?

1. Yes. What were they? __________________________________________
   __________________________________________
   __________________________________________

2. No. Why not? __________________________________________
   __________________________________________
   __________________________________________
The next section will help us understand what potential students consider when they are choosing a college.

A.8-A.24 Following are reasons often given for selecting a college. Please circle the number for each statement if this reason was very important, somewhat important, or not important in your selection of this university.

<table>
<thead>
<tr>
<th></th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.8</td>
<td>Availability of financial aid</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.9</td>
<td>Availability of specific program</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.10</td>
<td>Reputation of academics at university</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.11</td>
<td>Friends going to the university</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.12</td>
<td>Advised by a counselor</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.13</td>
<td>Able to return home frequently</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.14</td>
<td>Able to improve English, reading, and math skills</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.15</td>
<td>To see if I would do well in college</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.16</td>
<td>Able to live at home</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.17</td>
<td>Availability of training for a job</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.18</td>
<td>To be where I could feel I belonged</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.19</td>
<td>Advised by a parent</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.20</td>
<td>Did not meet admission standards of first-choice college</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.21</td>
<td>Able to be away from home</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.22</td>
<td>Time efficient way to get baccalaureate degree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.23</td>
<td>Cost efficient way to get baccalaureate degree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>A.24</td>
<td>Liked the university’s location</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

A.25 What other important reasons did you have for selecting this university?
A.26 Was this university your first choice for your baccalaureate degree?
1 Yes (Skip to A.28)
2 No. Why not? ________________________________

(Continue to A.27)

A.27 Which college/university was your first choice?

(Skip to A.29)

A.28 Were you admitted to this university when you wanted, without any delays?
1 Yes
2 No, applied too late
3 No, it was filled, put on waiting list
4 No, other (Specify) ________________________________

A.29 Was your baccalaureate degree in the major or department of your first choice?
1 Yes (Skip to A.31)
2 No. Why not? ________________________________

(Continue to A.30)

A.30 What was your first choice major or department? ________________________________

(Skip to A.32)

A.31 Were you admitted into your first choice major or department when you wanted, without any delays?
1 Yes
2 No, applied too late
3 No, major or department filled, put on waiting list
4 No, other (Specify) ________________________________
Funding your college work is often very influential in your choice of institutions.

A.32-A39 How did you finance your education at this university? Which of the following common methods of financing a college education applied to you? (Circle all that apply)

<table>
<thead>
<tr>
<th>Applied?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.32</td>
<td>Received state or federal aid from this college</td>
<td>1</td>
</tr>
<tr>
<td>A.33</td>
<td>Received financial assistance from employer</td>
<td>1</td>
</tr>
<tr>
<td>A.34</td>
<td>Had a private loan</td>
<td>1</td>
</tr>
<tr>
<td>A.35</td>
<td>Had a scholarship</td>
<td>1</td>
</tr>
<tr>
<td>A.36</td>
<td>Parent(s) paid for some or all costs</td>
<td>1</td>
</tr>
<tr>
<td>A.37</td>
<td>Had other state or federal assistance, such as DVR, Veteran's benefits, GSL, or BIA</td>
<td>1</td>
</tr>
<tr>
<td>A.38</td>
<td>Savings</td>
<td>1</td>
</tr>
<tr>
<td>A.39</td>
<td>Earned money while taking courses</td>
<td>1</td>
</tr>
</tbody>
</table>

Your observations about your college experiences are requested in this section.

A.40 In general, how would you characterize your experience at this university? (Circle one number only)

1 Very satisfactory
2 Somewhat satisfactory
3 Neutral (No opinion)
4 Somewhat dissatisfied
5 Very dissatisfied

A.41 What was the key to your success in completing your degree? (The one thing which gave you the most help)

_____________________________

_____________________________

5
A.42 What one factor gave you the greatest difficulty in completing your degree?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

A.43 What recommendation(s) can you make to improve the area you just described?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

A.44 Did you participate in any university or student organizations (e.g., student newspaper, academic clubs, social clubs)?

1 Yes. What were they? ____________________________________________

________________________________________________________________________

2 No

A.45 Did you have personal contacts with faculty members and/or other university staff members?

1 Yes

2 No
We would like to know about the pathway you chose toward academic success.

A.46 Did you ever attend two or more colleges at one time?
1 Yes (Continue to A.47)
2 No (Skip to A.49)

A.47 What are the names of those colleges? (Do not abbreviate)
1 ________________________ and ________________________ and
________________________ and ________________________
2 ________________________ and ________________________ and
________________________ and ________________________
3 ________________________ and ________________________ and
________________________ and ________________________
4 ________________________ and ________________________ and
________________________ and ________________________

A.48 What are the reasons you attended two or more colleges at the same time? (Circle all that apply)
1 Time of day I could attend class
2 Desired courses not all offered at any one college
3 Courses "closed" at one college
4 Location more convenient
5 Cost
6 Smaller class size
7 Other (Specify) ______________________________
A.49 Please list in chronological order all the colleges you have attended. (Do not abbreviate)

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

A.50 After you attended a 4-year college, did you ever then attend a community college?

1. Yes (Continue to A.51)

2. No (Skip to A.52)

A.51 Please indicate your reasons for attending a community college after having attended a four-year college. (Circle all that apply)

1. Time of day I could attend class

2. Desired courses not offered at the four-year college

3. Courses "closed" at the four-year college

4. Availability of developmental courses

5. Location more convenient

6. Cost

7. More personal and helpful environment at the community college

8. Smaller class size

9. Smaller campus size

10. Academic difficulty

11. Concerned faculty members

10. Student services (tutors, advising, counseling, etc.)

11. Other (Specify)
A.52 When did you take most of your courses at your baccalaureate university? (Circle one number only)
1 Weekdays before 9:00 a.m.
2 Weekdays during the day
3 Weekdays after 5:00 p.m.
4 On weekends

Now, we would like to ask some questions about your general background, and future expectations to help us interpret the study results.

A.53 When you first entered this institution, how many years had it been since you first started taking courses which lead to your bachelor's degree? (Fill In)

_________________________ (Number of years)

A.54 Prior to beginning college courses for your baccalaureate degree, what was your primary occupation? Were you: (Circle one number only)
1 A student, (Skip to A.56)
2 A homemaker, (Skip to A.56)
3 In military service? (Skip to A.56)
4 Employed full-time, (Continue to A.55)
5 Employed part-time, (Continue to A.55)
6 Other (Specify): __________________________________________________________

(Continue to A.55)

A.55 What kind of job or occupation did you have? (For example: salesperson, waiter/waitress, assembler, etc.)

(Specify): ________________________________________________________________
A.56 What was your primary occupation while you attended this college in addition to being a student? Were you: (Circle one number only)

1. On work-study
2. Employed part-time (not as work-study)
3. A full-time homemaker
4. Employed full-time
5. Full-time military
6. Not employed
7. Other (Specify): __________________________

A.57 What was your grade average in high school? (e.g., C+, C-, or C-) (Fill In)

_______ (Grade)

Success in college is often related to one’s background, so we would also like to ask you the following questions.

A.58 Had any one else in your family also received a baccalaureate degree? (Circle all that apply)

1. None, I was the first
2. A parent has a degree
3. Both parents have degrees
4. Brother(s) or sister(s) has/have a degree
5. Other (Specify) __________________________

A.59 What was the highest level of education which your mother had completed by the time you started college? (Circle one number only)

1. Some high school or less
2. Graduated from high school
3. Some college or trade school
4. Finished college at 4-year level
5. Master’s or other advanced degree
6. Other (Specify) __________________________
A.60 What was the highest level of education which your father had completed by the time you started college?
1. Some high school or less
2. Graduated from high school
3. Some college or trade school
4. Finished college at 4-year level
5. Master's or other advanced degree
6. Other (Specify) ________________________

A.61 Which of the following statements, about family status applied to you during your last year at this university? Did you live:
1. Alone with dependent children
2. With spouse and dependent children
3. With spouse without dependent children
4. With parents
5. On campus
6. Alone
7. With non-related adult(s)
8. Other (Specify) ________________________

A.62 Please circle the number for your total 1989 family income: (Include your parents' income, if your university regarded them as responsible for part of the cost of your education.)
1. Under $20,000
2. Between $20,000 and $30,000
3. Between $30,000 and $40,000
4. Between $40,000 and $50,000
5. $50,000 or more

A.63 How many people are in the family for the income level which you just described? (Fill In)

____________ (Number in family)
Finally, we would like to talk about your plans for the future.

A.64 What is your main activity one year after graduation? (Circle one number only)
1 Working for pay
2 Armed forces, active duty
3 Homemaker
4 Further higher education
5 Other (Specify) ____________________________________________________________________

A.65 How closely is that activity related to your baccalaureate degree? Is it:
1 Very closely related
2 Somewhat related
3 Not at all related
4 Don't know

A.66 If you plan to pursue further schooling, will your school be:
1 A graduate or professional school
2 A two-year college
3 A four-year college
4 Other (Specify) ____________________________________________________________________

A.67 What field will you be most likely to pursue in graduate/professional school?
1 (Specify) ________________________________________________________________________
2 Don't know

If you transferred twenty-four or more credits into your baccalaureate granting university, please proceed to the following section of the questionnaire regarding your principal transfer college.

If you did not transfer twenty-four or more credits into your baccalaureate granting university, this is the end of your questionnaire. We want to thank you for your time and effort in helping us with this important study.
The questions in this section pertain to your Principal Transfer College (where you earned 24 or more credits that were transferred to your baccalaureate university).

We would like to know about your planning and goals when you chose this principal transfer college.

B.1 Name of principal transfer college:

B.2 What was the highest level of education you planned to attain when you began college work at this institution? Was it: (Circle one number only)

1. Graduation from high school, or GED
2. Vocational, trade, or business school after high school
3. Less than two years of college
4. Two or more years of college (including a 2-year degree)
5. To finish college (4 or 5-year degree)
6. Graduate or professional school
7. Other (Specify)

B.3 What was your foremost objective for taking courses at this college? (Circle one number only)

1. To earn a transfer degree to transfer with general education requirements (Continue to B.4)
2. To pick up a few courses for transfer to another college (Continue to B.4)
3. To take a program to prepare to transfer to a 4-year college (Continue to B.4)
4. To earn a bachelor's degree (Continue to B.4)
5. To obtain a job (Skip to B.6)
6. To help me with my job (Skip to B.6)
7. To earn a high school diploma or G.E.D. (Skip to B.6)
8. Other (Specify)
B.4 Did you select your courses at this college to meet transfer requirements of specific college/university?

1 No, I didn't know the specific college (Continue to B.5)
2 No, I didn't plan courses to meet transfer requirements (Continue to B.5)
3 Yes (Skip to B.6)

B.5 What source(s) of information did you use to help you select your courses? (Specify)
Following are reasons often given for selecting a college. Circle the number for each statement if this reason was very important, somewhat important or not important in your selection of your primary transfer college.

<table>
<thead>
<tr>
<th></th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>Not Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.6</td>
<td>Availability of financial aid</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B.7</td>
<td>Availability of specific program</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B.8</td>
<td>Reputation of academics at college</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B.9</td>
<td>Friends going to the college</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B.10</td>
<td>Advised by a counselor</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B.11</td>
<td>Able to return home frequently</td>
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<tr>
<td>B.16</td>
<td>To be where I could feel I belonged</td>
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<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B.21</td>
<td>Cost efficient way to get bachelor's degree</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>B.22</td>
<td>Liked the college's location</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

B.23 What other important reasons did you have for selecting this college? (Specify)

---

---
The questions in this section refer to resources supporting your studies.

B.24-B.37 Following is a list of resources that are commonly available at colleges for students who want to transfer. These services include advising and printed information on the transferability of courses.

B.24 Would you have had reason to know about such services?
1 Yes (Continue to B.25)
2 No (Skip to B.39)

B.25-B.37 Please circle the numbers indicating which, if any, of these resources were made available to you and if you used them. (D.K. means don't know)

<table>
<thead>
<tr>
<th>Resources</th>
<th>Available?</th>
<th>Used?</th>
</tr>
</thead>
<tbody>
<tr>
<td>An advisor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>An advisor knowledgeable about transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College days where representatives of colleges and universities were present</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Printed information on the transferability of courses specific to your needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial aid information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information on the &quot;Closing Date&quot; for application to the colleges to which I wanted to transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information about prerequisites for courses I planned to take</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer information about all public and private 4-year colleges in Arizona</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Counseling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Career planning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Placement testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Campus clubs and organizations (e.g., student government, athletics, student clubs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Help with job placement while a student</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B.38 What additional information would you have liked to have had before transferring which you did not have access to? (Specify)
We would like to ask you several questions about your preparation for transfer while you were at this college.

B.39 How well did your work at this college prepare you for transfer in terms of having the right set of courses? Would you say that you were: (Circle one number only)

1. Very satisfied
2. Somewhat satisfied
3. Neutral (No opinion)
4. Somewhat dissatisfied
5. Very dissatisfied

B.40 How well did your work at this college prepare you for transfer in terms of preparation for the rigor of papers, exams, and reading? Would you say that you were: (Circle one number only)

1. Very satisfied
2. Somewhat satisfied
3. Neutral (No opinion)
4. Somewhat dissatisfied
5. Very dissatisfied

B.41 How well did your work at this college prepare you for transfer in terms of general knowledge and skills expected of students in the courses you took at the college you next transferred to? Would you say that you were: (Circle one number only)

1. Very satisfied
2. Somewhat satisfied
3. Neutral (No opinion)
4. Somewhat dissatisfied
5. Very dissatisfied

B.42 Did you take any courses at this college which you thought would transfer, but later found would not transfer?

1. Yes (Specify)

2. No
B.43 Were there any courses which you took at this college that you thought would not transfer, but which did eventually transfer?  
1. Yes (Specify)  

2. No

B.44-48 Continuing to focus on your principal transfer college, please circle the numbers indicating whether you agree strongly, agree, disagree, or disagree strongly about the following statements.

<table>
<thead>
<tr>
<th></th>
<th>Agree Strongly</th>
<th>Agree</th>
<th>Disagree</th>
<th>Disagree Strongly</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.44</td>
<td>This college encouraged me to plan to transfer</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>B.45</td>
<td>As a result of attending this college, I was encouraged to pursue additional education</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>B.46</td>
<td>As a result of attending this college, I became more interested in learning about new things than before</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>B.47</td>
<td>This college encouraged me to attempt to reach for higher goals than I had set for myself in the past</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

B.48 What recommendation could you make to this college which would result in improved service to students who will eventually transfer? (Specify)

B.49 Did you participate in any college organization (e.g., student newspaper, academic clubs, social clubs, etc.) at this college?  
1. Yes. What were they?  
2. No
B.50 Did you have personal contacts with faculty members and/or other college staff members?

1 Yes
2 No

The next few questions are about how you financed your principal transfer college work.

B.51-B.58 Which of the following common ways of financing your college education applied to you? (Circle all that apply)

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Finally, we want to know about your family status and class schedule choices.

B.59 Which of the following statements, about family status applied to you during your last year at your transfer college? Did you live: (Circle one number only)

1 Alone with dependent children
2 With spouse and dependent children
3 With spouse without dependent children
4 With parents
5 On campus
6 Alone
7 With non-related adults
8 Other (Specify)
When did you take most of your courses at this college? (Circle one number only)

1. Weekdays before 9:00 a.m.
2. Weekdays during the day
3. Weekdays after 5:00 p.m.
4. Weekends
PARTICIPANT COMMENTS

If you have additional comments which you think may help Arizona's colleges better serve their students, we'd appreciate your sharing them with us on the page below.
Thank you for your time and effort in helping us with this important study.

Higher Education