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Western Washington University Student Survey Series: Western Washington University Students Volume One

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The Western Washington University
Student Survey Series:
Western Washington University Students

Volume One

Carl Simpson

May, 1988

Preface to the WWU Student Survey Reports, Volumes One to Five

The Surveys

During Summer, 1986, Western's Vice President for Academic Affairs requested that the Office of Survey Research, located in the Sociology Department, conduct three inter-related surveys:

- A five year follow-up of 632 1982 Western graduates.
- A five year follow-up of 364 individuals who attended Western but left in 1982 without graduating and remained out of Western for at least one year.
- A survey of 1280 seniors enrolled during Spring, 1987, who had completed at least 155 credits.

A discussion of samples and research methods is included in Volume One of the reports based on these surveys.

The purposes of these surveys are to provide information to faculty and staff concerning students' background and orientations, to provide feedback about the relative quality and success of a Western education by asking about students' experiences while at Western and their evaluations of Western, and to describe the quality of former students' occupational and personal lives five years later.

These issues are discussed for Western students as a whole, and, where appropriate, for students in each collegiate unit within Western, as well as for transfer versus natives, men versus women, and other background differences.

The Organization of Reports

The reports are divided into five brief volumes. Each of the first three focuses on one set of measures. The fourth reviews the comments offered by students in response to open-ended questions about their experiences at Western. The fifth is a summary of the first four, written with the larger off-campus audience in mind. Each volume moves segmentally from one topic to the next, keeping each section as free-standing as possible so that the reader can locate the issues of greatest concern and focus on the appropriate sections.

This first volume, Western Washington University Students, begins with a brief review of our research method and then presents findings regarding students' backgrounds, majors, educational careers (transferring versus entering Western as freshmen, timing of choosing a major, educational aspirations, graduation versus non-graduation), orientations to the value of university education, and reasons for choosing particular majors.

Volume Two, Student Experiences and Perceptions, focuses on non-academic experiences such as sources of income and types of problems, students' utilization and evaluation of advising services and of various campus services and facilities, students' perceptions and evaluations of their majors, of General University Requirements, and of Western, overall.

Volume Three, Western Washington University Students Five Years Later, reviews former students' educational attainment, their employment and job quality, their satisfaction with a wide range of life qualities, and the role Western and their major field played in producing those life outcomes.

Acknowledgements

These projects benefitted from the input of Western's Deans and Vice Presidents. We received valuable technical assistance from Steve LaBree, Chris Goldsmith, and Evelyn Albrecht, as well as from the Data Entry and mailroom staffs.

Many sociology students, in Sociology 372, 410, and 310, participated in various phases of these projects. We hope that they will accept this acknowledgement as thanks for their good work.

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Volume One: Western Washington University Students

INTRODUCTION

During Summer, 1986, Western's Vice President for Academic Affairs requested that the Office of Survey Research, located in the Sociology Department, conduct three inter-related surveys. The first, a five year follow-up of former Western graduates, would provide feedback about the relative quality and success of a Western education by asking about students' experiences while at Western as well as about the quality of their occupational and personal lives five years later. In addition, it would ask these former students to offer their evaluations of Western from the perspective of five years' experience after graduation.

The second survey was necessitated by the first and is, in many senses, a part of the first: a five year follow-up of individuals who attended Western but left without graduating. Using the evaluations offered only by graduates would risk overestimating our success. If individuals who dislike some aspect of Western tend to leave, we need to talk with non-graduates as well as graduates in order to complete an accurate picture of Western and in order to get the critical information which may be most useful in guiding internal program improvement. Our research finds fewer differences between graduates and non-graduates than might have been expected, but the possibility of bias necessitated the inclusion of non-graduates in the follow-up survey. In addition, there is value in learning more about the large portion of students at Western who attend for a time but do not graduate from Western or who leave for an extended period and then return to complete their education here.

These two follow-up surveys offer an important "five years later" perspective on Western. By the same token, they suffer from the weakness that all the reports these students can offer on Western are retrospective. Both because some questions are better asked about current experiences and also because it is valuable to get students' impressions about Western in its current form rather than as it was in 1982, a survey of seniors enrolled during Spring, 1987 was also commissioned.

Like former students, 1987 seniors were asked to evaluate various aspects of Western and their experience here. In addition, they were able to describe their experiences in greater detail than possible with a follow-up, and to report on their current educational orientations and opinions. The most important quality of this survey is that it provides a current look at student life at Western. In addition, it offers some comparisons between graduates five years ago and the [near] graduates of 1987-88. It also provides a base for an improved follow-up study in the future, if the university wishes one.

SOME ISSUES GUIDING THE CONSTRUCTION OF MEASURES

It is no accident that these surveys were commissioned at this point in time. Interest in assessing the quality of education is at a peak across the nation, accrediting organizations are requiring that universities collect data on the success of their graduates, and educators are becoming more aware that we may be able to improve our programs internally through gaining information from our graduates and currently enrolled students. These surveys cannot be seen as part of a full-fledged assessment effort because such efforts require a lengthy process of shared input and development by all the segments of the campus community involved in the assessment. However, we sought to simulate a fuller project as much as possible within constraints of time and resources.

Western's Vice Presidents and Deans were consulted during the construction of the questionnaires, in hopes of grounding the questions in the policy concerns and quality enhancement issues guiding their decisions. In addition, we undertook a thorough review of previous surveys of students and former students. Both published and unpublished work was reviewed, and surveys used by other universities were solicited.

The surveys were constructed so as to touch on a broad range of issues rather than focusing on any one concern. We also made the surveys as long as advisable, so that this one round of surveys could offer as comprehensive a knowledge base as possible. Our reports are organized around the major sets of measures imbedded in these surveys.

THE ORGANIZATION OF REPORTS

These reports are being produced in hopes that various members of the Western community will find useful information in them.¹ Given the range of different concerns on which we touch, it is likely that various members of the Western community will have interest in quite different elements of these reports. We have therefore organized these write-ups segmentally.

There will be five brief volumes rather than one longer report. Each of the first three specializes in one set of measures. The fourth reviews the comments offered by students in response to open-ended questions about their experiences at Western. The fifth is a summary of the first four, written with the larger off-campus audience in mind. Each volume will move segmentally from one topic to the next, keeping each section as free-standing as possible, so that the reader can locate the issues of greatest concern and focus on the appropriate sections.

This first volume, Western Washington University Students, begins with a brief review of our research method and then presents findings regarding students' backgrounds, students' majors, characteristics of Western's non-graduates and why they left Western, some issues concerning educational careers (transferring versus entering Western as freshmen, timing of choosing a major,

¹ In addition, the original datasets will be available for departments or others who wish to pursue their own analyses. These public datasets will not include any student identifiers, so that respondent confidentiality will be maintained.

educational aspirations), students' orientations to the value of university education, and reasons for choosing particular majors.

Volume Two, Student Experiences and Perceptions, begins with non-academic experiences, such as sources of income and types of problems experienced by students, then discusses students' felt need for advising and their utilization and evaluation of advising, reviews students' use and evaluation of various campus services and facilities, presents students' perceptions and evaluations of their majors, presents students' perceptions and evaluations of General University Requirements, and finally, analyzes students satisfaction with Western, overall.

Volume Three, Western Washington University Students Five Years Later, reviews former students' educational attainment after Western, their employment and job quality, their satisfaction with a wide range of life qualities, and the role education at Western and major field play in producing those life outcomes.

These reports offer occasional interpretation of findings or speculation concerning what may lie behind patterns of findings. For the most part, however, findings are presented rather than interpreted. Quantitative displays are used to provide detail for those who wish it, while briefer verbal summaries are also offered for readers who prefer. The reports are not written in a formal academic style. Although the major author has background in the sociology of higher education, and occasionally mentions past research in the area, no formal references to previous literature are made, and little formal theoretical interpretation is offered. The reports are intended as reviews of factual information concerning this one location -- Western Washington University.

RESEARCH METHODS

The analyses in this report and later volumes are based on three samples: the senior survey, the graduate follow-up, and the non-graduate follow-up. This section of Volume One explains how these samples were defined and selected, discusses how our surveys of these groups were conducted, and assesses the adequacy of the samples to generate valid and reliable characterizations of Western students and their perceptions. Those who are concerned only with results should skip to page 11.

THE DATA COLLECTION DESIGN

The design of these projects was constrained by resource limitations. However, relatively large samples were required in order to reliably characterize Western and the various units within Western. Both these factors -- the need to keep costs low and the need to complete a large number of surveys -- recommended the mail out questionnaire design. On the other hand, two other factors recommended the use of telephone surveys: 1) completion rates, important for the validity of conclusions, are higher with telephone surveys, and 2) follow-up surveys require extensive tracking and callbacks to locate individuals in the sample. Tracking and multiple contacts are more effective via phone than via mail.

We developed a design which combined mail questionnaires and telephone interviews. The critical resource which allowed us to do this was that telephone interviews were conducted by students in survey research methods classes. The opportunity to work on a real-life project is a valuable aspect of students' education, and their willingness to conduct these interviews without pay was a major subsidy to these projects. To maintain the integrity of the educational process, each student was allowed to perform only a limited number of interviews; repetitive work holds little educational value. Students also assisted in tracking efforts and in coding data from completed surveys.

For both **follow-up surveys**, we began by mailing a printed questionnaire along with a letter of explanation to each member of the sample. These mailings resulted in a number of completed questionnaires and in the identification of a large number of cases in which our address information was inaccurate. We next sent reminder letters to the appropriate individuals and began tracking new address information where necessary. Finally, using tracking information from a variety of sources, we conducted telephone interviews with as many remaining individuals as could be located. The first mailings occurred in December, 1986. The final telephone interviews were conducted in April, 1987.

Our interest in measuring a wide range of variables led us to make the mail questionnaire quite long. Since telephone interviews must be kept relatively brief, a shorter version of the survey was written for the telephone. Thus, in this

report, some follow-up measures are reported for the full sample, having been included in both forms, and other reports are based on only the mail out forms.

For the **senior survey**, mail out questionnaires were used exclusively because tracking was seldom problematic, the number of students available to assist was limited, and the target number of completed surveys was large. The sequence of contacts included the original mailing in mid-Spring term, 1987, a brief reminder letter a week later, a second mailing of the survey two weeks later, and a final reminder letter near the end of the term.

SAMPLE DEFINITIONS

The individuals included in any survey sample are selected in stages. First, one decides what population is to be analyzed. Then one decides how many individuals in that population are to be selected for a sample and how specific individuals are to be identified. Finally, of course, only some members of a sample will be located and will complete questionnaires or interviews.

The definitions of population and sample for each of the three surveys conducted as part of this project are presented below.

The Senior Survey

The senior survey was conducted both to examine the experiences and views of individuals nearing the completion of their careers as Western students and also to lay a base for possible follow-up interviews to be conducted later with these same individuals. For such a later follow-up to be successful, we needed to complete about 1200 senior interviews, which would require a sample pool of about 1800. This fact led to somewhat uncommon population and sample definitions. If we had defined the population for analysis as only those individuals who had announced their intention to graduate in Spring, 1987, only about 800 individuals could have been identified, half the number required. If we sampled all seniors, the number would have been too large -- about 2400 at the beginning of Spring term, 1987.

Our compromise was to select as our population and sample **all students enrolled during Spring term, 1987 who had completed at least 155 credits by the end of Winter, 1987**. This produced a total sample pool, identified from the Registrar's files, of 1816, which was later reduced to 1802 since 14 individuals were no longer enrolled by the time the survey began. The sample included all those who would be graduating at the end of Spring and a somewhat larger number of others planning to graduate later than Spring. For convenience, we will speak of these individuals as "Western seniors." However, the true population studied here are advanced seniors, with 155 credits. The sample pool and the population are identical.

There were 1280 senior surveys completed, for a response rate of 71.0%. For surveys of this type, mail questionnaires with accurate addresses for the entire sample, a 70% response rate is considered well above the minimum level acceptable.

The Graduate Follow-Up Survey

For the graduate follow-up survey, a follow-up period of five years was selected as long enough to allow most graduate education to be completed and for career patterns to have stabilized, and yet short enough for a sizeable number of former graduates to be locatable. In addition, the Western Registrar's management information systems are more complete for a five year lag time than for longer periods. Since the follow-up was scheduled to be conducted during Winter, 1987, the population to be examined was set as **Individuals who graduated during the 1981-1982 academic year**. This makes the true follow-up period five years give or take one half year.

Registrar's files included 1614 individuals who graduated during the '81-'82 academic year. Our goal for the follow-up surveys was to complete up to 1000 follow-up interviews, about two-thirds with former graduates and about one-third with non-graduates. With this goal in mind, we selected 1060 graduates from the population of 1614. In surveys of this type, following a population which has not been tracked consistently over the years, and for many of whom we therefore have no phone or address information, a 60% completion rate is considered acceptably high. That completion rate would produce 636 completed interviews, about the number we hoped for.

Our fears that former graduates would be difficult to locate proved to be well founded. Indeed, they were much more difficult to find than we had anticipated. (Our tracking methods are reported below.) At completion of the project, we had completed 632 surveys (a rate of 59.6%), had been refused phone interviews by 19 former graduates (a rate of 1.8%), and had left 57 (5.4%) possible, but difficult, address or phone numbers not contacted. Of the remainder, 14 (1.2%) were confirmed out of the country but at addresses unknown, and for 352 (33.2%) we were unable to locate any currently accurate address or phone information despite intensive tracking efforts.

One goal of these survey projects was to characterize different collegiate units of Western. However, the population of graduates from one year contains relatively few individuals from smaller colleges. A completed sample of about 600 would contain even fewer. We therefore stratified the graduate sample, to select a higher proportion of students from smaller colleges, increasing the reliability of estimates for these smaller units. The sample of 1060 former graduates whom we attempted to contact included 55% of all '81-'82 graduates from the College of Arts and Sciences, 64% from the College of Business and Economics, and 100% from all other units. The numbers of interviews we could complete for the smallest units, Huxley and Fairhaven, remain small even after this procedure. However, they are as large as possible since 100% were sampled. Within strata, the sample was chosen at random.

The advantage of disproportionately stratified samples is that we produce the most reliable characterization of each separate collegiate unit that is possible within the total sample size. The drawback is that the set of completed surveys does not accurately represent the whole of the population of Western

graduates. However, that drawback is easily repaired by reweighting the sample during analysis, so that each college provides the same proportion of the sample as of the original population.

Throughout these reports, when a college is analyzed separately, or when colleges are compared, the sample is left stratified, making estimates as reliable as possible without producing inaccuracies. However, when the entire unit -- Western -- is being described, the findings presented are based on a reweighted sample which accurately represents the mix of students in the population of 1982 graduates or non-graduates.

The Non-Graduate Follow-Up Survey

The non-graduate population was defined to produce the same follow-up period as the population of former graduates, insofar as possible. We included in the population all individuals **1) who completed at least 15 credits of undergraduate work during the 1981-82 academic year, 2) who did not graduate during that year, and 3) who were not enrolled at Western at any time during the 1982-83 academic year.** This definition includes individuals who left Western without returning to any college or university, who transferred to a different college or university, and who took a leave of absence of at least one full year and then returned to Western. It also includes both individuals who attended Western with the intention of taking only a few courses and those who intended to graduate.

This population definition produced 2040 non-graduates.¹ As with the graduate survey, the sample was disproportionately stratified to allow more reliable comparisons among collegiate units. With especially grave doubts concerning the possibility of tracking non-graduates, we selected a sample of 820 individuals, using the following proportions, by college: Arts and Sciences, 40%; Business and Education, 50%; Fine and Performing Arts, 70%, Huxley and Fairhaven, 100%; undecided or undeclared, 20%. As with the graduate sample, when collegiate units are being analyzed, the sample is left stratified. When Western as a whole is being characterized, the sample is reweighted to correctly represent the population.

Non-graduates were indeed difficult to track. However, they proved only a little more difficult than graduates. When we had reached the maximum number of non-graduate interviews our resource level allowed, we ended our tracking efforts. However, it would have been possible to complete considerably more surveys if the effort had continued. In all, we completed 364 non-graduate surveys. The completion rate, 44.4%, is low enough that some hesitation about its representativeness is in order. However, this problem is not likely to be severe. Ending our survey in the fashion we did means that many of the non-respondents were chosen essentially at random.

¹ It should be noted that the number of non-graduates fluctuates considerably depending on the population definition, in particular how many credits individuals had to complete during the academic year in order to be included.

COMPLETION RATES AND TRACKING EFFORTS

In general, it is desirable to complete interviews with a high proportion of a survey sample. Because those most willing to complete surveys or most easily locatable may differ systematically from others, findings based on partial completions are always susceptible to some degree of distortion. The smaller the number of non-completions, the less impact their absence can have on the accuracy of our conclusions.

In the case of follow-up surveys, and in particular where they were not planned in advance, the greatest problem for completion is difficulty locating individuals in the sample. Our projects at Western were no exception. At most, one-third of the addresses we began with for graduates, and fewer for non-graduates, were accurate, or recently accurate, for the former student. This made tracking efforts crucial to these follow-up efforts. The tracking techniques below were used in order to identify a sufficient proportion of the samples for interview. They are presented roughly in order of their implementation. After the first mailings, telephone calls were made whenever any of these techniques yielded a possible location either of the former student or of a family member who might know the individual's location.

- Identification of mailing addresses from Registrar's data ("permanent address") and from alumni office address lists.
- First class mail, with forwarding, address update, and return of undeliverable mail requested.¹
- Telephone directory search for the former student's full name in the area of original [permanent] residence, in surrounding areas, and in the state's most populous areas.
- In cases where names were relatively uncommon, telephone directory search for same last names with different first names, to locate family.
- Operator assisted directory information search.
- Return to the Registrar's vault to examine original application forms for parents' address at that time, followed by directory information search for a current phone number.

¹ In the case of foreign students and others who were confirmed to be out of the country at follow-up, our tracking efforts ended with mailing. Although these individuals were sent reminder letters, they were not contacted by telephone.

CONFIDENCE LEVELS AND ERROR TERMS

It is important for readers to recognize the limits which sample sizes place on the reliability of the conclusions we report here. All findings we report are estimates, subject to error. At the same time, it is the intention of this series of reports to be written non-technically. It can be extremely tedious for most readers to have each table report numbers of cases on which every percentage shown is based, and for the text to make frequent references to error margins.

Our decision was to treat the issue of error margins generally in this location, and then, with few exceptions, to present tables and figures without reference to sample size or error terms. In order to make the reader aware of the approximate error margins on findings presented throughout this series, we have prepared Table 1.1, on the following page. We adopt the 95% confidence (.05 probability of error) level which is conventional in social science research. This means that it is likely (95% certain) that the true values for each population lie within the error terms shown there. In addition, the true value is more likely to be close to the figure reported than to the outer edges of the error margin.

How wide an error margin is generated with 95% confidence depends primarily on sample size.¹ Table 1.1 shows sample sizes and approximate error margins for each of the major subgroups referred to during this report. For example, the statement "75% of seniors are xyz" is based on 1280 cases, and has an error margin of less than 3%. That is, with 95% confidence, we can conclude that the true level had we interviewed all seniors would have been 75% plus or minus 3%. If the statement were "75% of non-graduates are xyz," the error would be larger, 5%, because the sample is smaller.

If findings are reported for a particular college then the number of cases is much smaller and the error term correspondingly larger. For example, a table or graph in these reports showing that 75% of seniors majoring in Huxley College are xyz would be subject to an error margin of plus or minus 15%. Seventy-five percent remains our best estimate, and errors are likely to be smaller than 15%, but the full 95% confidence interval is plus or minus 15%.

¹ Error also depends, to a smaller degree, on the variance of the particular measure. However, that level of precision in reporting is inappropriate here. In addition, some error is introduced by respondents, as they recall events or make judgements. There is no way to estimate the magnitude or direction of such error.

Table 1.1. Sample Sizes and Error Terms for Collegiate Units in Each Sample

	<u>1987 Seniors</u>		<u>1982 Grads</u>		<u>1982 Non-grads</u>	
	Num. ^a	Error ^b	Num.	Error	Num.	Error
A&S: SOCIAL SCIENCES	171	7%	66	12%	26	20%
A&S: MATH / NATURAL SCIENCES	155	8%	61	12%	31	18%
A&S: HUMANITIES	134	8%	57	13%	23	20%
A&S: APPLIED	231	6%	90	10%	47	15%
BUSINESS & ECONOMICS	231	6%	100	10%	55	13%
EDUCATION	115	9%	81	11%	34	17%
FAIRHAVEN	25	20%	19	22%	12	28%
FINE AND PERFORMING ARTS	76	11%	51	14%	32	17%
HUXLEY	45	15%	30	18%	24	20%
TOTAL	1280	3%	632	4%	364	5%

^a Number of individuals interviewed in each category.

^b Approximate 95% confidence interval, based on a binomial split of about 60/40, but rounded to the nearest whole percent to avoid the suggestion of precision. Actual errors vary with the standard deviation of the measure in question.

There are two major implications of the fact that error items are larger for smaller units. One is that descriptive findings such as the various graphs which display percentages of some quality among majors in each of nine collegiate units are subject to considerable error. Readers should be aware of the dangers involved in any fine-tuned interpretation of differences in these displays. This problem also explains why these reports offer no findings specific to units smaller than nine collegiate units. Few departments generate enough majors for findings from this research to be appropriate for general publication.

The second implication stems from the fact that we report particular findings in the text of these reports only after they have satisfied statistical tests indicating their reliability. That is, if a collegiate unit appears to differ from others, but the difference is small enough that we cannot be 95% confident in it, we do not report that difference. The figures might be shown in a graph or table, but they would not be stated verbally. This means that we are much more likely to identify differences between larger units and the university average, since the measured difference between a small unit and the average must be very large before statistical tests will find it reliable.

WESTERN WASHINGTON UNIVERSITY STUDENTS

STUDENTS' BACKGROUNDS

Although most information in this report comes from surveys, some background characteristics are available in the registrar's files for all those in our sample, whether we completed interviews or not. A brief profile of these characteristics is shown below.

Table 1.2. Background Profiles of 1987 Seniors, 1982 Graduates, and 1982 Non-graduates

	<u>1987 Seniors</u>	<u>1982 Grads</u>	<u>1982 Non-grads</u>
Percent Female	52.6	51.0	55.1
Percent Minority	6.5	5.6	6.4
Percent Foreign	1.5	5.3	4.3
Percent each Age in 1987 or 1982:			
22 or younger	19.8	15.2	37.4
23-25	59.2	54.8	29.5
26-30	15.2	18.7	16.2
31 or older	15.8	11.3	16.9
Percent Admitted :			
Summer /interest only	1.9	12.5	14.2
As freshmen	35.9	33.8	44.0
As transfers	62.2	53.7	41.8
Ratio Transfer : Native	1.73 : 1	1.59 : 1	.95 : 1
Of transfers, % from:			
Wa. Comm. Coll	61.4	56.5	49.7
Wa. 4 yr public Univ	12.2	13.1	16.3
Out of State	21.8	25.4	28.2
All others	4.6	5.0	5.8
High School GPA =			
3.0 or less	32.7	30.1	36.3
3.01-3.5	41.5	40.2	40.2
Over 3.5	25.8	29.7	23.5
Number of cases figures based on:	1816	1614	2040

For the most part, the figures in Table 1.2 are self-explanatory. However, a few findings of note are highlighted below. The primary comparisons are between 1982 graduates and 1987 seniors, and between 1982 graduates and non-graduates. Current seniors and past graduates are roughly equivalent, since almost all the current seniors we interviewed intend to graduate within a year. Although comparing students from two arbitrarily selected years is not a sufficient basis from which to draw conclusions about changes over time, these comparisons are offered to stimulate further interest. The comparison between 1982 graduates and 1982 non-graduates is clear cut, since these two groups are representative samples of all those who graduated and all those who left without graduating in that year.

- While the percent minority students is the same in all three groups, the number of foreign students is much lower in the 1987 senior class than among the 1982 students.
- Non-graduates, much more often than graduates, were under age 22 when they left Western. This occurs because freshman year is the primary point of dropout. Consistent with this, the proportion of non-graduates who transferred into Western is much smaller than for graduates or 1987 seniors. While native freshmen make their dropout decisions at Western, transfers into Western do not include individuals who decided to leave education as freshmen at other schools.
- In addition, somewhat more non-graduates than graduates were over 30. Many of these are individuals who enrolled for reasons other than to graduate, and left when they had completed their goals.
- the 1987 senior class contains just under two-thirds transfer students. To have transferred is the "norm."
- The statuses under which 1987 seniors were admitted to Western are markedly different from those for 1982 graduates:
 - a) Many fewer students are now being admitted under the headings of "summer only" or "interest only." Indeed, 12.5% of 1982 graduates began their work here under a status implying no plan to graduate.
 - b) Seniors of 1987 are much more likely than graduates of 1982 to have entered Western as transfer students.
- Among transfers, well over half come through the Washington state Community College system. That percentage was 56.6% for 1982 graduates, up to 61.4% among 1987 seniors.

MAJOR FIELDS

We can also profile intended major or major at graduation for all individuals included in our samples. These are presented in the two tables below. Table 1.3 shows totals for each college, based on registrar's data. For Seniors, changes of major fields mean that these figures are sometimes inaccurate.

Table 1.3. College Enrollment of 1987 Seniors, 1982 Grads, and 1982 Non-Graduates.

	<u>1987 Seniors</u>	<u>1982 Grads</u>	<u>1982 Non-grads</u>
ARTS AND SCIENCES			
Total	60.8	58.2	44.7
Social Sciences	11.8	14.9	10.0
Math / Natural Sciences	12.3	10.4	9.0
Humanities	11.3	9.7	7.5
Applied	19.1	17.1	12.5
BUSINESS & ECONOMICS	18.5	17.9	14.7
EDUCATION	8.4	9.4	10.6
FAIRHAVEN	2.0	2.2	1.8
FINE AND PERFORMING ARTS	6.2	6.1	5.7
HUXLEY	3.2	3.3	2.8
OTHER/UNDECLARED	9.2	9.7	25.8
TOTAL	100%	100%	100%
Number of cases figures based on:	1816	1614	2040

The main impression from Tables 1.2 and 1.3 is one of relative stability over time and marked similarity among graduates and non-graduates.

The major difference between graduates and non-graduates is that one-fourth of non-graduates had not declared a major when they left WWU.¹ The ratio of graduates to non-graduates is about the same within each college, except that Education had proportionately more non-graduates and Arts and Sciences had fewer. The reason Arts and Sciences had fewer non-graduates than expected is very likely to be that, as shown in our senior surveys, students decide on these majors late, after the primary period of dropout has passed. It is less clear why Education had more non-graduates. Education non-graduates intended to graduate as often as others but more often transferred out of

¹ The figure, 25.8%, includes a tiny number of individuals constructing their own major.

Western. (Transferring was listed as a major or minor reason for leaving by 59.4% of Education non-graduates, versus 39.3% for all others.)

Between 1982 and 1987, college and major choice are relatively stable. Enrollment in the Social Sciences declined by about 20%, while other Arts and sciences subdivisions increased in enrollment. Education decreased by about 10%. Other units remain essentially unchanged.

Table 1.4 uses reports by the Seniors we interviewed to offer greater detail on choice of major field. Figures are shown for specific majors in all cases where at least 12 students reported that major. In addition, majors are divided into students who report a single major only (81.8% of all) and those who report pursuing two majors (220 students in our sample, pursuing 440 majors.) Many of these are secondary education majors. However, over half of individuals with double majors are outside education.

Table 1.4 shows not only what proportion of single and double majors are in each field, but also what percent of majors in each field are also pursuing a second major elsewhere. There is a notable concentration of double majors in the sciences and humanities, many in conjunction with secondary teaching preparation. In addition, the proportion of Business and Accounting majors with double majors is quite high. Technical areas have the fewest double majors, probably because of extensive requirements within the major.

The calculation of number of majors in a field depends on whether one speaks of proportions of students or proportions of majors. For example, Computer Science has 6.3% of all majors, but 5.3% of all *majors*; The College of Business and Economics enrolls 20.0% of the students in our sample but 16.9% of the majors pursued by our sample. Table 1.4 shows figures as proportions of all students. These figures are slightly inaccurate because of differential response to our survey by individuals in different majors. In particular, more women than men responded.

Table 1.4. Number and Proportion of 1987 Seniors in Selected Majors, Separated by Single Majors and Double Majors.^a

	Percent of All Single Majors	Percent of All Double Majors ^b	Percent Double Maj in Each Field	Majors in Field as Percent of Students
ARTS AND SCIENCES				
Soc.Sci: Anthropology	1.3	.7	19	1.3
Soc.Sci: Geog/Reg. Plan	1.7	.5	19	1.6
Soc.Sci: Political Sci.	3.1	1.4	16	3.1
Soc.Sci: Psychology	5.9	3.6	21	6.2
Soc.Sci: Sociology	2.9	.7	11	2.6

(Table 1.4 cont.)

	Percent of All Single Majors	Percent of All Double Majors ^b	Percent Double Maj in Each Field	Majors in Field as Percent of Students
Math/sci: Biology	2.2	3.2	39	3.0
Math/sci: Chemistry	1.7	3.0	43	2.5
Math/sci: Computer Sci.	2.7	11.4	64	6.3
Math/sci: Math	1.8	7.0	63	4.1
Math/sci: Other	2.0	2.0	31	2.4
Humanities: English	2.8	4.1	39	3.8
Humanities: Journalism	1.0	.5	17	1.0
Humanities: History	1.6	3.0	45	2.4
Humanities: Others	1.5	2.5	42	2.2
Applied: Home Econ.	2.2	1.8	27	2.5
Applied: Phys. Ed.	5.1	2.5	18	5.1
Applied: Speech	4.2	.7	7	3.7
Applied: technology	3.6	.2	3	3.1
Applied: Visual Commun.	3.2	0	0	2.6
Applied: Indust Design	1.8	0	0	1.5
BUSINESS & ECONOMICS				
Business Administration	14.2	12.0	27	16.0
Accounting	3.1	3.9	35	4.0
EDUCATION				
Elementary	6.9	4.8	24	7.4
Special Ed.	2.0	2.7	38	2.6
Human Services	1.8	.5	10	1.7
Secondary Ed.	.8 ^c	17.7	91 ^c	7.1
FINE AND PERFORMING ARTS				
art	3.1	2.5	26	3.5
music	1.3	1.1	28	1.5
Theater/dance	1.0	.7	23	1.1
FAIRHAVEN	1.3	1.6	19	1.7
HUXLEY	4.9	.7	6	4.3
OTHER/UNDECLARED	6.0	3.4	20	6.2
TOTAL	100%	100%		118.2%
N of cases	989	440 (220 students)		1209 (1429 majors)

^a Percentages are based on the number of majors in the sample (440) rather than the number of students with double majors (220.)

^b These students reported only a secondary education major despite the fact that that a degree in a substantive field is required. Either they had not yet chosen such a field or they were returning to Western after completing a degree in a substantive field.

CHARACTERISTICS OF MAJORS IN DIFFERENT COLLEGES

Based on our 1987 senior sample, we can offer some limited observations about the demographic background (i.e., factors listed in Table 1.2) of students majoring in different colleges.

- On the whole, demographic differences among majors are smaller than one might imagine. The differences which exist are highlighted below. When a characteristic reported in Table 1.2 is not mentioned for any particular college, it is approximately average for that college.
- Some collegiate units depart considerably from the university wide average of 52.6% women and 47.4% men, although most units are about equal. Seventy percent (69.6%) of math/science majors and 55.4% of Business majors are men. At the other extreme, 85.5% of Education majors, 62.2% of Fairhaven majors, and 59.8% of Fine and Performing Arts majors are women. All other units are approximately equal in gender division.
- No statistically reliable ethnic differences exist among collegiate units.
- The College of Business and Economics has the youngest majors, with 61.9% aged 22-23 and only 5.6% 30 or over. The colleges with the oldest majors are Fairhaven, with 56% over 30, and Huxley, A&S Math/Science and A&S Applied areas, all with about one-third aged 22-23 and about one-fifth over 30.
- Colleges are remarkably similar in the proportion of their students who are natives and transfers. This issue is explored later in this report.
- Among those for whom we have high school GPA (primarily native freshmen) only small differences occur by major. The groups with highest high school GPAs are Huxley College, with 41.1% over 3.5, the School of Education* (38.3% over 3.5), and the College of Business and Economics (35.7% above 3.5.) The University wide percent above 3.5 is 27.4%. Majors with the lowest percent of high school GPAs over 3.5 are A&S Applied (15.8%), Fine and Performing Arts (20%) and Social Sciences (21%.)

WESTERN'S NON-GRADUATES

We interviewed 364 individuals who left Western during 1982 and remained away for at least one full year without graduating. These are the individuals typically not included in college follow-ups, but important to study if we are to understand Western's students and programmatic effectiveness.

Who are the Non-Graduates?

Many of Western's non-graduates entered as freshmen, left young, and left before declaring a major. This presumably reflects the fact that college dropout

* This finding runs counter to typical findings for schools of education. The reason is that women at Western enter with high school GPAs much higher than men's.

is highest during freshman year. But this pattern does not characterize all non-graduates. Of the non-graduates we interviewed, 15.0% reported that they had enrolled with no intention of graduating. This group split evenly between individuals enrolled for enjoyment and those enrolled in courses related to their jobs. Those between ages 30 and 50 were enrolled for job-related reasons ten times more often than for enjoyment. However, the majority younger than 30 or older than 50 were enrolled for enjoyment. Enrollment for a degree, job-related courses, or enjoyment does not differ by gender, high school GPA, ethnicity, or transfer vs. native.

Those who enrolled with the intention to graduate may be divided into three categories, based on their destinations when leaving Western. Just over one-third (37.0%) transferred to a different school within six months of leaving Western. A smaller group (21.2%) took a leave of absence for a period and then returned to Western or transferred. The remaining 41.8% dropped out and have not returned to school in the five years since they left Western.

Why Did Non-Graduates Leave Western?

Published studies on college retention have tended to emphasize the negative aspects of withdrawal from college -- in particular the non-congruence between the individual dropout or transfer and the university setting. Transfers are found to be dissatisfied with the school or to be poorly integrated socially. Dropouts perform poorly or have interests incompatible with continued education. The patterns we found suggest some support for the non-congruence perspective but also indicate that most non-graduation stemmed from a variety of "normal life course" decisions or problems.

We asked non-graduates to indicate whether each of 11 factors was a "major reason," a "minor reason," or "not a reason" why they left Western. The average non-graduate in our sample checked 3 of the 11 potential reasons we listed for leaving Western without graduating. The proportions who listed each as a major or a minor reason for leaving are shown in Figure 1.1.¹

One-third say their major reason for leaving was that they were finished here! The individuals who listed this reason for leaving were much less likely than others to indicate any lack of interest, performance problems, lack of clarity about goals, or dissatisfaction. They simply felt finished. Financial problems and personal or family reasons were primary for about one-fifth each. Nearly one-fifth were influenced in some degree by having found a good job. All these are aspects of students' lives which have little to do with the University. This non-completion, whether desirable or not, is "normal life" for part of our population of students.

Problems of non-congruence are suggested for some students. The classic factors of dissatisfaction with college or social life rank at the bottom of our list, although dissatisfaction with professors is considered to be at least a minor reason among one-fourth of non-graduates. Problems with course

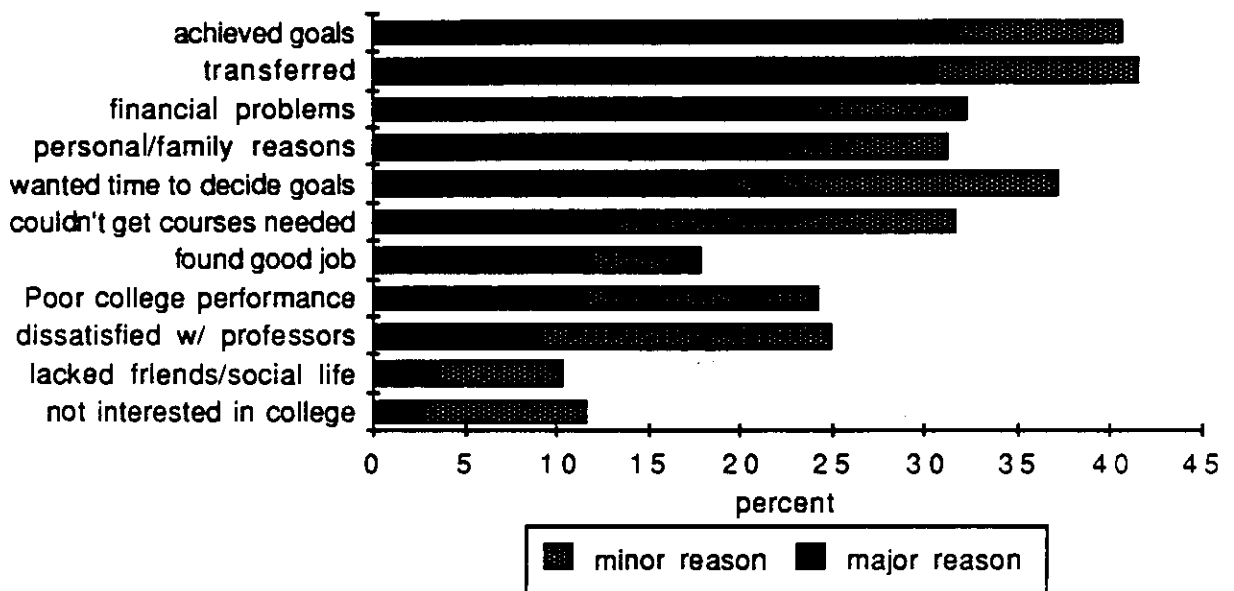
¹Students were also asked to list "other" major reasons for leaving. Very few were reported.

performance also played some role in nearly one-fourth of decisions to leave Western. For one-third, problems getting needed courses was a factor, although usually a minor reason.

For the one-third who list transferring as their major reason for leaving Western, we are left wondering what influenced their decision. The most common secondary reasons for these individuals were inability to get the courses they wanted and dissatisfaction with professors. However, these two help explain only a minority of transfer decisions.

While transferring was an option for many non-graduates, finding work was an option for others. This factor tended to occur in conjunction with a lack of interest in college or with poor grades and dissatisfaction with professors. In each case, some non-congruence with college apparently combined with the availability of employment options to produce the departure.

Reasons non-graduates give for leaving Western



Do Reasons for Withdrawal Differ by College?

The great majority (84.6%) of all 1982 non-graduates were intending to complete a degree when they enrolled at Western. For three groups, the proportions intending a degree were especially high: CBE, A&S Humanities, and A&S Applied fields. Perhaps ironically, College of Business and Economics and A&S Applied Fields had the lowest proportion of students pursuing course work related to jobs they were holding at the time, and the college with the fewest students taking courses for enjoyment was the college of Fine and Performing Arts.

Among those who initially intended a degree, when reasons for leaving are compared across colleges, remarkably few differences emerge. Indeed, all of the minor differences which do appear could have quite easily occurred by chance. Apparently, most decisions to transfer or to drop out of higher education are made in response to factors other than the curriculum or instruction in different major fields. Although some individuals list poor professors, poor academic performance, inability to get desired courses, or lack of interest in college as reasons for leaving, the tendency to give these reasons is essentially identical across all collegiate units. This pattern of findings presumably indicates that the decision to leave Western is more influenced by characteristics or experiences of individual students than by differing policies or practices of various collegiate units.

THE SHAPES OF EDUCATIONAL CAREERS

It is no longer the case that most university students enter college at 18, attend one college, graduate in four years, or exhibit any other singular pattern. Instead, there are various "student career paths," some aspects of which are explored here.

Transfers versus Natives

As indicated earlier, the 1987 senior class contains 17 transfers for each 10 natives (students who entered Western as first quarter freshmen.) Nearly two-thirds of transfers come through Washington state Community Colleges, with 52.7% of all transfers entering Western after earning an AA degree.¹ Over one-third of transfers (39.3%) report taking none of their General University Requirements (GURs) at Western, with another 21.6% taking less than half here.²

Most 1987 seniors (86.7%) report high school plans to complete at least a bachelors degree. Thus, the great majority of those who transfer plan to do so in advance. However, an earlier study of 1983 incoming transfers showed the majority making the specific decision to transfer only after time spent in the first college. It appears the intention to pursue a transfer career line is usually set early, but specific decisions are often flexible.

Although native freshmen and transfer students differ surprisingly little in terms of performance at Western or perceptions of Western, they show some marked differences in age and gender background. In particular:

- Among those aged 22-23, 51.8% entered as natives. For those 24-29, the figure is 27.3%; for those over 30, only 12.9%.

¹ Thus, Thus, 31.6% of all seniors in our sample had completed an AA degree.

² These figures represent neither all transfers into Western nor all natives. Only those who remain at Western until having accumulated a total of 155 academic credits are included in this study.

- Forty percent (40.3%) of 1987 senior women but only 30.8% of men entered Western as freshmen.
- Among transfers, slightly more women and significantly more individuals over 30 had completed their AA degree before entering Western.

Do Transfers Experience Problems On Arrival At Western? We asked seniors who had transferred to Western about three problems they might have experienced. Forty-one percent reported loss of some non-transferrable credits. In addition, 29.4% reported some loss of progress through incompatibility between their previous GURs and Western's. Finally, 29.3% said they experienced some difficulties getting courses they needed.

Do Transfer Patterns Differ by Collegiate unit? The fact that transferring colleges has become a standard, conventional pattern is illustrated by the similarity between transfers and natives. No example is clearer than choice of major field. There is almost no difference by college or major in the number of transfers versus natives. Education and Fairhaven gain slightly more students through transfer than other colleges, with all others being equal. Education does stand out by virtue of the proportion of its transfers who have received the AA degree (70.5%, as opposed to 50.6% for all others.) There are also only very small differences by college in the proportion of students who transferred as freshmen, sophomores, or juniors.

There are somewhat greater differences across majors in the *types of colleges from which students transferred* to Western.¹ In particular, the School of Education draws disproportionately from community colleges. Over seventy percent of education students transfer to Western, and 78.8% of those report transferring from community colleges. Thus, 55.4% of seniors majoring in Education began their training in community colleges. The figure for all other seniors is 37.1%. Fewer than average community college transfers are found in Huxley, Fairhaven, and "undecided." All Arts and Sciences majors, with the exception of the Applied Arts and Sciences, consist of slightly fewer than average community college transfers. Huxley and Fairhaven draw disproportionately from out of state. Social sciences draw more heavily than others from other public four year universities in Washington.

Problems experienced with transferring vary slightly among colleges. There are no differences in the proportion with non-transferable credits. Somewhat more Fine and Performing Arts and humanities majors, and somewhat fewer Business and Fairhaven majors found Western GURs incompatible with their previous GURs. More Business and humanities majors report having had difficulty getting courses they wanted upon arrival at Western.² Fewest

¹ For a list of college types, see Table 1.1

² These are majors at senior year, not intended majors upon arrival. Since a large proportion of humanities majors changed their majors after arrival, it is likely their difficulty was in fields outside humanities.

problems getting courses are reported by Huxley, Fairhaven, and Fine and Performing Arts majors.

Choosing a Major

Another aspect of the student career is choice of major field. We were able to ask about selected aspects of that choice process, providing the following observations.

- Half (50.9%) of all 1987 Seniors entered Western with a definite choice of major in mind. Another 33% had a preference, while 16.1% felt no preference. Eleven percent planned a double major.
- Twice as many transfers as natives enter Western with a definite choice of major (62.2% versus 33.1%.) The reason is timing: for both groups, most decisions regarding major field are made during sophomore or junior years, but most transfers enter Western as juniors.
- Among native freshmen, almost exactly one-third each report never having changed their choice of majors, changed once only, and changed more than once. Among transfers, 59% do not change fields after arriving at Western; another 26% change once only, and only 15% change more than once while at Western.
- How often seniors have changed their majors is unrelated to gender, ethnicity, or age, except that older students are more often transfers and therefore change less often.
- The majority (57.1%) of 1987 seniors who reported ever changing their majors decided on their current majors during their junior year. Of the 12.5% who made their decision during their senior year, only 51% plan to graduate by Fall, 1987. For all others, the figure is 72%.
- The more often students have changed majors, the later they decided on their current major. For example, of those changing 2 or more times, 19% decided only during their senior year.
- As shown in Table 1.5, students who enter Western with a firm choice of major which they do not change, enroll in relatively different majors than those who change their intended major one or more times after arriving at Western. In addition to specific findings shown below,
 - > Few students arrive here intending a social science major, so that nearly all social science majors are individuals who changed their initial intention.
 - > Most applied areas, natural sciences, and humanities draw similar proportions of majors from changers and non-changers.
 - > Most fields in business and education are more often occupied by individuals who have not changed their majors since arriving at Western.

Table 1.5. Proportion of 1987 seniors in each major among those who never changed majors after entering WWU and those who changed at least once, shown only for those majors where the two groups differ by at least 0.5%. ^a

	<u>Never Changed:</u>	<u>Changed:</u>
ARTS AND SCIENCES		
Soc.Sci: Anthropology	.4	2.2
Soc Sci: Geog./Reg.plan.	1.3	2.3
Soc.Sci: Political Sci.	2.2	3.3
Soc.Sci: Psychology	3.0	7.3
Soc Sci: Sociology	.5	4.2
Math/sci: Computer Sci.	4.7	1.1
Math/sci: Geology	1.1	.6
Math	2.3	5.0
Humanities: English	3.8	3.3
Applied: visual commun.	1.8	3.4
Applied: indust. design	1.1	2.2
BUSINESS & ECONOMICS		
Management/Admin.	6.5	4.8
"Business" ^b	6.1	3.3
Accounting	4.1	2.6
Economics	.2	1.2
Marketing	1.1	2.5
EDUCATION		
Elementary	9.3	4.2
Special Ed.	2.9	1.2
"Education" ^b	5.2	1.9
Human Services	1.4	1.9
FINE AND PERFORMING ARTS		
Art	2.3	3.7
Music	2.5	.5
Theater/dance	1.4	.6
Number of cases:	558	645

a. All majors not shown above experience about the same enrollment among students who change majors and those who do not. See Tables 1.3 and 1.4 for estimates of their enrollment levels.

b. Specialization not indicated by respondent.

Educational Aspirations

Western's 1987 senior class includes many individual's whose aspirations have evolved relatively recently. It is by definition true that most college dropouts among the 1982 non-graduate sample lowered their educational aspirations. However, it may be useful to Western decision makers to learn how much students who survive to their senior year have *raised* their aspirations. Table 1.6 shows seniors' reports of their aspirations during high school and at the time of interview. Findings are shown separately for men and women since aspirations differ considerably for the two groups.

Table 1.6. Educational aspirations in high school and as seniors, by gender.

<u>Highest Degree Planned</u>	<u>During High School:</u>		<u>As WWU Seniors:</u>	
	<u>male</u>	<u>female</u>	<u>male</u>	<u>female</u>
High School	12.0	7.3	-	-
Associate	4.3	3.9	-	-
Bachelors	67.7	67.8	49.0	39.8
Masters	12.0	15.1	40.5	49.3
Post-Masters	<u>4.1</u>	<u>5.9</u>	<u>10.5</u>	<u>10.0</u>
	100.0%	100.0%	100.0%	100.0%

The increase in educational aspirations among these individuals is marked, with men moving from 16.1% to 51% intending a post-graduate degree, and women moving from 21% to 59.3%. However, one footnote to this aspect of students' educational careers is that only 16% of the sample intends to be in graduate school during the fall immediately after graduation, whereas 74.4% plan full time work and another 13.8% say they may be working full time at that point. The number of 1982 graduates who in fact attended any post-baccalaureate program during the five years after their graduation was intermediate to these figures, at 34.6%.

Reported aspirations during high school vary only slightly across collegiate unit. Majors in Huxley and Fairhaven colleges report having had somewhat higher aspirations, while majors in applied subjects within the College of Arts and Sciences report lower than average aspirations. All others vary close to average. Differences are somewhat more marked, however, when the question involves current aspirations. Education majors show the highest proportion (67.7%) intending the Masters degree, while Fairhaven college shows the highest proportion who intend post-Masters degrees. Most Arts and Sciences majors -- those in social sciences, math and natural sciences, and humanities -- intend both Masters and post-Masters degrees significantly more often than do

other majors. Applied fields within Arts and Sciences have the lowest aspirations of any group, with two-thirds (68.1%) intending only the Bachelor's degree and only 3.5% wishing a post-Masters degree.

When asked their immediate plans to enter graduate school in the fall after graduation, majors in three units answered "yes" at least 50% more often than the university average (16.1%): Social Sciences, Humanities, and the College of Fine and Performing Arts. Majors in the College of Business and Economics, Education, and Arts and Sciences Applied majors say "yes" less than half as often as the university average.¹

Accumulating Credits

A final aspect of students' educational careers to be considered is the number of credits students accumulate before graduating. While the catalogue indicates 180 credits as sufficient for graduation in most fields, about half of Western's graduates amass credits in excess of that amount. Among seniors with more than 155 credits as of our interviews, 35.1% had between 155 and 169 credits; 24% between 170 and 184; 17.3% between 185 and 199; 16.4% between 200 and 224; and 7.3% between 225 and 300. The majority of those with at least 170 credits by the end of Winter, 1987 were planning to graduate in Spring, 1987. However, 24% of those with 200-224 credits and fully 36.7% of those with an excess of 225 credits planned not to graduate until after Fall or Winter, 1988.

In our sample, majors in two areas -- business and social sciences -- were least likely to have accumulated more than 200 credits. Majors in education, applied areas and Fairhaven were somewhat more likely than others to have accumulated more than 200 credits. The most unusual unit is the College of Fine and Performing Arts, where 46% of students we interviewed had accumulated more than 200 credits, and fully 24.1% had more than 225 credits.

Aside from field, we have little information on what differentiates students with more or fewer credits as seniors. Remarkably, the number of times students changed majors is unrelated to the number of credits they have as seniors. Further, although transfers have more credits than natives, the difference is surprisingly small.

THE VALUES STUDENTS PLACE ON UNIVERSITY EDUCATION

This report has dealt with relatively external aspects of students' biographies: their background characteristics and various aspects of their career paths as Western students. In addition, the subjective values and interpretations students bring to the educational experience are critical to an understanding of Western students and how Western serves them. Although our surveys were

¹ Immediate plans are affected by typical career patterns in different fields. For example, MBA programs demand some field experience and therefore prevent immediate graduate work for most Business majors.

multi-purpose and could not measure such orientations in great depth, we did draw on the extensive literature in this area to construct limited sets of measures indicating students' subjective orientations in two major areas: overall orientations to education and reasons for choosing a major. Findings in these areas constitute the final segment of this report.

All students seek to achieve multiple goals by attending a university. To test students' relative orientation to opposing values such as career training versus liberal arts education, we asked a series of forced choice questions. Seniors and former students indicated which of two opposing goals they valued relatively more than the other, or that they valued the two equally. Responses were remarkably consistent across our three samples. We therefore report findings for seniors, along with comments on the minor variations between 1987 seniors and 1982 graduates and non-graduates.

Vocational and Credentialing Orientations

The image of the 1980s is that students are overwhelmingly oriented to credentials, vocational preparation, and financial rewards rather than learning, liberal arts, and building tools for a fulfilling life. National research has confirmed a considerable shift toward vocationalism since the 1960s, although it is likely that the 60s were the more unusual period. What we find among Western students is considerable diversity. It appears that particular students may emphasize vocational preparation much more than liberal arts education, while others espouse precisely the opposite set of values. In addition, for a considerable portion of seniors, preferences are strongly felt. Students could mark strong or weak preference for each value. In general, about one-third of students who preferred any given value felt that preference strongly.

Asked to indicate the "relative importance you place on [the] opposing goals: to obtain a degree [or] to learn a great deal," 23.3% of seniors said they value the degree more, 40.7 value both equally, and 36.0% value learning more. A similar question asked for a choice between "training preparing me for a specific occupation" and "a well-rounded education preparing me for life as a whole." Again, answers are relatively balanced, with 34.4% saying specific training, 28.2% reporting equal balance, and 37.3% placing more value on well-rounded education.

For many, the tension between relatively extrinsic and intrinsic goals appears to be reduced by orienting toward occupations which are relatively fulfilling. Asked to choose between preparing for "an occupation that would fulfill me as a person" and one "that would be financially rewarding," 63.1% say they place greater value on fulfillment, while only 10.8% report greater value on financial reward.

The only differences in these orientations among our three student surveys are that non-graduates report having been somewhat more vocationally oriented than the others and that currently enrolled seniors report slightly greater value on goals of learning and a well-rounded education than either other group.

Goal Clarity and Independence

During pretests of our surveys, a number of students echoed the concern that they had not really known what they were doing at Western as freshmen, leading us to include questions on this issue. Although the majority of respondents felt self-directed and relatively clear about their goals when entering college, many did not. Asked whether it was more true that "when you first entered Western: they "knew exactly what I wanted to get out of college" or that they "felt college was necessary without a clear reason why," 48.4% report knowing their goals, but 37.7% report feeling they did not have clear reasons for attending, and 14% felt both equally.

More students felt their college attendance was their own independent idea, but here too, a substantial minority report feeling pressured. The alternatives they choose from were "attending college was entirely my own idea" and "I felt pressured to attend by my parents or others." 70.7% chose the first alternative; 11.0% chose the second, and 18.3% ranked both equally, indicating considerable feeling of pressure. Thus, 29.3% of graduating seniors felt they began at Western with less than entirely internal motivation.

Since two-thirds of this senior class entered Western as transfer students, this finding suggests a considerable minority of current students begin their education without clear and independent reasons for doing so. The figures for 1982 graduates are very similar. Although non-graduates felt pressured no more often than graduates, a considerably higher portion of non-graduates who initially intended to complete a degree report having begun their education without clear goals (36%, as opposed to more than 48% of seniors, report clear goals.)

Social Life versus Academic Engagement

We asked the former student samples to choose between two options, one of which indicated rather extreme neglect of the academic side of the student life equation: "studying and learning were what mattered to me" and "social life and 'getting through' were what mattered to me." Sixty-six percent of 1982 graduates and 58.8% of non-graduates report valuing studying more, while only 6.7% and 13.1% valued social life more. Since the phrase social life and "getting through" was relatively extreme, it is remarkable that one-third of former graduates valued it as greatly as academic life.

Seniors were asked a softer question, to agree or disagree with the statement: "While at Western, I have found a good social life to be just as important as studying hard and learning. Two-thirds (67.6%) agree with this statement, 22.4% agreeing strongly, while 20.7% disagree, 2.8% strongly. These answers may give Western professors pause. However, they are entirely consistent with the conventional role of the modern university. Western students are living life, one important part of which is academic. They are neither living the monastic image of students dedicated entirely to learning, nor living the "party school frat house" image of dedication entirely to social life.

Differences by Collegiate Unit

Students who enter particular majors hold very different orientations than those of their fellow students. Findings for 1987 seniors and 1982 graduates are remarkably similar. Findings for 1987 seniors are summarized below, followed by a comment on their differences from 1982 graduates and non-graduates.

- The orientations of Business majors differ most significantly from the orientations of students in other majors. They are nearly twice as likely as others to value the attainment of a degree over learning and 3.6 times as likely to value financial rewards over personal fulfillment in a job. However, they are only slightly more likely to value specific job training over a well-rounded education. They also report feeling somewhat less independently motivated to attend college and somewhat less clear about their exact goals. These findings may reflect their relative youth.
- Education majors are highly vocational without being oriented to financial gain. While they place the highest value of any group on training for a job rather than getting a well rounded education, they place less emphasis on financial rewards than any group except Fairhaven and Huxley majors. To complete the picture, they are by far the most likely of any group to say they knew exactly what they wanted when they entered Western and also the least likely to say they were influenced by parents or others to choose their specific major.
- Among students enrolled in the College of Arts and Sciences, only humanities majors stand out: they place unusually low importance on the degree, as opposed to learning, they least often value the financial rewards of a job above self-fulfillment, and they consider a well rounded education more valuable than specific job training. In terms of goal clarity or independent motivation, however, they are close to the university average.
- Social science majors value a well-rounded education over specific job preparation significantly more than other majors, but are otherwise close to average on all orientations discussed here. Math and science majors do not depart significantly from the average on any of these orientation measures.
- Students majoring in the College of Fine and Performing Arts are less motivated by receiving a degree or financial rewards than average, but are otherwise close to the university average on the set of measures being discussed.
- Huxley majors place a greater than average value on learning as opposed to receiving a degree and place much less value on financial rewards than on personal fulfillment in the work, but are otherwise close to the university average on these orientation measures.
- Our sample contains only a modest number of Fairhaven majors (25 seniors), but that number is sufficient to observe a clear emphasis on the liberal arts. None of the 25 Fairhaven respondents reports valuing a college degree more

than learning or valuing financial rewards in a job above fulfillment, and only one values job training above liberal arts, making Fairhaven the most extreme unit at this end of the scale. Fairhaven students, who are considerably older than average, report almost exclusively internal motivation for college attendance, but somewhat lower than average clarity about college goals.

- None of these collegiate units differ from average with regards to the orientation valuing social life higher or lower than studying. This measure taps an orientation quite separate from the others and also separate from choice of major.

Differences by Transfer Status

Many university instructors probably believe that transfers are more vocationally oriented and less likely than others to value liberal arts education. However, any belief about the ways in which transfers and natives differ is challenged not only by our survey findings, but also by the fact that transferring has become a typical educational career path.

Transfers are slightly more likely to value the degree over learning and slightly more likely to value job preparation over liberal arts training, but the two groups are identical in emphasis on financial rewards in a job. The small differences which do exist between these groups are better explained by the major fields which transfers and natives tend to enter than by their status.

Transfers are, however, markedly different from natives with regard to the independence and clarity of their college goals, with transfers indicating less pressure from others and much greater goal clarity than natives. This is to be expected since transfers tend to be older than natives and, in particular, since most transfers enter during their junior year. It is, nonetheless, important for the university to recognize how many students come to Western with the greater portion of their educational plans already laid out. Three-fifths (60.1%) of transfers, compared to 28.9% of natives, report that they knew exactly what they wanted from college when they entered Western.

Differences among 1987 Seniors, 1982 graduates, and 1982 non-graduates

Seniors versus Graduates. Asking graduates of five years ago to report their orientations during college undoubtedly introduces memory error. Nonetheless, both overall distributions of answers and differences in orientation across collegiate units are very similar for 1982 graduates and 1987 seniors, increasing our faith in both datasets. It is meaningful, therefore, to compare graduates of five years ago to [probable] graduates of 1987-88. The major differences are:

- 1982 graduates report being slightly more vocationally oriented than 1987 seniors.

- Business graduates of 1982 are not as extremely different from their peers as are 1987 Business majors.
- Social science majors are more different from the other collegiate units in 1982 than in 1987: that they place less value on occupational preparation, the college degree, and financial reward.

Graduates versus Non-Graduates. Comparing 1982 graduates and non-graduates produces some intriguing patterns that return us to the congruence thesis put forward by many analysts of college withdrawal.

- Non-graduates are considerably more vocational (oriented to the degree, specific occupational preparation, and financial reward) than either the 1982 graduates or the 1987 seniors. This is a common finding at selective universities and liberal arts colleges, where orientation toward intrinsic learning is more congruent with the context than these more vocational orientations. It appears the same may be true at Western, although the effects are of modest proportion.
- Almost without exception, 1982 graduates differ more extremely across major than do 1982 non-graduates. For example, Business and Education graduates are 26% below and 20% above the university mean percentage valuing a fulfilling job over financially rewarding jobs. However, among non-graduates the corresponding figures are 18% below and 2% above the mean. This difference may occur because the non-graduates had been socialized less long by their major fields. But previous research showing modest socialization impact by majors make it more likely that these individuals less often selected major fields of interest on the basis of personal congruence with the value orientation typical for the field.
- Perhaps surprisingly, non-graduates do not report a greater lack of goal clarity upon entry to Western. They do, however, report slightly less independent motivation to attend college and somewhat more orientation to social life rather than to studying.

Differences by Route Leaving Western

The findings just reported concerning non-graduates take on greater clarity when non-graduates are divided into groups depending on whether they transferred immediately to another school, took a leave and then returned to Western or another school, never intended to graduate, or intended to graduate but dropped out instead.

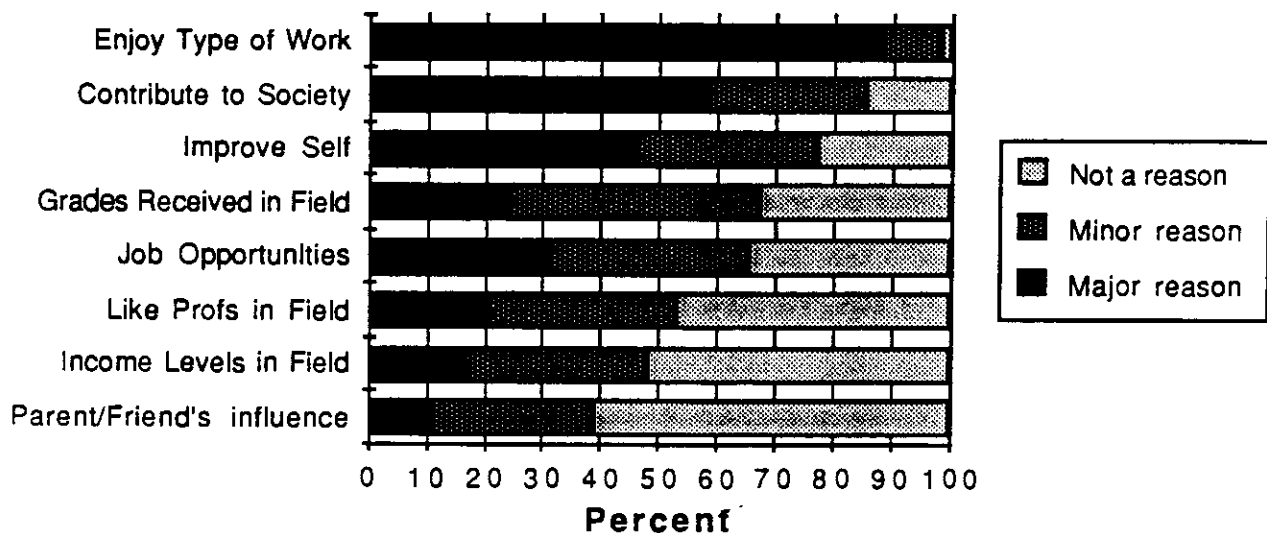
- Those who did not intend to graduate quite naturally valued college more for learning than for a degree, and valued well-rounded learning more than graduates.
- Transfers and those taking leaves of absence report only slightly more vocational orientation than graduates.
- The most vocationally oriented group are those who dropped out of education altogether. In particular, they much more often valued college for a

degree rather than for learning. They also more often report having been oriented to social life rather than to studying. Thus, the group who distanced themselves most completely from higher education had more often than others attended for what many liberal educators would call the "wrong reasons." That is, we may see many of these individuals as incongruent with major elements of the Western climate.

REASONS STUDENTS GIVE FOR CHOOSING MAJORS

By examining reasons students give for selecting their major fields, we further explore the issue of congruence and also identify some marked differences among collegiate units. It is valuable for educators to understand students' expectations when choosing a major. Is student reasoning congruent with that of professors'? Are students' plans realistic in terms of the area's occupational futures? What orientation to their academic work is indicated by students' reasons for choosing their field? To explore this topic, we asked 1987 seniors to indicate whether each of eight possible factors was "a major reason," a minor reason," or "not a reason" for their choice of their current major. Results for students in all majors are shown in figure 1.2.

Figure 1.2. Importance of selected reasons for choosing a major-1987 Seniors



The three reasons most often cited by 1987 seniors as a "major reason" for choosing their majors can all be classified as intrinsic or "soft" criteria: enjoyment of the work that a major entails (87.8%), the ability to contribute to society (57.5%), and the opportunity to improve oneself (45.5%). That is, most career decisions are being made laterally, according to qualitative differences

among fields, rather than vertically, according to job opportunities or income differences. Job opportunities, while a major reason for 30.8%, was "not at all" a reason for about 35%. Over half say income was not at all reason for choosing their major.

These findings correspond well with previous research on choice of major. They also suggest one cause of students' felt need for improved career counseling (discussed in a later report.) The fact that students down play job opportunities and income as reasons for choosing a major does not mean that these are unimportant. Indeed, 96.2% intend to be working full time five years after graduation and 91.7% of those intend to be working in the same field as their major. Instead, it implies some possible stress between choice of a major and the job futures which may follow.

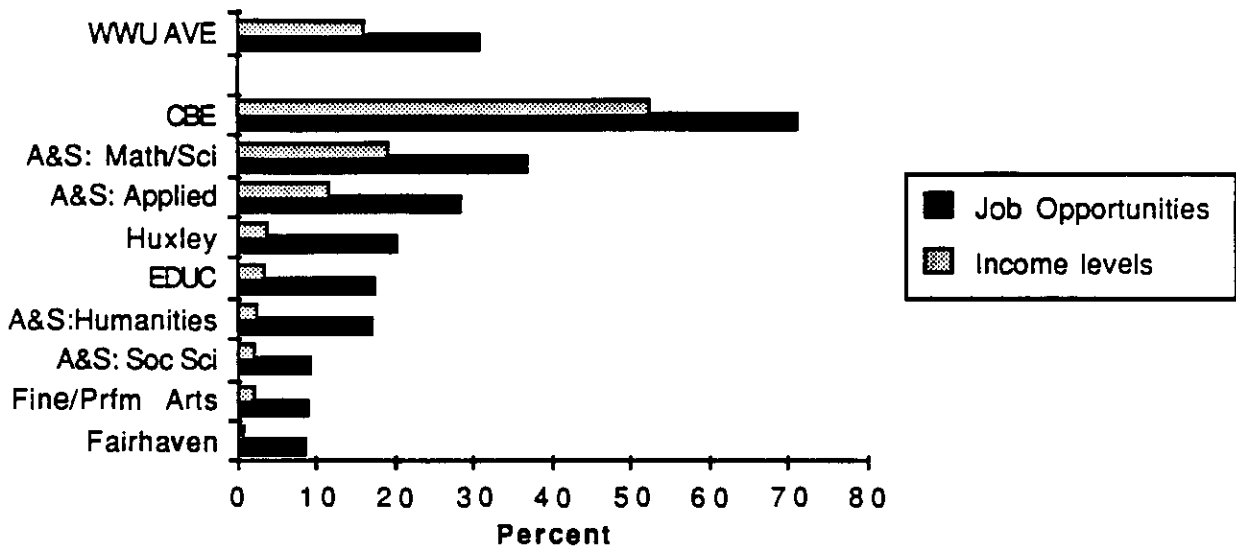
Variation Across Collegiate Units

The patterns shown above for all Western students vary by college. The following are findings unique to each particular collegiate unit in the university. Those reasons for choice of major not mentioned in relation to a particular college below can be assumed to be close to the University average. Only departures from the average are highlighted.

The College of Business and Economics. Seniors majoring in Business stand out as being the most distinctive group among those seniors surveyed. In particular :

- Business and Economics majors cite the three most common reasons for choosing a major less often than students in any other college in the university: enjoyment of work, 72.1 vs. 91.2; improvement of self, 26.0 vs. 49.8; and contribution to society, 24.2 vs. 65.0.
- CBE majors cite the influence of parents or friends as a "major reason" for choice of major more often than seniors of any other college (17.9% versus 8.9%).
- Job opportunities and expected income levels are cited as major reasons by CBE majors much more often than by seniors in any other college. This difference is so marked that it is shown graphically on the following page.

**Job Opportunities and Income levels as major reasons for choosing
a major-Seniors 1987**



The School of Education. Students majoring in Education:

- Rate the importance of grades on their choice of major especially low (12.4% vs. 24.5% say "major reason.")
- Rate expected income levels in the field lower than by majors in any other field (.9% vs 17.7%.)
- More often than seniors in any other major rate as "major" reasons the enjoyment of the work entailed in a major (96.5% vs. 86.9%) and the ability to contribute to society (88.7% vs. 54.6%.)

Social Sciences. Seniors majoring in the social sciences:

- Especially seldom emphasize the job opportunities in a field as a "major" reason for their choice of major (9.6% vs. 34%).
- Do not consider the expected income levels in their field to be a main reason for choosing their major(3.6% vs. 18.2%).
- Rate the degree to which they like the professors in their major as a main factor influencing their choice of major more often than any other group (34.1% vs. 17.9%).

College of Arts and Sciences: Math and Science. Seniors majoring in math, computer science, or the natural sciences:

- Down play improvement of oneself as a "major" reason for choosing their major (29.3% vs. 47.6%.) Only seniors majoring in Business rate this factor as less important than do math and science majors.

- Emphasize the importance of job opportunities in choosing their majors (37.1% vs 29.9%). Only Business major rate job opportunities as more important.

College of Arts and Sciences: Humanities. Seniors majoring in the humanities:

- Place the highest importance among all seniors on the grades they received in the field as a reason for choosing their major ("major" reason: 41.5% vs 22.2%)
- De-emphasize the importance of income levels in their field as a main reason for choosing their major (2.2% vs. 17.8%.)

College of Arts and Sciences, Applied Social Sciences. Seniors majoring in home economics, physical education, speech and technology are unique primarily in that they so closely resemble the university wide average on all but one reason for choosing a major.

- Enjoying the work is listed as a "major" reason by 96.5% of Allied majors, vs. 85.8% for all others.

The College of Fine and Performing Arts. Seniors majoring in art, music, or theater/dance:

- Down play the importance of job opportunities in their field as a "major" reason for choosing their major (9.2% vs. 32.2%.)
- Place low importance on the income levels in their field when choosing their major (2.6% vs. 17.1%.)
- To a modest degree, Fine and Performing Arts majors more often give all the "soft" reasons for choosing a major: enjoying the work, improving self, and service to society.

Fairhaven College. Seniors graduating from Fairhaven depart furthest of any group from the university average in the direction of de-emphasizing vocational preparation and conventional life success. In particular, they:

- Less often than any other group of seniors consider the job opportunities in their field to be of importance when choosing their majors (8.7% vs. 31.2%.)
- Place more importance on the opportunity to improve oneself than seniors in any other major (80% vs. 44.8%).
- Stress the ability to make a contribution to society (88% vs. 57.1%). Only education majors consider this factor more influential.
- Seldom report grades received in a field as a major reason for choosing it (8.3% vs. 24.6%)

Huxley College. Huxley seniors appear to choose their majors differently than others in that they often transfer from out of state, apparently seeking out this specialized program. However, in terms of our eight measures of reasons

for choice of major, Huxley seniors differ from others in only three respects. They:

- Place the lowest emphasis of all majors on grades when choosing their major (6.8% vs. 24.9%).
- Consider the income levels in the field to be of minor importance when choosing their major (2.3% vs. 16.7%). Only Education majors rated this factor lower.
- More often list contributing to society as a major reason (77.3% vs. 57%.)

Differences in Orientations by Individual Background

Some of the differences in orientation among students in different colleges is accounted for by the mix of male and female students and of older or younger students in each college. Female students and students over age 30 differ quite consistently from male and younger students in placing greater emphasis on the lateral, intrinsic, or "soft" reasons for choosing a major. Differences are larger and more consistent by sex than by age.

Women de-emphasize job opportunities and income, rate liking professors and course grades the same as men, place much more emphasis on choosing majors which will improve the self and contribute to society, and somewhat more often emphasize liking the work.

Older students also wish more often to choose majors which will improve themselves and contribute to society, and they somewhat less often emphasize earning power. They also differ from younger students by placing much less emphasis on the grades received in a field.

Differences in Orientations by Transfer Status

For five of the eight potential reasons for choosing a major which we listed on our senior survey, transfers and natives answer identically. These include all the most frequent reasons. The two groups differ only in that transfers less often report parental or peer pressure, and less often choose a major because they like the professors in the field or because they received high grades in that field. These differences are minor, in that none of these issues is of prime importance to either group. Further, these differences appear to reflect the fact that most transfers selected a major at a college other than Western, and that many transfers are older than native freshmen.

CONCLUSION

In addition to outlining the methodology of the WWU Student Survey series, this volume has offered three types of partial profiles of Western students. One set of findings involves students' backgrounds. The second describes selected elements of students' educational careers, with special emphasis on the finding that, except for age-related differences, transfers and native freshmen are extremely similar. The third reports various orientations toward the value of a

higher education, including the reasons why students choose particular majors. These are presented for all students and also broken down across nine different collegiate units.

It is the hope of this project that members of the Western community will find items of value among the various specific findings listed here. In particular, the issue of students orientations to education and their reasons for choosing their majors are central to much research on changing patterns among American university students and also central to an understanding of what Western students expect or desire. The degree of congruence between students' desires and the orientations of courses and faculty within particular majors presumably influences both the effectiveness of the educational enterprise and the degree to which it is satisfying to both students and faculty.