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# The Western Washington University Student Survey Series: Western Washington University Students Five Years Later, Volume 3

Carl Simpson

*Western Washington University*

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The Western Washington University  
Student Survey Series:  
Western Washington Univeristy Students  
Five Years Later

Volume Three

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.

Thanks to Sam Kelly and Robert Thorndike for helpful reviews of early drafts, to Janet Simpson and Donna Hintgen for indispensable organizational work, and special thanks to John Richardson for collaboration throughout these projects and to Kelly Buck for high quality assistance on all phases of these projects, from conceptualization through writing.

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# Volume Three: Western Washington University Students Five Years Later

## EDUCATIONAL ATTAINMENT FIVE YEARS AFTER WESTERN

This volume begins with a brief discussion of the education graduates and non-graduates in our samples received after they left Western in 1982.<sup>1</sup>

### Western Graduates

By the time of our follow-up interviews, approximately five years after their graduation, 34.6% of Western graduates had at been enrolled for some period of time in one or more degree program beyond the bachelors at Western. As part of our mail survey, which was longer than the phone version of the survey, we asked graduates who had attended further education to indicate what degree they sought, as well as what school they attended. The information gained from those questions is profiled below.<sup>2</sup>

**Degree Programs.** Some graduates, 7.6%, decided to get a second undergraduate degree. An equal number (7.5%) say they attended without intending to receive a degree. A large group, 15.3%, enrolled in a certificate program rather than a degree program. Nearly all these were teaching certificates. The largest group, 57.6%, enrolled in Master's programs. A few, 4.2%, say they followed that with entry into a Ph.D. program. Finally, 5.9% entered a professional program in law or medicine.

**Schools Attended.** The one school most frequently attended for graduate work was Western, with 28.8% of those in the sample who attended any graduate school. Only 7.8% enrolled in UW and .9% in WSU. Other regional universities in Washington enrolled 5.3%. Twelve percent (12.3%) attended other four year universities within the state. The remainder, 44.9%, attended four year universities outside the state.

### Non-Graduates

As discussed in Volume One, non-graduates followed several paths: a few intended no degree; 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. Of the three-fifths of non-graduates who attended school after 1982, one-third attended at least two additional schools, while the rest attended only one.

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<sup>1</sup> See Volume I for a description of graduate and non-graduate samples.

<sup>2</sup> A number of former students who indicated that they did receive some further education did not complete this section. It may be that they attended only briefly. The percentages reported here are based on 123 individuals, and therefore subject to error margins of 7-9%.

**Degree Programs.** The great majority of college and university attendance by Western's non-graduates (61.0%) had the bachelor's degree as target. Another 20.1% aimed at AA degrees. Including those who attended two schools, we also find 10.7% of college attendance in Masters programs and another 2.5% in Doctoral programs and .6% in M.D. or law programs. Another 5.1% earned certificates, a few from proprietary schools and most from Community Colleges.

**Schools Attended.** One third (34.3%) of all attendance after 1982 occurs at two year colleges, with 26.9% at Community Colleges in Washington or in neighboring states. Eight percent of post-1982 attenders took leaves of absence from Western and then returned here. The University of Washington was the most frequent single recipient of Western's non-graduates, with 17.4% of all. Only 3.5% attended WSU. Other Washington regional universities enrolled 8.5%. Private four year colleges and universities in Washington enrolled 3.0%. Four year colleges and universities out of state enrolled the remaining 23.4%.

**Degrees Achieved by Western's Non-Graduates.** By our five year follow-up, 38.4% of Western's non-graduates had received their bachelor's degree, with 3.1% also achieving a Master's degree. One tenth (10.8%) had an AA degree, while the rest, 47.7%, achieved no degree beyond high school.

**Reasons Given by Western Graduates for Attending Graduate School.**

We asked graduates to indicate whether each of five possible factors was a major or a minor reason why they attended graduate school. Three of these reasons were checked as major reasons by more than two-thirds of those attending graduate school: "this was part of your long range educational plan," "in your field, further education is required to find good jobs," and "you wanted more knowledge in your field." A fourth reason -- "in your field, further education is required for advancement on the job" -- was seen as a major reason by 59%. These reasons are entirely compatible, and suggest relatively long range career planning.

One additional finding is that 26% checked "you decided to change fields" as a major reason for attending graduate school. This group represents a small percentage of all graduates (9%.) However, they are a notable substratum because their utilization of the undergraduate degree is very likely to be indirect, rather than resulting in employment in the field of the undergraduate major.

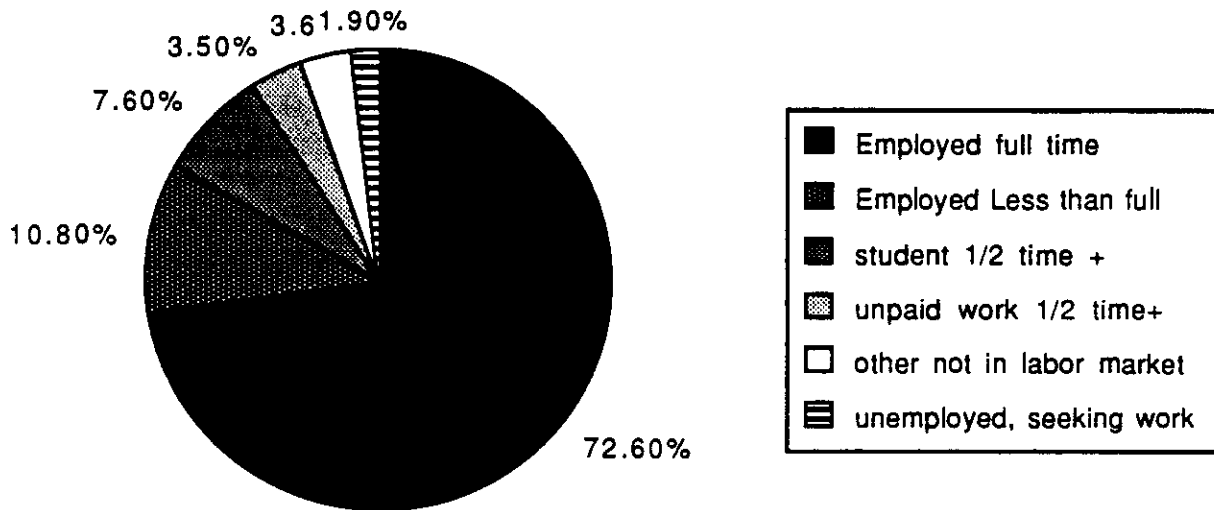
## EMPLOYMENT FIVE YEARS AFTER GRADUATION

We begin this volume with some of the most basic of educational outcomes -- employment status and job quality. This section of the report includes *only Western graduates* in the analysis. In later sections, findings for non-graduates are included also.

### Employment Status

The great majority of former Western graduates are employed five years after their graduation. Nearly three-fourths are employed full time and another tenth employed part time. Of the remaining 16.6%, almost half, 7.6 are in graduate school half time or more. This leaves 7.1% out of the labor market and 1.9% unemployed. About half of those not in the labor market at the point of follow-up report that they are doing unpaid work half time or more.

Figure 3.1. 1987 Employment Status Among 1982 Western Graduates



These findings are remarkable given that the majority of individuals in our sample of graduates are at the age when families are often planned and built. Nearly one-third (30.7%) have children; 53.7% are married and 7% divorced or separated. Given these family statistics and the fact that 53.7% of the former graduates we interviewed are women, it is worthy of note that so many are currently engaged in the labor force. In this respect, Western graduates very much illustrate changes in modern family working and earning patterns. Consistent with this, 88.1% of those who are married report that their spouses are employed. Further, employment statuses differ only slightly by gender. Paid employment is slightly more frequent among men (85.7% vs. 81.3%). Figures for men's and women's rates of college attendance are 8.5% vs 6.9%,

respectively; for unemployment, 1.6% vs. 2.2%; for absence from the labor market, 4.1% vs. 9.6%.

### **Types of Employment**

Nearly two-thirds (62.4%) of the employed Western graduates we interviewed were working in managerial or professional positions.<sup>1</sup> While a full list of job titles is too detailed for this report, the following highlights indicate something of the types of employment graduates are now experiencing:

- Management positions (including financial and non-financial positions in management or related to management) account for 17.5% of graduates.
- Another 7.6% are working as engineers, computer analysts, or in mathematics or natural science positions.
- Nearly three percent (2.8%) are in professional level positions in the health field.
- Fifteen percent (14.7%) of all graduates are involved in elementary or secondary teaching; another .7% report teaching at the post secondary level.
- Other "professional or specialty occupations" account for a further 14.2% of graduates. These include: 3.1% counselors; 4.6% social science, planning, religious, or recreational; 1.3% legal; and 6.5% in art, music, dance or photography.
- The combined category "technical, sales, and administrative support" accounts for 9.9% of graduates, including 1.7% health technicians, 3.2% other technicians, and 6.5% in sales.
- Clerical occupations are occupied by 11.7% of graduates, including 2.9% in administrative support positions and 2.3% in financial and banking positions.
- A small number (3.5%) are occupied in non-professional service positions, the largest proportion (1.2%) in food preparation and service.
- Farming, forestry and fishing account for 2.4%.
- Various construction, transport, or laboring positions are occupied by 4.2%, with .8% of those in the armed forces.

### **JOB QUALITIES**

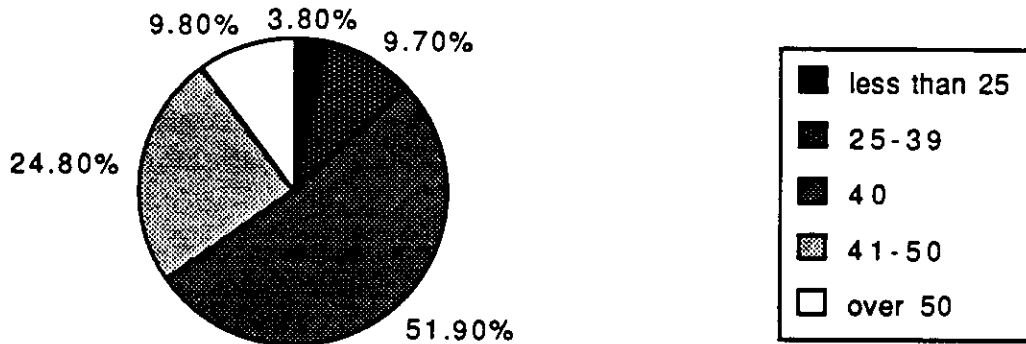
In a different section of our interview, many graduates express dissatisfaction with amount and quality of their leisure time. Perhaps one reason is that many work more than full time. One-third (34.6%) report typically working more than 40 hours per week, while only 13.5% work less than 40. (See Figure 3.2.)

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<sup>1</sup> Job titles were coded using the current U.S. Census Occupational Categories. Managerial positions include managing small branch offices as well as management in larger settings.

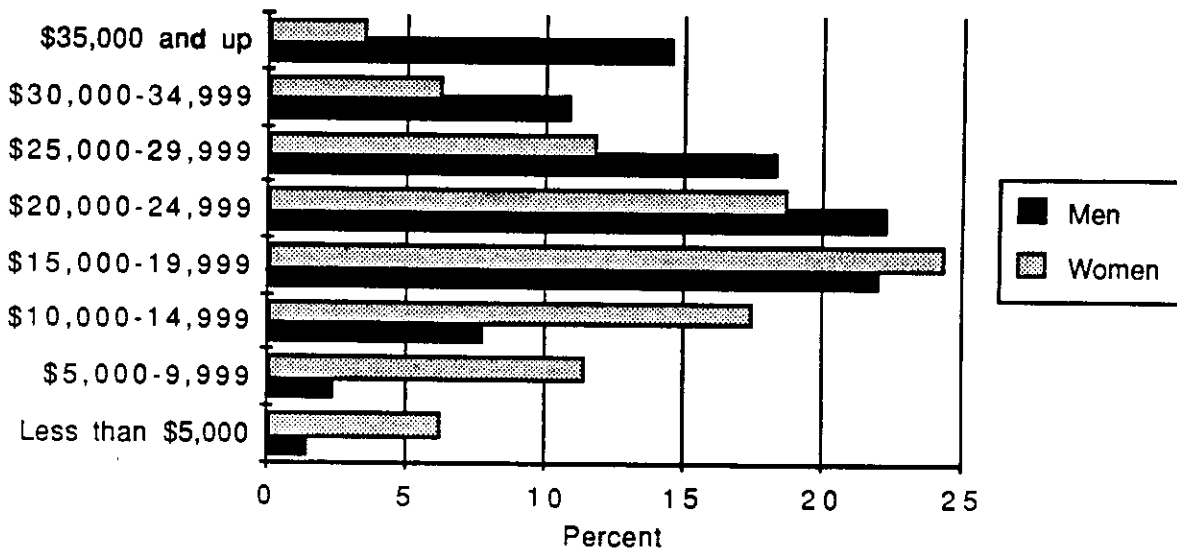


**Figure 3.2. Number of Hours 1982 Western Graduates Work Weekly**



The work force we interviewed is relatively stable, given recency of graduation. A fair proportion of 1982 graduates (36.3%) have held their current jobs for at least three full years. Over half (55.3%) have held their jobs for more than two years. Only 20.7% of jobs were begun within the 12 months before our interviews. However, this is a finding which may be biased by our inability to locate a sizeable proportion of former graduates. Those who are least stable residentially, and therefore most difficult to locate, may also exhibit the least stable employment patterns.

**Figure 3.3. 1987 Annual Income Levels of Male and Female 1982 Western Graduates.**



The median individual income reported by members of our sample is just over \$20,000.<sup>1</sup> Although one-tenth are earning rather little, less than \$10,000, most of these individuals are working part time, often in conjunction with continued schooling or family child care. Because earnings are so heavily influenced by gender, Figure 3.3 presents earning levels separately for male and female graduates. As Figure 3.3 shows, nearly 15% of male graduates report earning more than \$35,000 annually; about one-fourth (25.5%) earn more than \$30,000. For women, only 9.8% earn over \$30,000, while fully 35.3% earn \$15,000 or less annually.

The average income of males in our sample is \$5,900 greater than the average for females (\$24,200 vs \$18,300.)<sup>2</sup> While this differential is marked, it is smaller than the differential among all employed males and females nationwide. The average woman in this sample earns 75.6% of the average man's salary. Among only full-time employees, women average 79.8% of male earnings (\$19,750 vs. \$24,750.) For the entire labor force, women average about 57% of male earnings. This difference is leveled somewhat by higher education. (For greater detail and accuracy on this issue, see pages 11-12 in this report.)

#### **RELATEDNESS OF EMPLOYMENT TO EDUCATION AT WESTERN**

Although earnings are often posed as the most critical aspect of employment, the primary issue from the viewpoint of educators may be the degree to which former graduates utilize their university training on their jobs and in other parts of their lives. It is nowhere written that employment must be in the same field as an undergraduate major for the university and the student to be successful. However, most students, express a clear intention to work in their major field. When we asked currently enrolled seniors whether they planned to be "employed in your major field" five years after graduation, 77.2% said yes, 7.0% said no, and 15.8% said they did not know. These figures are presumably similar to the intentions of 1982 graduates when they were seniors.

We approached this important issue using several measures, all indicating the degree to which graduates' jobs were directly related to their training at Western. First, we compared respondents' job titles, which they reported, with their majors, as recorded with the university registrar.<sup>3</sup> Jobs were categorized as in the same field as the undergraduate major at Western, in a related field, or in an unrelated field. For some majors, such as social sciences and some business concentrations, most of the natural employment targets are in "related" fields since few jobs bearing the precise title of the field exist. Thus, the

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<sup>1</sup> We did not ask family income. Just under half the sample are dual income families.

<sup>2</sup> These figures are not exact averages. They are interpolated from the \$5,000 categories used to record income. They approximate median scores since the influence of any extremely high incomes is eliminated through use of the "higher than \$35,000" category.

<sup>3</sup> For non-graduates, respondents' reports of their own majors were used since it is common to change fields when transferring. In all cases, our coding -- comparison of major and employment field -- was double checked for reliability. Coder agreement was in excess of 95%; disagreements were resolved by the project director.

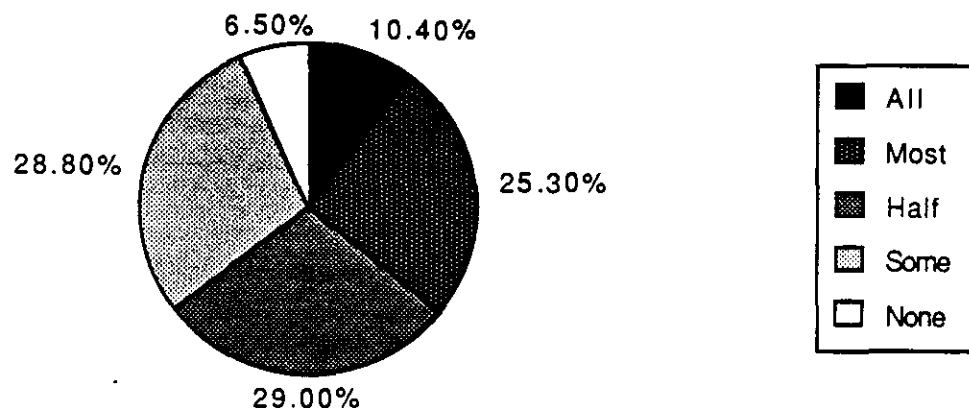
primarily issue in terms of utilization of university training is how many jobs are entirely outside the field of the major.

Three out of seven (42.9%) graduates are working in the same field as their undergraduate major. Another 26.5% are in a related field, bringing the total to 69.4% of jobs directly related to the undergraduate major field. This figure is clearly lower than the intentions expressed by 1987 seniors, but nevertheless shows relatively high utilization of the major field.

Of the 30.6% working in unrelated fields, over one-third (12.7%) have attended graduate school and list as one reason for doing so the desire to prepare for work in a field different from their undergraduate field. These individuals report that they have chosen a career field, but one which differs from their undergraduate major. When asked why their chosen career field differs from their undergraduate major, about one-fourth said their interests changed, one-fourth said they did not originally choose their major with employment in that field in mind, one fourth said they were unable to find work in their original field, and one-fourth said they were able to find better work in the new field.<sup>1</sup>

A second measure in this area involves career relatedness to undergraduate major. Seventy-seven percent of 1982 graduates say they have made a definite career choice at this point. Asked if their intended career is in the same field as their undergraduate majors, 74.8% say the same or a related field, while 25.2% say a different field. Most of these career changes appear to be working out satisfactorily, with 85.6% of respondents who have decided on a career working in their chosen field (67.9%) or a field related to it (17.7%.)

**Figure 3.4. Proportion of Each Individual's Job "Using Skills or Knowledge Gained from Attending Western."**

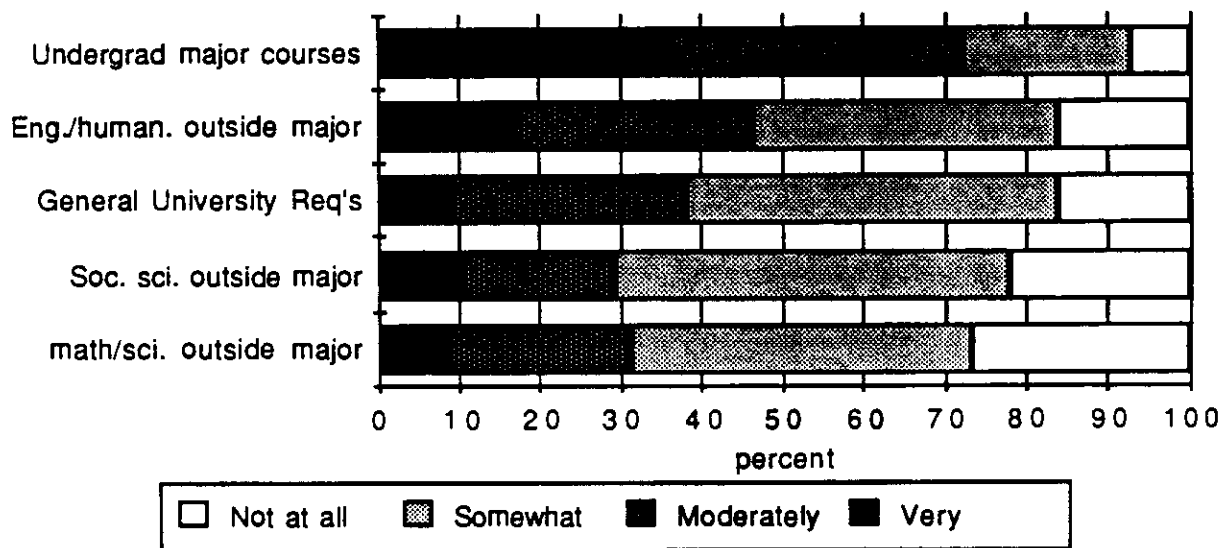


<sup>1</sup> This question was asked of only a subset of graduates -- those who completed our mail questionnaire. These percentages are therefore based on only 65 cases.

Another approach to this issue of "training utilization" recognizes that much university education may transfer knowledge to settings not explicitly related to the major field and, on the other hand, that weak training could result in little transfer even when employment is in the major field. To explore this matter, we asked former graduates to indicate "What proportion of your job uses skills or knowledge you gained from attending Western?" This is a relatively demanding criterion measure, since one-third of graduates have attended graduate school since Western, and over half of graduates transferred to Western, attending Western for only a part of their undergraduate education..

Responses are shown in Figure 3.4. One-third of employed graduates (35.9%) say "most" or "all" of their jobs use knowledge gained at Western; 64.9% say at least half the job uses knowledge from Western. Only 6.5% say "none" of their work uses their skills from Western.

**Figure 3.5. How Useful Various Types of Courses at Western Were In Preparing Graduates for their Jobs**



The question of skill transfer into employment related to undergraduate education can also be specified by the source of knowledge which could be gained at Western. The question we posed was: "How valuable was each of the following types of undergraduate courses in preparing you for your job?" The types included courses in the major and also courses of several types outside the major. Responses are shown in Figure 3.5. Results should be read bearing in mind that about one-fourth of Western graduates were transfers who took no GURs at Western and another third were transfers who took fewer general courses than courses in their majors.

It is natural that the most directly useful courses for job preparation are those in the major. Also of interest, however, are the reports regarding courses outside the major. General University Requirements are rated as "very" valuable by 8.7% and as "moderately" valuable by another 29.4%. Only 16.2% say they were "not at all" valuable. Since the major purpose of GURs is not vocational, and since many graduates took only a portion of their GURs at Western, these findings suggest that most graduates are finding jobs which call for more than narrow technical expertise, making general educational background count. However, the modal response, including 45.7% of graduates, is that GURs are only "somewhat" useful preparation for employment five years after graduation.<sup>1</sup>

We also asked graduates to rate the usefulness of courses outside their majors in the three areas shown in Figure 3.5. Language skills most often apply, with social science and math/science courses at least "somewhat" helpful in three-fourths of cases, but "moderately" or "very" helpful in only about 30% of cases. Given the nature of job specialization, the fact that some jobs make no use of each of these types of skills is to be expected. However, the fact that "somewhat" rather than "moderately" valuable is the modal response may offer pause for thought.

## **EMPLOYMENT BY COLLEGIATE UNIT**

### ***Graduates' Employment Status: Descriptive Findings.***

Figure 3.6 shows considerable variation in the proportion of former students from each collegiate unit who are employed, but very little variation in rate of *unemployment*. Only one college -- Education -- has a noticeably higher-than-average proportion of former students out of the labor market. That one case is accounted for entirely by the facts that 85% of Education majors are women, and that slightly more women than men in our sample have withdrawn to raise small children.

The reason variation in employment rate is greater than variation in unemployment is that the primary factor determining what proportion are employed is the proportion who are in graduate school. The total unemployed and out of the labor market varies by only 7.5%, while total employment rate varies by 20%. The difference is explained entirely by the proportion of individuals in each field attending graduate school, which varies from less than five percent to over 20%. Thus, what differs by collegiate unit is not employability or desire to work, but the typical patterns of post-graduate education, including how much post-graduate education students pursue and the timing of their entry into graduate school.

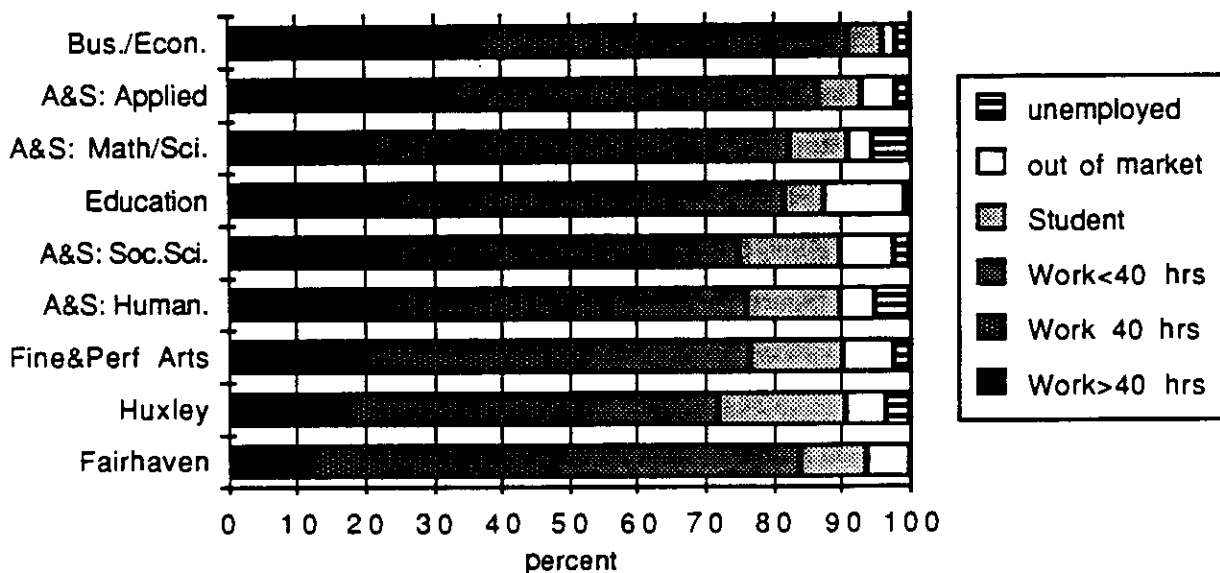
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<sup>1</sup>A portion of graduates have been in the job market only a short time, following graduate school, or are working temporarily as part of their longer term graduate education. These are especially unlikely to find undergraduate courses related to their work.

It is significant for the interpretation of career building in various fields that a follow-up of considerably longer than five years would be necessary before estimates of differential employment rates would fully stabilize. At five years, the major alternatives are employment vs. further education. This choice is, in turn, influenced by the credentialing demands of different fields, by individual preferences, and by employment opportunities in different fields. A less obvious implication is that in fields where more students attend graduate school, a larger proportion of those employed have entered the labor market after completing graduate education, and shortly prior to our study, and do not, therefore, enjoy the pay benefits of a longer time on the job.

Figure 3.6 also indicates considerable variation in the proportion of individuals who are employed only part time -- from just over 10% in Math/science to over one-third of former Fairhaven students and one-fourth of Fine and Performing Arts students.<sup>1</sup> Two fields -- Business and Applied fields within Arts and Sciences -- also stand out as having about one-third of former graduates working *more* than 40 hours per week.

Figure 3.6. Employment Status by Collegiate Unit



**Explaining Graduates' Job Qualities: Descriptive and Multivariate Findings.**

In this sample, employment rates are explainable almost entirely in terms of one variable -- rate of attending graduate school. Nearly all graduates are either working or attending graduate school. However, so many factors influence income and the utilization of education on the job -- from gender and attitudinal

<sup>1</sup> The number of Fairhaven students in the sample is small, making this figure subject to error.

orientations to major field -- that simple descriptions of these outcomes for each collegiate unit can be misleading. Therefore, in addition to describing differences among former graduates of each collegiate unit, we also conducted multivariate analysis to estimate the *unique impact* of collegiate unit while statistically adjusting for the possible effects of the individual attributes and educational measures available in our follow-up dataset. These measures include:

sex, age, Western GPA, number of credits taken at Western, native vs. transfer entry to Western, whether post-graduate education was sought, highest degree earned at follow-up, and seven measures of orientation toward higher education and the choice of major (cf. Vol. One.)

After the effects, if any, of all these variables are accounted for, we estimate the remaining effect, if any, of majoring in each of the nine collegiate units defined in Volume One. We also tested the possibility that two very basic background characteristics, age and sex, might have differential impacts depending on which collegiate unit the individual majored in.<sup>1</sup> Finally, additional analyses were performed to adjust for the length of time each graduate had held his or her job and the number of hours the individual reported working each week.

In the following paragraphs, figures 3.7 and 3.8 present descriptive patterns, following which the results of multivariate analyses are summarized verbally. Any of the measures listed above which is not mentioned in these discussions is estimated to have no impact on the job quality -- income or knowledge utilization -- being examined.<sup>2</sup>

**Describing Income Differences by Collegiate Unit.** Figure 3.7 shows Western graduates gaining income somewhat in proportion to the balance of their own motivations during college and also reproducing widely understood aspects of the U.S. economy. Business majors stand alone with much higher than average earnings, followed by fields involving scientific or other applied orientations, followed by non-scientific fields frequently producing employment in the public sector, especially in educational institutions, and followed by those in the arts. The grand average for all graduates is approximately \$21,050.

**Multivariate Explanation of Income Differences.** Aside from the number of hours worked, the most powerful single factor influencing income is gender. This was seen in Figure 3.3. In an equation also accounting for the influences of major field, other individual attributes, and attitudinal orientations, being female is estimated to lower annual earnings in this sample by \$5,450.<sup>3</sup> The one exception to this general rule is that among math/science majors only,

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<sup>1</sup> These tests were accomplished by constructing dummy interaction terms for inclusion in multiple regression models.

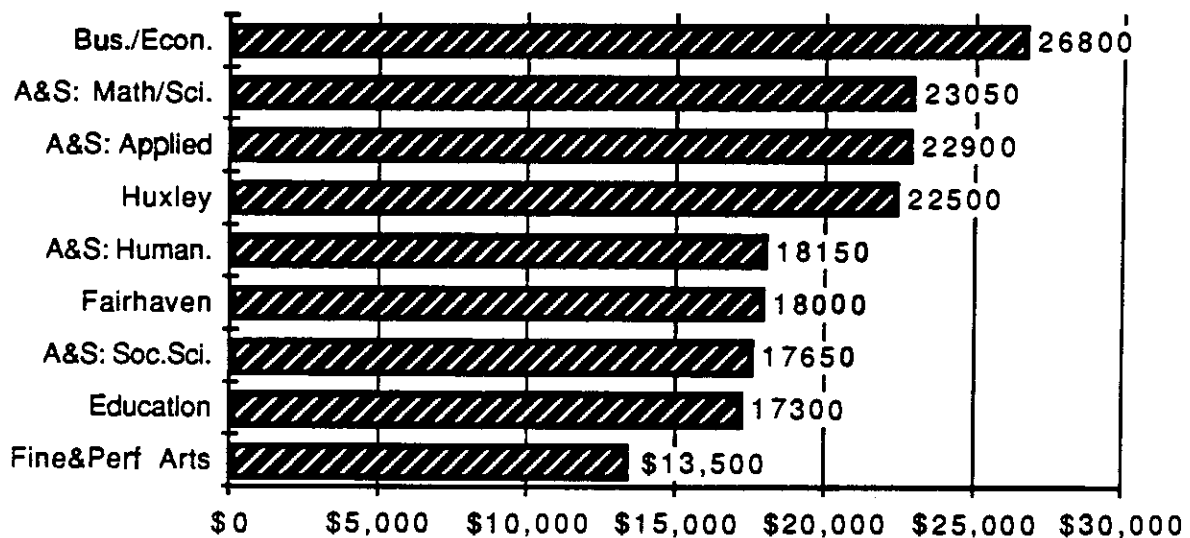
<sup>2</sup> More precisely, we estimate that the probability that the measure affects satisfaction is too low to merit its inclusion in the findings. We use the conventional 95% confidence level as cutoff.

<sup>3</sup> This figure is an approximation based on a regression slope of 1.09 scale intervals of \$5000 each.

being female is estimated to reduce earnings by only \$1,100, one fifth the rate for all other fields.

One part of the reason women earn less involves the most powerful determinant of earnings: the number of hours worked. Part-time workers earn an estimated average of \$7,025 less than individuals working 40 hours per week. More than twice as many women as men work part time: 13.9% vs. 5.8%. Similarly, the length of time one has held a job influences earnings, and male graduates in our sample began their jobs somewhat earlier than did the female graduates. When hours worked per week and time on the job are taken into account in the equation, the differential between men and women is reduced, but remains at an estimated \$4,300. About half (\$500) of the reduction from \$5,450 is explained by time on the job, with hours worked explaining the remaining \$650. These findings do not change the male/female differential, but they do identify the mechanism through which approximately one fifth of it is generated.

Figure 3.7 Average Annual Income of Employed Graduates from each Collegiate Unit



Several attitudinal orientations toward education and the choice of a major also help explain income levels, although each effect is of modest proportion. Those who wanted "to prepare for an occupation that would fulfill me as a person" are now earning less than those who placed greater emphasis on preparing "for an occupation that would be financially rewarding." Those who placed greater emphasis on getting a degree rather than learning a great deal are now earning more. And those who chose their majors because of the employment futures they offered are earning more than those who chose more on the basis of liking the field.



Graduation from three collegiate units is estimated to affect income five years later, over and above differences accounted for by gender or orientation. Business majors (males and females) are estimated to earn \$3850 more than others, in addition to their additional earnings based on their greater orientation toward degrees, financially rewarding jobs, and choice of major for its employment future. Applied fields within the College of Arts and Sciences are estimated to earn \$2700 more than the average of other fields; graduates of the College of Fine and Performing Arts are estimated to earn \$5750 less than others.

Finally, two indicators of educational career enters the picture: students who entered Western as transfers are estimated to earn about \$1700 less than others. We have no explanation for this difference except to say that it is not accounted for by the other factors included in these tests. In addition, graduates who have earned advanced degrees and are now in the job market are earning an estimated \$1,500 more than those who did not.

In all, the factors reported above account for 31.7% of the variation in income level among individuals in our sample. Gender alone uniquely accounts for nearly 12%, with the others adding another 17.7%.<sup>1</sup> When the impact of time on the job and number of hours worked are included, 38.9% of variance in earnings is explained.

### **Differences Across Collegiate Unit in the Relatedness Between Undergraduate Major and Employment Field**

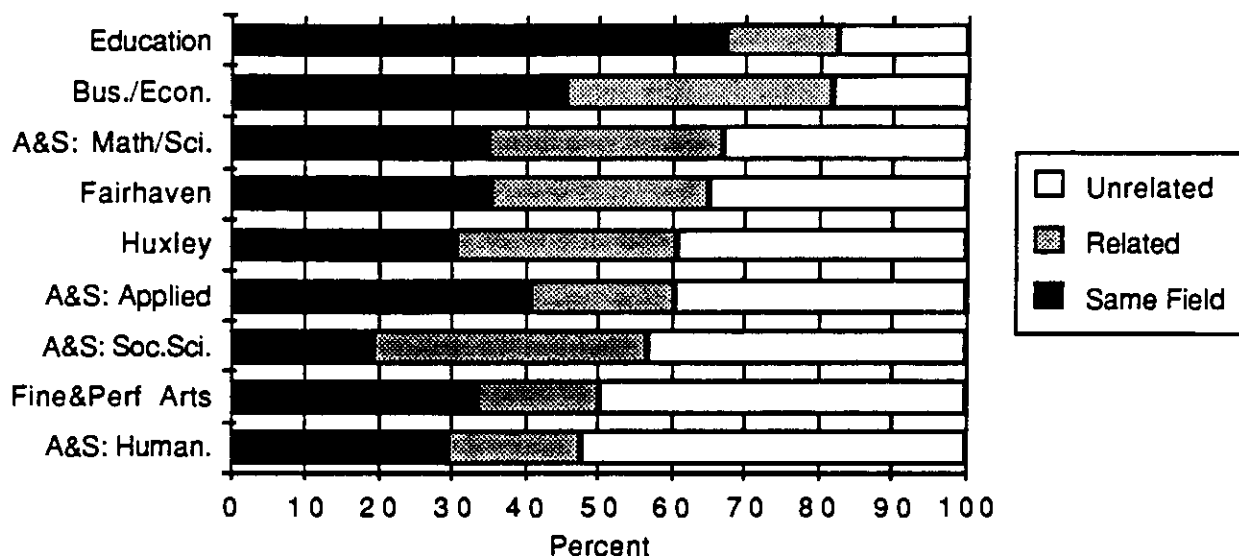
**Descriptive Differences.** Figure 3.8 shows how many of the employed graduates of each collegiate unit are working in the same field as their major, a related field, or a completely unrelated field. Differences between employment in and related to a field are explained primarily by the structure of positions for which a major prepares individuals. Education has a clearly defined channel, while fields like Business or Math/Science lead to a wider variety of possible employment futures, many outside the narrow field but clearly related to it. However, the distinction between employment entirely unrelated to the major versus employment in or close that field is a major one.

Two fields, Education and Business, produce employment in or related to the field of the undergraduate major far more often than others. For all other units, the rate of work unrelated to the major is over 33%. The maximum, in Humanities, is 52.4%. These findings reflect both job market possibilities in various fields during the mid '80s and also intentions and preferences of individual students. These multiple issues are explored below.

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<sup>1</sup> These amounts may seem small to readers unfamiliar with typical social science findings. However, study after study documents the tremendous individual variation among individuals which cannot be explained by social science variables.

**Figure 3.8. Relation Between Field of Employment and Undergraduate Major, 1982 Western Graduates.**



**Multivariate Explanation.**<sup>1</sup> Even after adjusting for the impact of various other factors, Business majors and women (but not men) majoring through the School of Education are more likely to be in jobs related to their college majors. The impact of Education is greater than that of Business. In addition, majoring through two other units, Social Sciences and Humanities, reduces relatedness between job and major.

Several factors other than collegiate unit also affect relatedness between job and major. These may be separated into two categories: measures indicating an emphasis on vocational preparation as opposed to general education, and measures indicating seriousness about, or involvement in, higher education.

Graduates who valued college as preparation for a specific occupation rather than for a broad general education more often have jobs related to their majors. Similarly, those who chose their majors for the employment future they would bring rather than because of enjoying the work are more often in related fields.

Those with greater involvement in education also utilize their education more than others. Those who pursue graduate education are much more likely to find work in or related to the undergraduate major. This is true despite the fact that a substantial minority of those attending graduate school do so in order to

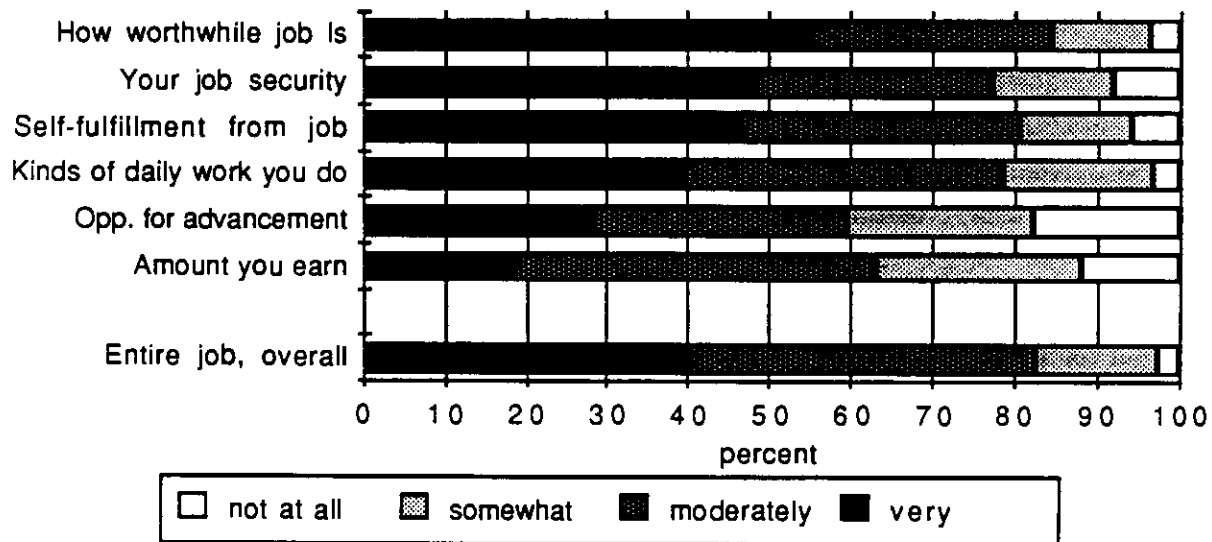
<sup>1</sup> The variable analyzed here, relatedness of employment to the major field, is the same as that graphed in Figure 3.8. Predictor variables are the same as those listed on page 10.

change fields. In addition, those who accumulated higher GPAs at Western are more likely to work in fields related to their majors.<sup>1</sup>

### JOB SATISFACTION

Volume One in this series reported that most Western students make their major field decisions on the basis of factors other than future earnings. The "soft" factors of liking the work, wishing to contribute to society, and seeking self-fulfillment through the work were especially influential. These priorities are also reflected in graduates' job satisfaction ratings. The classic "hard" factors -- earnings and the opportunity for advancement -- receive the lowest satisfaction ratings. Even in those cases, over 60% are at least moderately satisfied, but others are only "somewhat" or "not at all" satisfied. Job security is "very" satisfactory to nearly half the sample; however 8.1% report considerable insecurity ("not at all" satisfied.)

Figure 3.7. Satisfaction of 1982 Graduates with Various Aspects of their 1987 Jobs.



The highest satisfaction of all is reserved for "how important and worthwhile your work is." Similarly, nearly half are "very" satisfied with "the self-fulfillment you receive from the job." While the soft measure most important to seniors -- satisfaction with the tasks performed -- shows ratings intermediate to the other measures, nearly 80% are "moderately" or "very" satisfied. In general, it appears that graduates are maximizing the areas of greatest felt importance to

1

them. As would therefore be expected, *overall job satisfaction* is relatively high, with 40% "very" satisfied and another 42.3% "moderately" satisfied.

### **Correlates of Job Satisfaction**

The issue of "soft" versus "hard" job qualities continues to be of interest when we look at which qualities of jobs are most associated with overall job satisfaction. Satisfaction with earnings shows the lowest association with overall job satisfaction, with a correlation of .34.<sup>1</sup> The other "hard" measures, satisfaction with job security and with opportunity for advancement, are more closely associated with overall satisfaction, with correlations of .40 and .50. However, the closest correlations with overall job satisfaction are with "soft" factors: .65 with "how important and worthwhile your work is," .70 with satisfaction with "the kinds of daily work you do," and .75 with "the self-fulfillment you receive from the job."<sup>2</sup>

Satisfaction with these soft qualities of jobs is, in turn, associated with whether the job is in a field related to the undergraduate major at Western. Correlates with the three measures mentioned above and with overall job satisfaction are all between .28 and .32.

### **Graduates' Job Satisfaction and Collegiate Unit: Descriptive Findings.**

Figure 3.10 shows levels of overall job satisfaction among employed graduates of each collegiate unit at Western. A quick comparison of this figure with Figure 3.7 shows how different job satisfaction findings are from findings for income. Indeed, Fine and Performing Arts majors, those lowest in income, and Education majors, those second lowest in income, are highest and second highest in job satisfaction. For others, Fairhaven and Social Science graduates, both income and satisfaction are lower than for other collegiate units, primarily because many of these individuals were unable to locate work in their fields.

Perhaps the greatest similarity in job satisfaction across collegiate units is the proportion who are at least "moderately" satisfied. This figure varies between 74% and 90% for all units. That is, no more than a quarter and no fewer than one tenth are somewhat dissatisfied with their jobs.<sup>3</sup> The proportion who are "very" satisfied with their jobs varies much more by collegiate unit.

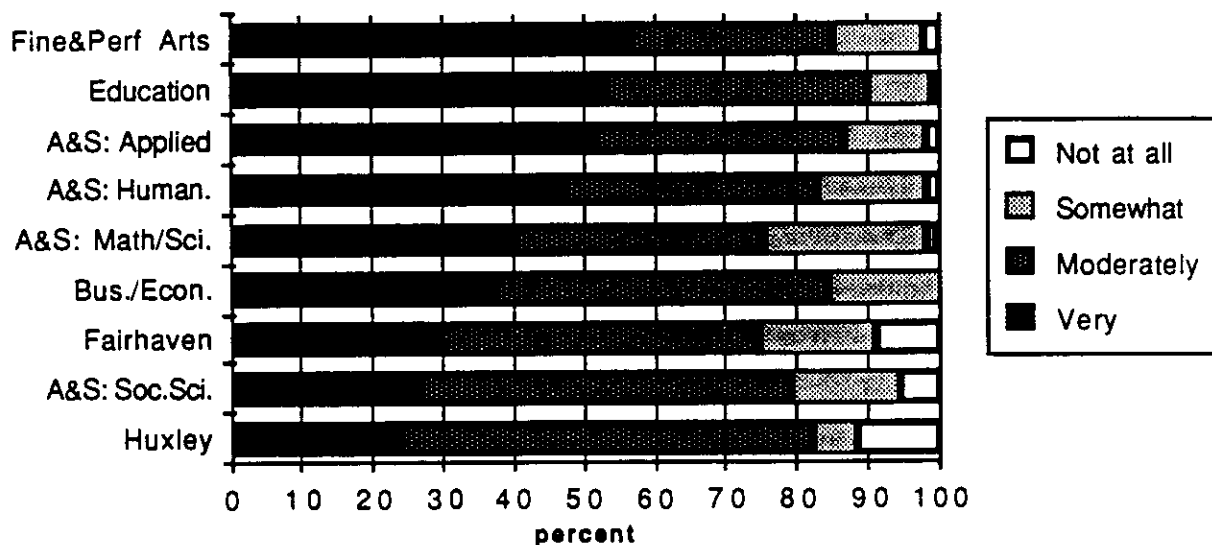
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<sup>1</sup> A correlation of zero indicates no association whatever; a correlation of 1.0 would indicate that two variables are completely identical.

<sup>2</sup> All these correlations are unusually high for social science data because all these variables measure different aspects of the same thing: job satisfaction.

<sup>3</sup> With survey measures such as this, respondents tend toward the positive. Thus, answering "somewhat satisfied" indicates lukewarm approval of the job.

Figure 3.10. Percent Reporting Each Level of Overall Satisfaction with Job, by Collegiate Unit



### Graduates' Job Satisfaction and Collegiate Unit: Multivariate Findings.

It is most likely that college major affects job satisfaction indirectly, through influencing the type of employment graduates gain. Also, we know that students who choose different majors have quite different orientations and may therefore judge their employment situations differently. It is therefore important to examine the possible impact of collegiate unit on job satisfaction while statistically taking into account the possible effects of the individual attributes and job attributes available in our follow-up dataset. These measures include the same set of measures used in multivariate analysis of job qualities (cf. page 10), plus measures indicating job qualities: the number of hours per week worked, number of months the job was held, annual earnings, and the measures of job's relatedness to major discussed earlier.

The results of these analyses are summarized verbally in the following paragraphs. Any of the measures listed above which is not mentioned below was estimated to have no impact on the indicator of job satisfaction being examined.<sup>1</sup>

**Satisfaction With Earnings.** The only measure among all those we tested which reliably predicts satisfaction with earnings is annual earnings.<sup>2</sup> This is interesting primarily because it indicates that students' expectations about the income they may receive do not appear to affect their satisfaction. No doubt

<sup>1</sup> We use the conventional 95% confidence level to include or exclude effects.

<sup>2</sup>  $R^2 = .23$ . That is, income explains about 23% of the variation in satisfaction with earnings.

majors in education or the social sciences expect to earn less than do business majors, just as individuals who choose a major for self-fulfillment rather than to earn a great deal presumably anticipate the possibility of earning less. And, as discussed earlier, these factors do influence earnings. Yet these expectations appear not to cushion the dissatisfaction of having a low income five years later. Satisfaction with earnings is only a small element of overall satisfaction with employment, but students with low incomes are not shielded from dissatisfaction with that aspect of their work.

**Satisfaction With Job Security.** Income level is also the major predictor of satisfaction with job security. Over and above that, Education majors feel more secure. Their adjusted average satisfaction is .32 higher on the four point satisfaction scale.<sup>1</sup> Finally, in the College of Business and Economics only, age is inversely related to security. Although older CBE students feel nearly as secure as the Western average, this is because of their greater earnings. Adjusting for the impact of earnings, a CBE student 10 years older than another expresses job security .7 points lower on the 4 point satisfaction scale. Thus, young CBE students feel more secure than average, but older CBE students feel less so five years later.<sup>2</sup>

**Satisfaction With Opportunities for Advancement.** Here, too, income level is the primary predictor of satisfaction. In addition, satisfaction with this aspect of the job is greater where the job is more closely related to the undergraduate education received at Western. For example, adjusting for other factors, one who reports that "most" of the job uses knowledge gained at Western reports satisfaction with opportunity to advance .34 higher on the four point scale than does one who says the job uses such knowledge only "some" of the time. No collegiate unit produces greater satisfaction of this type, but utilization of education in any major appears to help.

Two other measures have smaller, but statistically reliable effects. The first is that those who say they valued "studying and learning" while at Western are less satisfied with opportunity for advancement than those who placed greater value on "social life and 'getting through.'" We have no way to discern whether this has more to do with the type of work these individuals located or with higher expectations on the part of more serious students. The second effect is that full time workers feel more positive about advancement than part time workers.<sup>3</sup>

**Satisfaction With the Nature of Daily Work.** Since most students report choosing majors largely for work they enjoy, it is perhaps surprising that satisfaction with the nature of the work is not affected by collegiate unit. On the other hand, it is entirely reasonable that the strongest impact on this form of satisfaction is how closely related the job is to university education, whatever the major. The more the job uses knowledge gained at Western, the more

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<sup>1</sup> Satisfaction is measured as 1=not at all, 2=somewhat, 3=moderately, and 4=very.

<sup>2</sup> These measures together explain 11% of variance in satisfaction with job security

<sup>3</sup> These measures together explain 15% of variation in satisfaction with opportunity for advancement.

satisfied former students are with the work they are doing. In addition, two smaller effects are statistically reliable: satisfaction is higher where income is higher and for students whose GPA at Western was higher. It may be that these measures act as indicators of how high quality a job the student managed to select. We have no way to examine the matter further.<sup>1</sup>

**Satisfaction With "How Important and Worthwhile" the Work is.** This form of satisfaction is influenced by a wider range of factors than those discussed above. Of the variables we tested, eight show statistically reliable impacts.<sup>2</sup> The strongest influence on this form of satisfaction is from the relatedness of the job to one's education and career plans: the more the job used knowledge gained at Western, the greater the satisfaction with the job's worth. In addition, for individuals who have chosen a long term career field, satisfaction with the job's worth is higher when it is in the career field. Further, those who reported they "knew exactly what I wanted to get out of college" are more satisfied than those who reported that "I felt college was necessary without a clear reason why."

The number of hours worked is also associated with felt worth of the work, perhaps because those who feel their work is especially valuable are willing to work many more than 40 hours per week. Happily, those who report that while at Western they wished "to prepare for an occupation that would fulfill me as a person" are more satisfied with the value of their work than those who reported relatively greater emphasis on preparing "for an occupation that would be financially rewarding."

Female students more often valued education for fulfillment. Over and above that, women report higher satisfaction with the worth of their jobs except that women who majored in the College of Fine and Performing Arts are less satisfied than other women or men. After adjusting for other factors, women in colleges other than Fine and Performing Arts report .17 higher satisfaction on the one to four scale than men, but women in Fine and Performing Arts report satisfaction .37 lower than the average man in our sample.

One collegiate unit, College of Arts and Sciences majors in math/science, indicate significantly lower satisfaction with the worth of their work, over and above other factors already discussed. They report .38 lower satisfaction on the one to four scale. We have no way to examine causes of this difference.

**Satisfaction with "the Self-Fulfillment You Receive from the Job."** The constellation of factors influencing this measure is nearly the same as for felt worth of the job. Four of the five statistically reliable effects in this case are among the eight found for the former, each influencing satisfaction in the same way. Satisfaction with self-fulfillment is greater when: more of the job uses knowledge gained at Western, the job is in one's chosen career field, and one knew exactly what one wanted from college upon entering Western.

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<sup>1</sup> Together, these measures explain 10% of variation in satisfaction with daily work.

<sup>2</sup> These eight explain 19% of variance in this satisfaction measure.

Satisfaction is lower for math/science students. In addition, although there is no effect of gender among all students, within Arts and Sciences majors in the Applied fields, women are considerably more satisfied (.31 on a 1-4 scale) than men.<sup>1</sup>

**Overall Satisfaction with the Job.** The bottom line, of course, is how the factors just discussed influence overall job satisfaction. This depends on how important each aspect of the job is. We find the major influences on overall job satisfaction to be relatedness of the job to undergraduate education and to career development, and income.

Three measures which indicate aspects of career development and the usefulness of education to employment show considerable impact on overall satisfaction. First, the more use the job makes of "skills or knowledge you gained from attending Western" the greater the overall job satisfaction. An increase of one step on the 5 point utilization scale produces an increase of .16 on the 4 point satisfaction scale. For example, a job "most" of which uses knowledge from Western produces .48 higher satisfaction than a job "none" of which uses such knowledge. This factor explains more of the variation in overall satisfaction than any other single measure we tested.<sup>2</sup> Former students who say they knew exactly what they wanted to get from college also report higher overall satisfaction with their jobs. It appears they were able to translate that feeling of goal clarity into satisfactory career development. Similarly, those who say their current job is in the same field they have chosen as a career field are more satisfied with their jobs.

As discussed earlier, income is at the core of satisfaction with the "hard" qualities of a job. Each \$5,000 in annual income raises overall job satisfaction .17 on a 1-4 scale. Thus, a \$30,000 job receives .51 higher overall satisfaction than a \$15,000 job. In some senses, however, the surprise is that income affects overall job satisfaction no more than it does. Income level represents both purchasing power and also how much importance employers place on the work, likely job stability, and the like. Yet in our estimates, income uniquely explains only 3.2% of the variation in overall job satisfaction, less than half that explained by reports of how much the job utilizes one's college education.

Finally, two groups of student majors produce higher than average satisfaction. Women who majored in Applied areas within the College of Arts and Sciences and women who majored in the humanities are more satisfied with their jobs than than women majoring in other fields or men majoring in any field.

## **EMPLOYMENT AMONG GRADUATES AND NON-GRADUATES**

For the most part, it is Western graduates we are concerned with in this report. It is also valuable however, to compare graduates and non-graduates. This

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<sup>1</sup> Together, these five measures explain 15% of the variance in satisfaction with self-fulfillment on the job.

<sup>2</sup> All variables discussed here explain 17% of the variation in overall satisfaction. This one variable explains 7%.



section describes some of the most basic employment outcomes for graduates and non-graduates. The reader should note, however, that these groups differ in many ways other than their status as graduates or non-graduates. It is therefore dangerous to over-interpret these descriptive similarities or differences.

The non-graduate population contains several distinct educational patterns. When non-graduate findings are presented, they are separated into the groups shown below. (For more information on non-graduates, see Volume One.)

- Graduates (N=632)<sup>1</sup>
- Transfers (transferred within six months of leaving WWU) (N=124)
- Leave of absence (remained out of school for at least six months, then transferred or returned to Western) (N=71)
- Dropouts (intended to graduate, but left Western as non-graduates and remained out of school continuously since that time.) (N=140)<sup>2</sup>

For the most part, we allow Tables 3.1 through 3.4 to speak for themselves. Each shows one of the basic employment outcomes discussed earlier in this report, for each of the four groups defined on the preceding page. Table 3.1 shows that aside from slightly higher unemployment among transfers and dropouts, the only differences in employment statuses across these four groups is that transfers and those who took leaves of absence are more often enrolled in school full time five years after they left Western. Since many left during their freshmen years and nearly all left before senior year, this is to be expected.

Table 3.1. Percent in Each Employment Status Five Years After Western

<u>Employment status:</u>	<u>Graduates</u>	<u>Transfers</u>	<u>Leave Abs</u>	<u>Dropout</u>
Employed for pay	83.4	74.4	69.4	86.6
Student, half time or more	7.6	15.6	22.5	3.4
Working unpaid, ≥ half time	3.5	0.0	2.3	1.3
Not in labor market	3.6	3.7	4.4	4.6
Unemployed, seeking work	1.9	6.3	1.4	4.1
	100.0	100.0	100.0	100.0

Table 3.2 indicates a considerable, although not overwhelming, income advantage to individuals who graduated from Western rather than moving to a different school, taking a leave, or dropping out of higher education altogether. The income differential with dropouts is especially interesting since all dropouts

<sup>1</sup>Numbers in parentheses are the number of cases in each category in our sample.

<sup>2</sup> One group is omitted from this analysis: the 21 non-graduates in our sample who never intended to graduate from Western.

have had a full five years in the labor market, while close to one-third of graduates spent some period of time in post-graduate education. When the finding that graduates are employed more often than transfers or those who took leaves of absence (Table 3.1) is combined with the higher earnings of employed persons in the graduate category (Table 3.2) the result is considerably higher total earnings among all graduates.

Table 3.2. Percent of Employed Individuals in each Category at Each Annual Gross Income Level

<u>Income Level:</u>	<u>Graduates</u>	<u>Transfers</u>	<u>Leave Abs</u>	<u>Dropout</u>
Less than \$10,000	9.4	23.6	14.3	12.6
\$10-19,999	36.4	42.5	43.8	42.3
\$20-29,999	36.4	26.6	24.5	36.1
\$30,000 or more	17.8	7.3	17.4	8.8
	100.0	100.0	100.0	100.0

Income levels are also lower for transfers and those who took leaves of absence in part because they have had less time in the job market. All of these individuals spent some time after 1982 in university settings; many completed their undergraduate degrees, and some completed post-graduate degrees by 1987. These educational activities delay entry to the job market, with a consequent loss of earning power which partially counteracts the long term gain in earning power from completing further education. To estimate how much the decision to transfer or to take a leave of absence affects employment and long term earnings would require a follow-up survey much longer than five years.

Table 3.3. Percent of Each Group Working Part or Full time

<u>Hours Worked Per Week</u>	<u>Graduates</u>	<u>Transfers</u>	<u>Leave Abs</u>	<u>Dropout</u>
Less than 40	13.5	34.9	25.8	19.4
40	51.9	40.1	50.8	59.7
over 40	34.6	25.0	23.3	20.9
	100.0	100.0	100.0	100.0

Table 3.3 shows the main reason why earnings are higher for graduates: they are much less likely to be employed part time. Indeed, in multivariate analysis, the entire differential between graduates and non-graduates (as one group) is eliminated through the inclusion of various individual orientations and a

variable indicating whether the individual was working full or part time, with the part time variable having the strongest explanatory power.

Table 3.4 demonstrates that graduates are more often than others have jobs which are in the same field as their undergraduate major and which use knowledge they gained at Western. Beyond that, it also shows that all former Western students, even dropouts, tend to work in fields related to their major fields of study and to use skills from Western. The finding that 40% of dropouts report working in jobs which use knowledge they gained at Western at least half the time offers an important caution against the common presupposition that college education is of no value in the work place unless one graduates. Transfers least often have work related to their major or using knowledge gained at Western. This may occur because most transfers take the bulk of their major area courses after leaving Western.

Table 3.4. Relatedness of Employment to Education (Percent Related)

<u>Measure of Relatedness:</u>	<u>Graduates</u>	<u>Transfers</u>	<u>Leave Abs</u>	<u>Dropout</u>
At least half of job "uses skills or knowledge gained from Western	64.7	30.7	40.0	40.1
Job in field: same as major	42.9	39.5	31.7	23.6
Job field <u>same or related</u> to major	69.7	58.5	68.8	48.2

### QUALITY OF LIFE FIVE YEARS LATER

Recognizing that life involves many more facets than employment, and that higher education is intended to enhance life in many ways other than in narrow occupational terms, we measured a variety of factors commonly termed "quality of life indicators." We employed three different types of measures:

- Former Students' satisfaction with various aspects of their lives and their personal capacities.
- Former students' *perceptions* of how much, and in what direction, their *education at Western affected* various aspects of their lives and capacities.
- Behavioral indicators of some ways in which former students are using their education.

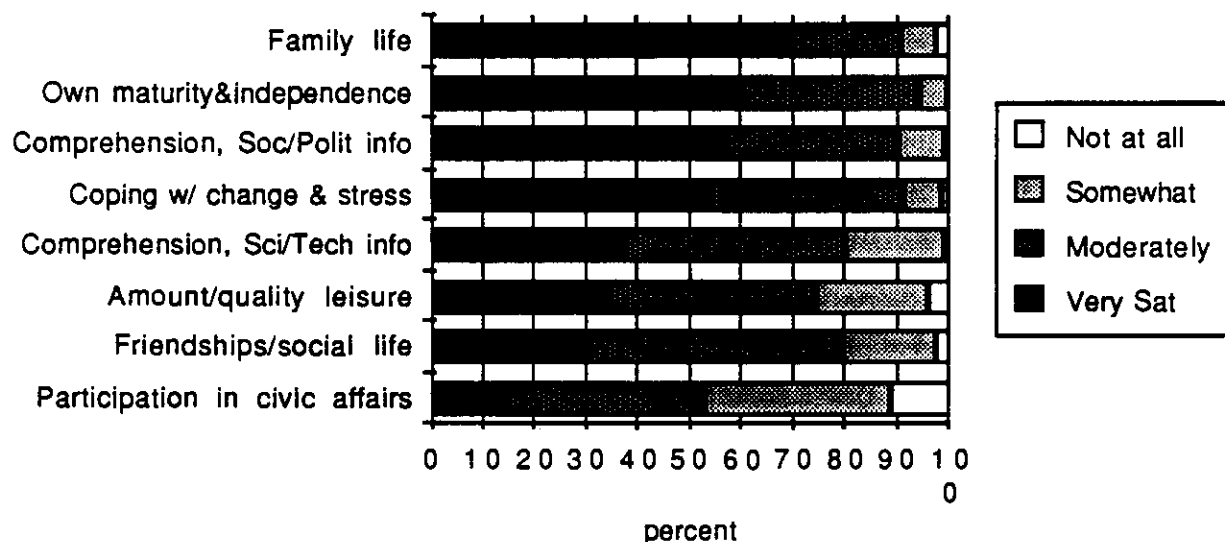
#### Satisfaction With Life

Most Western graduates are highly satisfied with their lives. One fourth (23.6%) say they are "extremely" satisfied with life, overall; another one-half (55.7%) are "very" satisfied. Including all those who are at least "moderately" satisfied, the total rises to 98.1%. These life satisfaction levels are not, of course, the result of Western education alone. Indeed, no one would wish to create a society

where one's chances for a happy life were contingent primarily on spending four years in one particular institution. However, these figures do allow us a description of the life condition experienced by Western graduates five years after graduation. As a partial comparison, the non-graduate sample, many of whom have completed college or are currently doing so, and most of whom are employed full time, report life satisfaction levels very similar to those of graduates, but slightly lower. Two percent fewer are "extremely" satisfied, and six percent fewer are "extremely" or "very" satisfied.

Satisfaction with more *specific aspects of life*, shown in Figure 3.11, is slightly lower than satisfaction with life as a whole, but nonetheless remains high.<sup>1</sup> The levels of satisfaction in Figure 3.11 are placed in perspective by recalling from Figure 3.9 that 40% of graduates are "very" satisfied and 82.3% are "very" or "moderately" satisfied with their *jobs*. Several *personal life qualities* generate high satisfaction: family life, personal maturity and independence, and ability to cope with life change and stress.

**Figure 3.11. Western Graduates' Satisfaction with Selected Aspects of Self and Life.**



Two *qualities explicitly related to education*, ability to comprehend new social or political information one encounters, and the ability to comprehend new scientific or technical information one encounters, also produce quite high satisfaction levels, although satisfaction with ability to understand technical information is the lower of the two, by a considerable margin. *Life qualities directed more toward the outer world* generate satisfaction levels much lower

<sup>1</sup> Specific life satisfaction questions were answered on a four point scale, "very" to "not at all."

than personal qualities. This is especially the case for participation in national or local civic affairs.

To examine possible association between these life satisfaction indicators and attendance at Western, we conducted a multivariate analysis (cf page 10.) After statistically adjusting for influences of age, gender, employment status, marital status, and parenthood, we tested whether graduating from Western, entering Western as a native or transfer, proportion of the major taken at Western, or proportion of GURs taken at Western influence any life satisfaction ratings. Further, among graduates only, we tested whether collegiate unit influences life satisfaction. These analyses also tested the number of credits taken at Western and Western GPA.

Perhaps the most interesting conclusion of this analysis is that with this constellation of measures, we have remarkably little ability to explain individual variation in life satisfaction, except for satisfaction with family life, where married individuals are much happier than others, and men are somewhat happier than women.<sup>1</sup> Beyond this, individual background characteristics influence satisfaction only a little. Women are somewhat more satisfied with most life qualities, older individuals are slightly more satisfied with most qualities, and individuals with children are less satisfied with leisure and with their ability to understand new technical information they encounter.

After these individual characteristics are accounted for, there is no statistically reliable difference in satisfaction between graduates and non-graduates. For nearly all measures, graduates express slightly more satisfaction, but differences are too small to be reliable.

Among graduates, there are some effects of collegiate unit on life satisfaction, after adjusting for the effects of individual background variables. Such findings must be interpreted with care, since dissatisfaction is not inevitably to be avoided. Dissatisfaction may indicate high expectations or conscious choice. For example, aside from having children, the only one of our measures which explains any variation in satisfaction with leisure time is Western GPA. Those with higher GPAs are less satisfied with their leisure. They may expect more or may have chosen to take on busier lives.

The three satisfaction measures most closely related to education are the only ones in which collegiate unit emerges to explain any variation. These include satisfaction with: "your ability to understand the social or political information you encounter," "your ability to understand the scientific and technical information you encounter," and "your ability to participate effectively in local or national affairs." Satisfaction with comprehension of political information is higher among Humanities majors and graduates of the College of Business and Economics. In the case of scientific and technical information, satisfaction is higher among Math/Science majors and Huxley College majors. Satisfaction

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<sup>1</sup>Even here, only 15% of variance is explained, but this is much greater than for any other satisfaction measure.

with one's ability to participate effectively in civic affairs is higher among Humanities majors, and lower among Social Science majors. All other units are close to the university average on each of these satisfaction measures.

### **Perceptions of How Education at Western Influenced Life Qualities**

The second approach our surveys took to analyzing quality of life asked former students to judge how their education at Western influenced their later lives in various areas. This approach has the advantage and the disadvantage that individuals are reporting their own subjective interpretation of the situation. The advantage is that only each individual knows the myriad ways in which higher education influenced, or failed to influence, his or her life. The disadvantage is that each of us lives only one life, giving us little basis to estimate how different our lives are from some alternative version of our lives which might have occurred. Estimating how college effected us is estimating the difference between the lives we lived and those we did not live.

In any event, the findings displayed in Figures 3.12 and 3.13 rely on graduates' and non-graduates' best estimates of a direct form of the question educators most wish to ask: "Please give us your best estimate of how the amount and quality of your undergraduate education at Western has influenced your life... [in each area listed.]" The answers from which respondents could choose were: "helped a lot," "helped a little," "had no impact," "hurt a little," and "hurt a lot."

So few indicate that attending Western hurt their lives in any area, that these categories are barely visible in Figures 3.12 and 3.13. The only area of life for which more than two percent of graduates (2.4%) indicate that attending Western hurt them is "your income and job security." That same area of life also received the largest number of negative tallies from non-graduates, with 4.5%. In all cases, the number of people who feel attending Western hurt their life in some fashion is too small to analyze further.

**Descriptive Profiles.** Figures 3.12 and 3.13 contain a good deal of specific information the reader may wish to pursue. Here, some patterns of note are highlighted verbally.

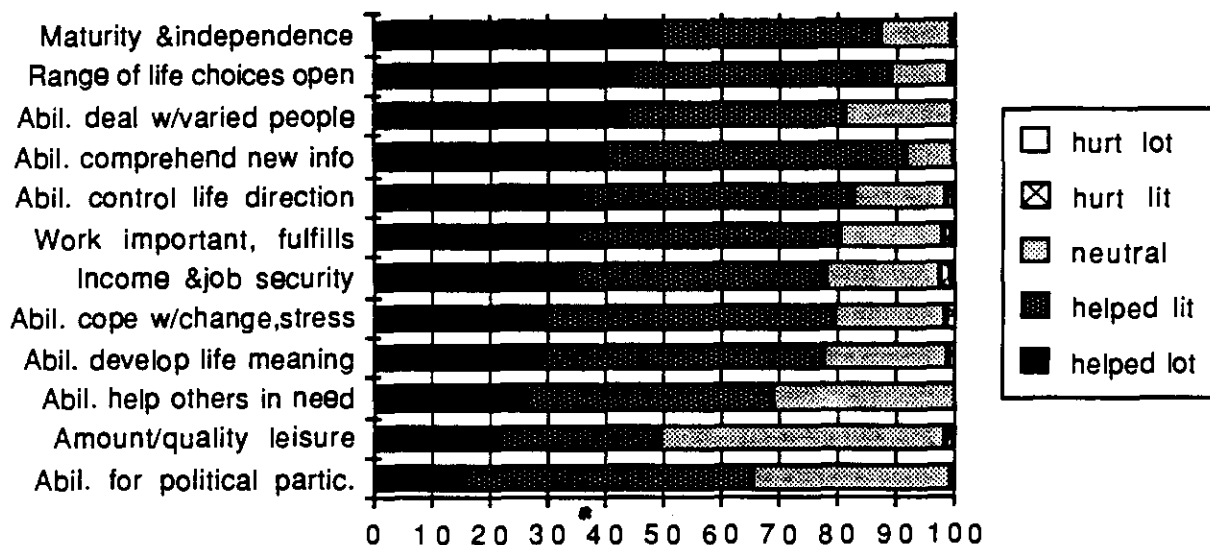
- The great majority of former students report that the amount and quality of their attendance at Western helped their lives.<sup>1</sup> This is true for non-graduates as well as for graduates. In only three cases -- amount and quality of leisure time for graduates and for non-graduates, and ability to participate in civic affairs for non-graduates -- do fewer than 50% report that attending Western helped their lives. In no case, is the figure lower than 45%.
- An important implication of non-graduates' favorable reports concerning Western's impact on their lives is that the mission of the University, typically

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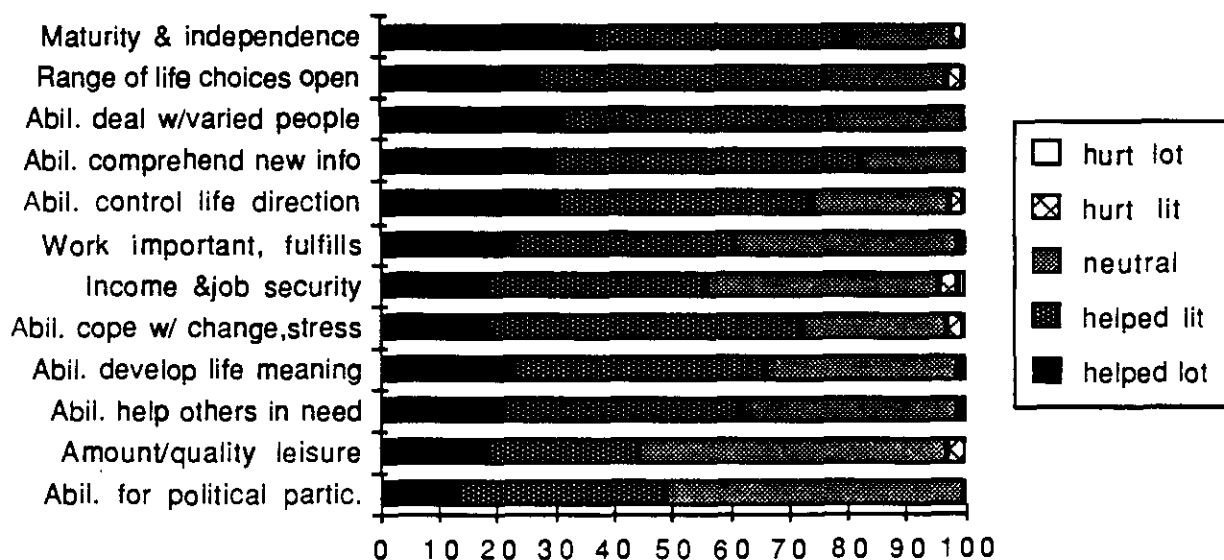
<sup>1</sup> It should be noted that although interviews were confidential, there is always a tendency in surveys such as this for some respondents to lean toward the positive when answering. However, the bias is likely to be small -- perhaps in the area of 5-10%.

thought of in terms of creating college graduates, should perhaps also recognize the community service compiled through enhancing lives of those whose exposure to the university is less extensive.

**Figure 3.12. Graduates' Perception of How Education at Western Influenced Their Quality of Life**



**Figure 3.13. Non-Graduates' Perceptions of How Education at Western Influenced Their Quality of Life**



- In all cases, graduates report greater impact of attending Western than non-graduates, which is consistent with the interpretation educators no doubt favor: that the more extensive the college experience, the more positive the impact of attendance on one's life. However, the difference is smaller than educators may normally assume.
- The *patterns showing which indicators* of life quality are most influenced by attending Western are very similar for graduates and non-graduates, suggesting that much of the impact of college on these non-employment qualities of life comes through the experience of attending rather than the completion of a degree.
- The two cases in which non-graduates say attending Western had much less impact on their lives than that reported by graduates both bear logical relation to obtaining a college degree. Over one-third of graduates, but only 18% of non-graduates say attending Western helped "a lot" in the area of "your income and job security." Similarly, 44% of graduates but only 27% of non-graduates say life was helped "a lot" in the area of "the range of choices open to you," many of which no doubt tie to occupations and income.
- The pattern of life qualities that former students report to have been most benefitted by attending Western provides considerable support for advocates of the view that higher education is as important for its production of broadly educated, "well-rounded" individuals as for its occupational training. Of the four areas rated most benefitted by graduates, only one -- the range of choices open -- is related to vocational preparation or a major field, and then the relationship is only partial. The other three areas are relevant to all aspects of life, private, social, and occupational: indicating "maturity and self control," ability to deal with new information, and ability to deal with "people of varied cultures and walks of life." Of the aspects of life ranked fifth through seventh in Figure 3.12, two are explicitly occupational while the other applies to all aspects of life.
- It may be an indicator of the historical period that the two life quality measures involving the welfare of others -- the ability to help others with need, and ability to participate effectively in local or national affairs -- are among the areas least benefitted by attending Western.
- The area by far the least benefitted is the amount and quality of leisure time, a finding thoroughly consistent with the number of graduates working more than 40 hours per week, the number of dual earner families, and the number of activities in which individuals report participating.

**Results of Multivariate Analysis.** We also conducted a multivariate analysis (cf page 10) of perceptions of Western's impact on life to assess the impact of measures indicating degree of exposure to Western and the collegiate unit in which former graduates majored. The single measure which has the strongest impact is the proportion of one's major completed at Western, which significantly increases perceived impact on all life qualities we measured. The greatest impact occurs for work-related qualities: "how meaningful and self-



fulfilling your work is" and "the range of life choices open to you." In addition, the proportion of General University Requirements completed at Western significantly influences some, but not all, quality of life indicators. Combining the effects of proportion of GURs and proportion of courses in the major to indicate overall degree of exposure to Western, a rather wide range of life qualities of life are reported most affected by exposure to Western: how meaningful and self-fulfilling work is, ability to understand new social, political, and technical information encountered, ability to deal with different cultures and walks of life, and emotional maturity and independence.

There is surprisingly little impact of collegiate unit on the perception that attending Western influenced life quality. Most of the impact appears to occur from factors common to all majors, such as exposure to the community, exposure to courses, or the personal redefinition of receiving a degree. However, there are some effects of college.

Graduating from The College of Business and Economics increases the perception that Western improved one's work quality; graduating from Fine and Performing arts decreases this perception. Education graduates report more positive than average impact of attending Western on job quality and less positive than average impact on the ability to comprehend new information they encounter. Humanities majors report especially positive impact on their ability to participate effectively in civic affairs. Math/science majors report less positive than average impact on their ability to deal with people of varied backgrounds.

Social Science majors are the group most different from others concerning these perceptual measures. They report significantly more positive than average impact of attending Western on their ability to understand new information, their maturity and independence, and their ability to develop a satisfactory life meaning. In addition, they report slightly higher impact for several other measures.

Finally, it should be noted that the small numbers of graduates from Huxley and Fairhaven make it difficult to reliably identify impacts of these measures.

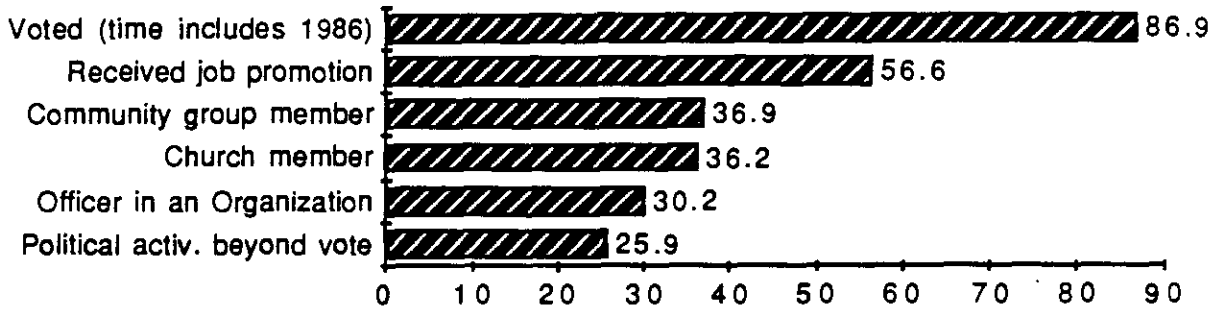
### **Activities and Memberships**

The third approach our surveys took to measuring education-related quality of life was to ask former students to report whether they engaged in each of a series of activities during the last year, or, where more appropriate, during the last month. The results of those questions are profiled for graduates and non-graduates in Figures 3.14 through 3.16. They show moderately active organizational lives and a quite high utilization of educational skills.<sup>1</sup> Perhaps the most surprising report is that more than half of graduates and non-graduates say they received job promotions during the past year. Many of these may be moving off probationary status on relatively new jobs, but these figures are impressive, nonetheless.

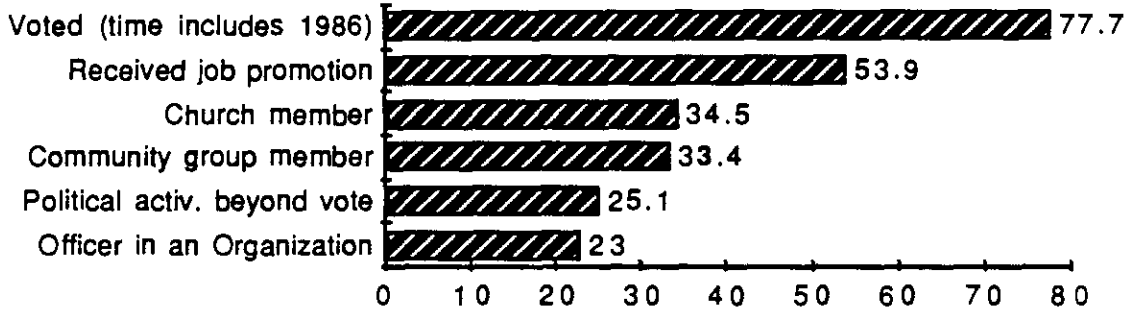
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<sup>1</sup> However, the temptation to inflate literacy reports may be considerable in an alumni survey.

**Figure 3.14. Percent of Graduates Who Engaged in Selected Activities During the Last Year**



**Figure 3.15. Percent of Non-Graduates Who Engaged in Selected Activities During the Last Year**



As illustrated in Figures 3.14 through 3.17, non-graduates exhibit patterns very similar to those of graduates, but with somewhat fewer voters, fewer officers in organizations, less computer use, and fewer writing papers or reports.

**Figure 3.16. Percent of Graduates Who Engaged in Selected Activities During the Last Month**

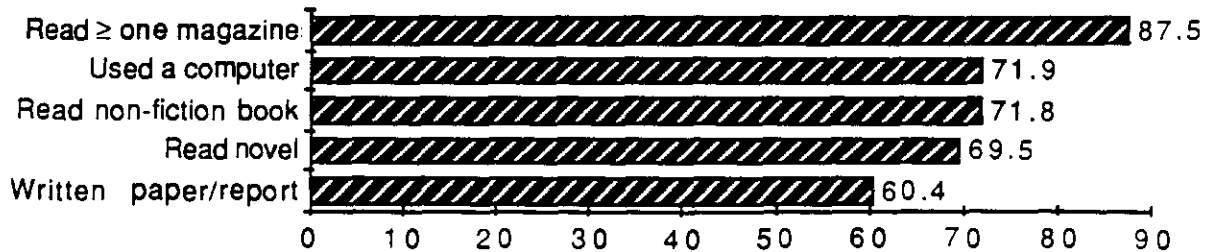
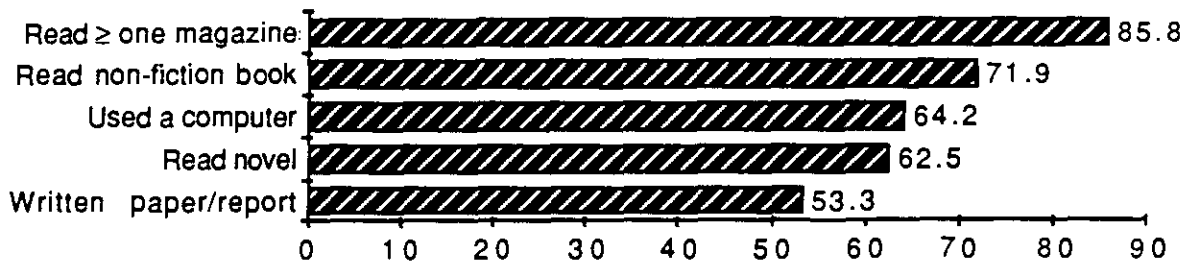


Figure 3.17. Percent of Non-Graduates Who Engaged in Selected Activities During the Last Month



## CONCLUSION

This volume of the Western Washington University Student Survey Series has presented our major findings from a five year follow-up of Western graduates and former students who left without graduating. Findings include reviews of educational attainment, employment status, earnings, job satisfaction, the relation between undergraduate major and employment field, and satisfaction with a set of quality of life indicators five years after Western.

As in previous reports, findings are summarized for Western as a whole and then compared across nine collegiate units. Collegiate units differ much more on measures of post-graduate education, employment, and earnings after five years than Volume II showed them to vary on satisfaction with various aspects of instruction while at Western. In particular, different Collegiate Units lead to quite different payoffs later, with earnings, job satisfaction, and working in fields related to undergraduate major maximized in quite different fields.

The analysis also included comparisons between graduates and various categories of non-graduates, as well as comparisons among individuals with different demographic background characteristics and different orientations to the value of education. Graduates are employed full time more often and earn more than non-graduates, dropouts in particular. Those who left Western to transfer elsewhere are working less often, but primarily because many remain in school or have entered the job market more recently than others.

Female Western graduates earn less than male graduates. Although the difference is smaller than national averages among all educational categories, it is substantial and is consistent across all collegiate units except that it is smaller in mathematics and the natural sciences. In addition, earnings are greater among those whose orientation toward higher education emphasized credentialing and earnings.

Five years after Western, both graduates and non-graduates express quite high satisfaction with various aspects of their lives. They also report the perception that attending Western helped their lives in a range of abilities and interests. Graduates report greater influence, but non-graduates also offer positive reviews of the ways in which attending Western affected their lives.