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SPECIAL FEATURES/CONTRIBUTIONS SPÉCIALES

A Critique of Job Market Reality for Postsecondary Graduates

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Job Market Reality for Postsecondary Graduates, released in March 1981, is Statistics Canada's comprehensive analysis of the results of a 1978 national survey of the labour market experiences of 1976 college and university graduates. Employment status, labour force participation rates, length of job search and average salaries are shown for individual fields of study and levels of qualification, with further breakdowns by province and gender. Results are similarly presented for a number of more subjective variables dealing with job and salary satisfaction, underemployment, regret over choice of programme, and plans for additional postsecondary education in the next two years. The data are apparently an accurate representation of what graduates were doing and thinking in 1978. However, the report was clearly intended as more than an analysis of a one-time survey:

> . The primary goal is to help senior secondary students who are considering career choices and options for further study. The object is not to offer advice, but to present a realistic perspective of job market opportunities. (p. 37)

Because of this intention, it is essential that that part of the report having most impact on the general reader be a balanced and accurate reflection of the survey results.

The Summary and Highlights Section

The general thrust of the report is established in the Summary and Highlights section, which contrasts markedly with Dr. David Slater's foreword. While praising the significant contribution of the report, particularly as the beginning of a time series on the links between education and employment, Dr. Slater also emphasizes that it "describes reality at one point in time only." (p. 6). Although similar cautions on the limited scope of the survey are reiterated elsewhere (pp. 36, 40, 52), the language of the opening paragraph of the Summary and Highlights is far more dramatic.

> The hard reality of today's labour market is a rude jolt to many graduates fresh out of college or university. Disappointment may run high during the first few years after graduation. Although, on the whole, postsecondary education leads to better jobs and higher salaries, newcomers to the labour force

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> often find that a diploma or degree does not guarantee early career success. Many of them earn less, particularly at first, than some trades people; have to accept jobs that do not use their qualifications; decide that their choice of program was a mistake and intend to go back to school to try again. (p. 7).

Students, educational institutions and governments are urged to make adjustments in order to avoid the mismatches apparently so detrimental to the survey class of 1976. Unfortunately, if they were to use *Job Market Reality* as their major guide, it is very likely that graduates from certain programmes would quickly exceed the supply of appropriate jobs, since commentary on the data seems to be weighed in favour of job-oriented education. Beginning with the Summary and Highlights, it is difficult to avoid the impression that data are selected for specific mention in order to support this view, and other data are ignored if they tend to contradict it. The Summary is potentially the most influential part of a report of this length, for many readers will accept it as an accurate synopsis of the contents, and may not go beyond it to the detailed tables and fuller analysis of later chapters.

The individual highlights tend to emphasize the problems faced by non-vocational graduates. Most of the highlights are factual statements from the text, with page references, but there are a few omissions and misleading inferences. Noting that most university and college graduates felt that it was important to find work related to their field, the authors conclude that "with fewer than that in directly related jobs, it is not surprising that one in four graduates regretted the course they had taken, and about 45% planned further postsecondary studies". (p. 8). However, as will be shown later, several community college fields with very high rates of education-related employment also have high percentages of regret of field choice and plans for further education. That most plans for further education are due to poor experiences in the labour market is simply not proven by the data.

Another highlight expands on the opening paragraph's comment on salaries of trades people: "Many trades, which do not require postsecondary education, pay better than some occupations held by postsecondary graduates, especially office work." (p. 11). The highlight comparison is misleading, since it does not mention the fact that starting salary data (Table 37) for university graduates is being compared with salary for all those employed in a given occupation, regardless of age or experience. This important point is made later in the text, but is completely excluded from the highlight.

In another highlight the reader is informed that "about a third of the university graduates were in the occupations which received the least favourable assessments, including clerical, sales and similar low-paid jobs". (p. 12). A more complete version of this statement is found in Section VIII of the report:

> Roughly one-third of university graduates were in occupations with the least favourable standing, such as clerical, typing, or sales, *or had jobs that did not fit into any of the 16 university occupation categories listed.* [My underlining] (p. 381).

A truer estimate of the percentage of university graduates in the least favourable jobs can be calculated from the relevant occupation tables (138-154). Table 150 shows that only 1% of all employed university graduates were working as stenographers and typists. A total of 4% were finance and statistics clerks or general office clerks (Tables 151, 152). An additional 2.9% were in commodity sales jobs (Table 153). Thus, only 8% of the employed university graduates were in identifiable clerical and sales jobs. Another 24.3% were in "other occupations" (Table 154). This large category includes an unknown number of graduates working in entirely suitable jobs: university teaching and related; government officials and administrators; librarians, archivists, library and museum technicians; writers, journalists and translators; clergy and religious workers. Although the bachelor's graduates in "other occupations" reported comparatively high rates of underemployment and dissatisfaction with salary, the 2,626 with master's and PhDs had an average salary of $18,800. Clearly the "other occupations" are not all unsuitable, yet the phrasing of the quoted statement from Section VIII is ambiguous. The final clause appears to be parallel to the listed jobs with "least favourable standing." In the highlight statement, any distinction is omitted: graduates in "other occupations" are simply included as part (in fact the largest part) of the third in jobs with "the least favourable assessments."

It would be unfair to say that the Summary and Highlights totally misrepresents the results of the survey. The section is necessarily selective, and most of the points are accurately presented. However, a careful review of the data does lead to questions about some inferences and comparisons.

College and University Graduates

The total university and college tables (No. 6 and 7) in Section IV show that each qualification has its advantages: university graduates had higher average salaries than college graduates ($15,200 vs $12,300). In June 1976, the college graduates had a somewhat higher unemployment rate (25.7% vs 23.5% for university) but by June 1978, the college group had a higher full-time employment rate and lower unemployment (6.7% vs 8.2% university). In both groups, graduates who weren't working one month after graduation spent about 5 months looking for work. Not unexpectedly, college graduates were more likely to be employed in jobs directly related to their field of study (66.6%) than university graduates (42.2%). They also reported less underemployment (25.3% vs 34.3% for university). However, as the authors point out, the college rate is somewhat misleading: "without the large group of medical and dental graduates (only 6% underemployed), the college and university rates would be almost the same." (p. 69). Results on the other subjective variables are similar for both groups: Dissatisfaction with job, 12.4% university, 12.5% college; Dissatisfaction with salary, 18.6% university, 25.4% college; Regret choice of field, 24.5% university, 25.8% college; Planning further postsecondary education for career reasons, 39.2% university, 34.6% college.

Although the authors conclude that "overall, the data on college graduates indicate a better labour force adjustment than that of their university counter-

parts", (p. 68), the prospective student who looks closely at the data would have to conclude that a *very* selective choice of college field is needed to insure success. This impression might be further reinforced if the report had shown data on the retrospective preference of graduates which were included in an earlier study based on the survey (1). Only brief references are made on pages 40 and 64 of *Job Market Reality* to the fact that the majority of college and university graduates regretting their choice of field would have chosen a different university programme, rather than a college programme or no postsecondary education. Although the 1976 graduates may prefer more job-oriented education, they recognize the value of pursuing it at the university level.

Rankings of Fields

In Table 30 - 41, fields of study are ranked according to the labour market experiences of graduates. The variables used in the rankings are not statistically correlated. Instead, broad comparisons are made, such as the observation that certain non-vocational fields generally appear in the lower half of the rankings. This method of analysis is not very satisfying, since examples can be selected that prove different points than those emphasized by the authors. Still, it is interesting to learn that philosophy graduates are quite satisfied with low salaries (p. 137) and that teacher training master's and PhDs had the longest job search and the lowest rate of underemployment.

The ranking of fields implies that all are directly comparable, regardless of level or entrance requirements. In fact, the choice of entering any programme or occupation is not completely open, and varying amounts of talent, time and money are required. It is simplistic to compare outcomes for graduates of limited enrolment professional degree programmes with bachelor's programmes in arts and science without even mentioning the high degree of selection that has already taken place. First professional degrees require in most cases two or more years of previous university education before admission. Students who graduate from these programmes (and from master's and doctoral programmes in academic subjects) are probably older than the average bachelor's graduate, and have been selected because of higher academic achievement, stronger motivation, and other characteristics that would lead to greater than average success in the job market regardless of educational qualification. Salaries, employment rates and job satisfaction are high in the professions largely because of limited entry and selectivity. If enrolments were open, with no attempt to match market demand and numbers of graduates, the situation would be quite different. In 1979, 20% of the candidates for Ontario medical schools were offered admission. Ontario law schools receive about four applications for every place. Since it can be assumed that some degree of self selection has already taken place in the applicant pool, those who are accepted into and successfully complete professional programmes should not be directly compared to the larger body of graduates who, for whatever reason, are in the job market with a bachelor's degree. Professional graduates are more comparable to master's graduates or the upper range of bachelor's

graduates. The salary data for the top 10% in each field show that the most successful (in terms of salary) arts and science graduates compare favourably with graduates of more vocationally-oriented university programmes. For example, 10% of philosophy BAs earned more than $24,100, while 10% of business and commerce BAs earned more than $20,400. Some of the authors' comments on the regret of field choice data are also questionable. As noted previously, about one-quarter of all university and college graduates expressed regret over their choice of field. Table 40 shows that lowest percentages of regret were reported by university graduates from professional, and master's and PhD programmes. Philosophy and fine art, as well as business, management and commerce are among the bachelor's disciplines with slightly higher percentages of regret. Below them in the ranking non-vocational bachelor's fields are interspersed with community college fields, including some shown in other tables as having high rates of job-related employment and low underemployment. The average level of regret for all bachelor's fields is 25.5%. Although some arts and sciences bachelor's fields exceed this, a number of vocational diploma fields are as high or higher: Nursing (1-2 yr.), 26.7%; Mechanical technologies (3-4 yr.), 28.5%; Secretarial arts and science (1-2 yr.), 30.3%. Even graduates employed in their field may regret their postsecondary field choice.

In spite of these results, the authors report that: "Although graduates were not asked why they regretted their choice, a likely reason may have been the discovery that employers had little use for their particular expertise." (p. 153). No doubt this is true in some cases, but it has not been proven so conclusively as to warrant the next sentence, underlined for emphasis in the report:

> *Thus, the message of most graduates after two years of coping with the work world is plain: at university, as well as in colleges, they want job-related programs that match the needs of the labour market. (p. 153)*

Plans for Further Education

The authors make similar inferences based on plans for future postsecondary enrolment data (Table 41). As one would expect, graduates of university professional, master's and PhD programmes are least likely to be planning further education, while a high proportion of arts and science bachelor's graduates (who may hope to acquire professional or graduate qualifications) report such plans. This being the case, the authors readily conclude:

> Graduates who did not fare well on the labour market wanted to take more job-related, and thus more rewarding, programs . . . *Results of the 1978 survey consistently show that graduates favoured career-oriented studies.* (p. 157)

However, the data on plans for further education also include a number of community college graduates in fields shown elsewhere to have good outcomes in terms of salary, employment related to field, and low unemployment: Mechanical technologies (3-4 yr.), 52.6%; Data processing and computer science (3-4 yr.), 58.8%; Chemical technologies (3-4 yr.), 67.8%.

It appears that college graduates from longer programmes frequently plan further education, perhaps because they recognize the value and realistic possibility of a university degree. The argument that additional education is planned largely because of poor success in the labour market is also undercut by the percentages of business and chemical engineering graduates with bachelor's degrees planning future enrolment (46.2% and 47.6%).

The authors do not appear to have any doubts about whether all these graduates will in fact enrol in two years time, as was asked in the survey. They provide no evidence that any of those intending to enrol did so. From what we know of university enrolment patterns from 1978 to 1980, only a small proportion could actually have registered. Instead, the authors speculate on the provisions that institutions should make for part-time courses. Then, they link their inference about the motivations for further education to its financing:

> Another point concerns the high cost of postsecondary education. *In a sense, taxpayers have to pay twice to educate many students who go back for retraining when they find that their first diploma or degree is no guarantee of early success on the labour market.* (p. 157)

This interpretation seems unfair. The data do not prove that plans for further education result only from lack of labour market success. Also, many of the highly successful professional, master's and PhD graduates hold previous degrees. Were they wasting the taxpayers money when they enrolled in the programmes that give them favourable places in the rankings? Elsewhere in the report, the authors say that "Postgraduate work in business was a particularly good investment, since those with master's or doctoral degrees earned an average of about $7,000 more than the bachelor's degree recipients". (p. 163). Apparently a commerce, engineering, or law graduate, already suitably employed, is making a "good investment" by enrolling for an MBA, but a philosophy or history bachelor's graduate who enrols in a similar programme after a year or two in the work force may be forcing the taxpayer to educate him twice.

Employment Outcomes by University Discipline

Section VI contains 44 tables showing employment outcomes for both major fields and specific disciplines. The data generally show that in terms of unemployment in June 1978, perceived under-employment, and employment in jobs not related to field, bachelor's graduates in some humanities, social science and natural science disciplines had poorer outcomes than graduate of university professional programmes. For example, 11.7% of English BAs were unemployed in June 1978, compared to 4.4% of those with business and 4.7% with engineering degrees. Underemployment rates were higher for non-vocational BAs, and jobs were less directly related to field of study. However, with the exception of engineering, medicine, dentistry and law, the difference in average salaries for bachelor's graduates was not great ($14,200 for English, $14,900 business, for

example). Substantial rates of underemployment were reported by business graduates with bachelor's degrees (32.4%, compared with 47.9% for English). The authors say that this represents a narrowing of the market for business graduates. (p. 163). However, a closer look at occupational tables later in the report suggests that underemployment may be over-reported by recent graduates.

The individual discipline tables contain more detailed information about employment outcomes than has previously been available. Still, the data need to be interpreted with considerable caution, particularly by students who might use the report in career planning.

Unfortunately, some of the comments on the tables do not precisely reflect the data. For example, we are told that the highly successful business graduates had more luck than most others in finding jobs related to their education: "fewer than 9% said their jobs were unrelated. The proportions who felt underemployed or were sorry they had chosen that field were also low." (p. 162). This juxtaposition would lead the casual reader to believe that the percentages for the latter two variables would be in the range of 9%. On the next page the report acknowledges that 28% of those working full-time were underemployed. This seems a fairly significant percentage, and a closer look at the table shows that 32.4% of business bachelor's were underemployed (the average for all bachelor's was 37.7%).

This choice of detail for comment may not indicate any deliberate bias on the part of the authors, but there does appear to be an emphasis on data that show favourable outcomes for job-oriented disciplines. Engineering consistently appears at the top of the rankings, and deservedly so. However, the excellent job match enjoyed by engineering graduates does not prevent them from planning future education. This finding appears to be at odds with the report's assumptions about the reasons for desired "retraining". A brief reference is made in the commentary on the engineering table:

> The proportion planning further postsecondary study (Table 72-VII-9-A) deserves particular attention. Although only one-third had such plans, that is still a significant proportion in a field where graduates already come out ahead. Engineering faculties, however, offer few part-time evening courses. (p. 239)

The "only one-third" is difficult to spot in Table 72. Presumably, it refers to the 36.0% of all engineering graduates (or the 37.7% of engineering bachelor's graduates) who were planning to enrol for career reasons. The total percentage planning future enrolment for all reasons is more than one-third (43.1% for bachelor's, 41.6% for all).

The choice of the phrase "only one-third" is puzzling, since "more than one-third" would be more accurate. In some earlier comments on graduates in the humanities, we are told that ". . .more than half were planning to go back to school. Most were interested in career-oriented training." (p. 182). Again, by referring to the appropriate table (No. 47), one finds that "more than half" must refer to the total who are going back to school for all reasons: 55.2% bachelor's,

53.1% all degrees. The percentages planning further enrolment for career reasons only are lower: 43.6% bachelor's, 41.6% all degrees. In the case of the engineers, the lower percentage was selected for comment, and was reduced even further by the phrase "only one-third", while in the commentary on the humanities, the higher percentage (planned enrolment for all reasons) was chosen. Although this statistic is accurately described as "more than half", the detail selection does not appear to be accidental.

The comments on the health professions are also interesting because of what is omitted. The text says that admissions to some programmes are controlled, but this important fact is not linked to the favourable outcome for graduates. Instead, "the following tables illustrate the usual labour market advantage enjoyed by graduates of job-related programs." (p. 262). The commentary does not mention significant percentages of health professionals who are planning post-secondary enrolment for career reasons: Dentistry, 21.5%; Medicine, 38.5%; Nursing, 31.6%. The comparable figure for humanities BAs is 43.5%. Again, the data appear to undercut the assumption that plans for future enrolment are largely due to poor labour market experience with the first degree.

Employment Outcomes by College Discipline

Some of the details from the college discipline tables suggest that future students should be highly selective if choosing a field largely for vocational reasons. Business, management and commerce diploma graduates in the 1978 survey were not very successful in finding jobs directly related to their studies, and nearly 40% of them reported underemployment. Women from these programmes were particularly disadvantaged in terms of salary ($10,400 average, compared to $13,700 for men). Over 40% of those with business diplomas were planning further enrolment for career reasons.

The detailed college tables also show that even when a very good education-job match is attained, graduates may still want more education. The survey respondents with data processing and computer science diplomas had scarcely any unemployment, and 80% were employed in jobs directly related to their education, with the highest average salaries of any college field. However, 43.2% were planning further education for career reasons. Obviously, they recognize that their prospects will be improved by additional education, possibly at the university level.

The data on nursing diplomas also illustrate some interesting correlations that are not adequately analyzed in the report. The college nursing graduates had a much lower underemployment rate than the university degree nurses (6.2% vs 36.7%). However, more of the diploma group regret their field choice (24.5% vs 14.7% degree). Plans for future enrolment are about the same for each group. Perhaps the diploma nurses wish they had gone to university, for the degree nurses had higher salaries ($14,800 vs $12,900 diploma). Underemployment at an early stage in the career may not be a problem if salary is adequate and prospects for improvement exist.

Employment Experience by Occupation

Section VIII shows occupations and industries in which the majority of graduates were employed. In fields having very direct relationships between education and work, such as law, medicine and engineering, the occupational tables generally confirm the findings of the discipline tables. For other occupations, the data raise questions that are not adequately explored in the text. Not unexpectedly, university graduates in clerical and sales occupations report very high rates of underemployment and dissatisfaction with jobs and salaries. But why do 38.7% of bachelor's graduates in senior and middle management report underemployment? Why do 28.8% of them regret choice of field, and 56.1% plan further postsecondary education? Similarly, 29% of 1 and 2 year diploma graduates in senior and middle management are underemployed, 24.7% regret their field choice, and 50.5% plan further education. Perhaps the occupational categories are too broad, or underemployment is somehow inflated. It also seems strange that 33.3% of bachelor's graduates employed as teachers would perceive themselves underemployed, since throughout Canada a degree is now required in order to obtain a teaching certificate. The high percentage of underemployment reported by teachers may be a factor in the high underemployment shown for humanities and social science graduates in the discipline tables, since many are employed as teachers.

The occupational data also suggest that poor labour market experience is not the only factor in plans for future education. Stenographers and typists with bachelor's degrees are by most objective standards underemployed in jobs not related to their education. These graduates also have low salaries, and are understandably dissatisfied: 45.2% of them are planning further postsecondary enrolment for career reasons. However, this percentage may be compared with: Senior and middle managers, 45.1%; Architects and engineers, 38.6%; Elementary and secondary teachers, 44.1%; Physicians, dentists and veterinarians, 30.2%. These data show that graduates with successful labour market experiences are as likely to plan further postsecondary studies as those who are much less successful. The number of respondents in each occupation category is given in the tables. However, by focusing on specific data without reference to relative population sizes, the commentary sometimes gives a distorted impression of outcomes. For example, Table 173 presents data on graduates employed in clerical and sales occupations. The text stresses the high level of dissatisfaction among university graduates in these jobs. Although numbers are given in the table, the problems of these few graduates are not placed in the larger context of suitable and successful employment for most graduates. Only 6.8% of all university graduates are in clerical jobs, only 4.3% are in sales. Table 174 shows employment in a number of industry groups, and the report points out a high degree of dissatisfaction among university graduates in retail trade. However, the total dissatisfied with jobs in health and welfare services (599), is higher than the number dissatisfied with jobs in retail trade (395). Thus, less than 1% of the 1976 graduates ended up in unsatisfactory retail jobs. Similarly, nursing is the largest single category of college graduates. The diploma level nurses are generally successful in terms

of employment rates, jobs in the field, and low underemployment. However, as mentioned previously, about 25% of these graduates regret their choice of field. In actual numbers, this 25% is approximately 950, a much higher number of individuals than the 235 university graduates employed as secretaries and stenographers who regret their field choice.

Conclusion

This paper has identified a number of shortcomings of *Job Market Reality* that are of particular concern because of the report's primary goal, the guidance of secondary students in career and educational decisions. Although the Statistics Canada survey established an excellent base for future studies, the sheer size of *Job Market Reality* makes it an awkward tool for secondary students and their parents. Students, or even guidance counsellors may be daunted by the full text with its nearly 200 tables, and will rely on the authors' summary and interpretations in evaluating postsecondary programmes. Several objections to the use of the report for guidance are summarized as follows:

1. The Summary and Highlights section gives undue emphasis to some negative outcomes for graduates of non-vocational programmes. A few of the Highlights statements are misleading or inaccurate, as shown by comparison with the data and more detailed commentary in the main text.
2. Although the authors acknowledge the limitations of a one-time only survey, the larger context of a changing labour market has not been adequately considered. The survey data are already somewhat out of date, and the situation may change before current high school students finish their postsecondary education.
3. Fields and degrees are ranked and compared without reference to different requirements for entrance and successful completion. There is little consideration of factors such as limited enrolment that directly affect the job market for some professionals.
4. The report repeatedly asserts that job-related education ensures labour market success. The data for some community college graduates show that this is not uniformly the case.
5. Questionable interpretations of some of the softer data, particularly those dealing with relationship of job to field, underemployment, regret of field choice, and plans for additional education, suggest that greater care should be taken in the design of future surveys.
6. The conclusion that poor first choices by non-vocational graduates cost the public money is not substantiated. This surprising deduction completely ignores the value of a general education as the basis for further professional training.
7. The report places too much emphasis on choice of postsecondary field as the only factor leading to career success or failure. If used uncritically as a guide to postsecondary education, *Job Market Reality* would channel students into a few fields that already have restricted enrolments, or may soon be overcrowded.

Students should of course be realistic, well-informed, and concerned with developing job skills. But in a rapidly changing labour market, they should be encouraged to be flexible, to make use of individual abilities, and to pursue their educational interests with an eye to more than the short-term job outlook. Unfortunately, *Job Market Reality* may persuade students that a single choice at the beginning of postsecondary education will ensure success. Those who have already made the "wrong" choice may be unnecessarily discouraged.

A more balanced analysis of the 1978 survey results would give equal attention to the majority from every field who were successful. For, in spite of demographic and economic factors that have made entry into the labour market more difficult for recent graduates than for earlier cohorts, most of the class of 1976 were fully employed, satisfied with their jobs and salaries, and making use of their education. This too is the reality of the job market.

REFERENCES

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