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ABSTRACT

As a means of obtaining information on educational outcomes and quality, Vancouver Community College (VCC) conducts annual follow-up surveys of former students, using one instrument for program completers and another for discontinuants (dropouts). For the 1990-91 survey, 3,685 graduates were surveyed 9 months after program completion, and 1,007 discontinuants were surveyed 1 month after a withdrawal record appeared in the students' record. The survey sought information on former students' characteristics, training-related work experience before coming to VCC, financial sources for education, main objective for enrolling in an occupational program at VCC, the extent to which students met their objectives, employment status/rate, reasons for unemployment, reasons for not being employed in training-related fields, quality of preparation for employment or transfer, usefulness of VCC training, quality of equipment, transfer problems, educational plans, and overall rating of VCC training. Study findings, based on responses from 32% of the program completers and 25% of the discontinuants, included the following: (1) 55% of the graduates attended VCC to learn the skills needed for a job, and 17% attended to improve existing job skills; (2) 91% felt their objectives were met by attending VCC; (3) 55% of the graduates were employed full-time 9 months after graduation, and another 26% were employed part-time; (4) 84% of the graduates sought employment related to their training; (5) of the unemployed graduates, 21% reported that they needed more education or training to obtain jobs; and (6) almost all respondents rated their training as either definitely worthwhile (67%) or worthwhile to some extent (30%).

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 Training Effectiveness of Vancouver Community College
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Running head: ASSESSING STUDENT OUTCOMES

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Abstract

To improve education services, a community college must regularly assess the quality of education or training it delivers to its community. Since educational programs vary from college to college, an institution has to select assessment methods most appropriate and practical to itself when it comes to assessment of educational quality. This paper presents an approach to the assessment of student outcomes via follow-up survey of former students. Specifically, this paper examines survey data collected in the past six years from 25,896 former students of Vancouver Community College, and focuses on the 1990-91 survey cohort of 4,692 former students for an answer to the general question "How well Vancouver Community College has served its students?". It was found that 85% of the students found jobs after completing training programs at the College and that most of the students (74%) were employed in fields related to their training at the College at the time of the survey. Based on the survey results, it was concluded that Vancouver Community College has successfully met students' educational goals with its training programs.

Assessing Educational Outcomes with Follow-up Survey:
Training Effectiveness of Vancouver Community College

With its three campuses, Vancouver Community College (VCC) enrolls the largest percentage of community college student population in the Province of British Columbia, Canada. In the 1991-1992 fiscal year (April 1 of 1991 through March 31 of 1992) alone, a total of 9,268 full-time equivalent students (FTE's) were enrolled in the College's 75 major programs.¹ In an effort to answer the general question "How well does VCC serve the students in its occupational programs?", VCC has been working cooperatively with the Ministry of Advanced Education, Training and Technology (MAETT) of British Columbia to collect follow-up information annually on its former students, both completers and dropouts, after they leave VCC. The current paper examines data collected in the past six years and concentrates on the cohort of the former students who completed VCC's occupational programs during the period of July 1 of 1990 through June 30 of 1991 for an answer to the general question. Specifically, this paper addresses the following questions: "Did VCC students succeed in their studies? What difficulty did they experience in their studies?", "Did they find their education and training at VCC useful for finding employment or for furthering their education?", "What suggestions and recommendations do they have for VCC?", and "Are the skills students learned at VCC useful at work?"

Purpose

To improve its services to the community, a public educational institution must know how well it serves its students; it must assess the quality of the educational services it delivers to the community. However, quality of education is an abstract construct and therefore is difficult to measure directly. To the best, we can only estimate it through examining relevant indicators. One of the important sources of indicators is the feedback from former students. Since former students have gone through the education or training process at an institution, they are able to tell if and how well that institution's programs fulfilled their educational and training needs. The purpose of this paper, therefore, is to analyze the data collected by follow-up survey of former students at VCC and present the results as an example for institutional planning, decision making, program evaluation, and curriculum development in community colleges.

Methods

Instrument

The instrument used in the follow-up survey was "VCC Former Student Questionnaire". The questionnaire has two forms, one for completers and the other for discontinuants.² The questionnaire contains two kinds of items. The first kind of items are questions required by the Ministry of Advanced Education, Training and Technology of British Columbia. All colleges and institutes in British Columbia are required to use these questions in their follow-up survey. Data collected with these questions are submitted to MAETT annually. The second kind of items in the questionnaire are VCC-specific questions. These questions were designed cooperatively with faculty by VCC's Department of Institutional Research Services for curriculum development and program review.

Procedures of Data Collection

For graduates, the follow-up form was mailed out approximately nine months after students completed a program at VCC. In the case of discontinuants (dropouts), the discontinuant form was mailed out about one month after a withdrawal record was shown in the student's record. A cover letter signed by the President of VCC was enclosed in the survey, explaining the purpose and importance of the survey. If the questionnaire was not returned in three weeks, a letter was sent out to remind those who had received the survey questionnaire but had not returned it. If a former student failed to respond to the survey after two rounds of mailings, a telephone interview was conducted. Because of the large quantity of respondents, the survey forms were electronically scanned on a NCS scanner. Data were automatically written to a ASCII file. Due to the limited human resources, former students in VCC's ABE (Adult Basic Education) and ESL (English as a Second Language) programs were not surveyed. For the same reason, students in VCC's Continuing Education Division were excluded.

Analytic Methods

Whenever it was appropriate and necessary, statistical significance was tested and reported. Statistical methods employed in this report for data analysis include discriminant analysis, regression analysis, analysis of variance, and chi-square test. In conducting these statistical tests, emphasis was placed on detecting meaningful differences rather than statistical significance. Both mainframe and PC versions of SPSS (Statistical Package for Social Sciences) were used as the analytic instrument.

Respondents and Response Rates

A total of 4,692 former occupational students were surveyed in the 91/92 survey year. Of these former students, 3,685 (78.5%) were graduates and 1,007 (21.5%) were discontinuants. Thirty-two percent (1,181) of the graduates responded to the survey (954 by mail; 227 by phone), and twenty-five percent (254) of discontinuants returned the questionnaire (all by mail). The overall response rate for all 1991 former students (both graduates and discontinuants) was thirty-one percent (31%).

Definitions and Abbreviations

The following definitions and abbreviations were used throughout this paper:

Discontinuant: A student who, for various reasons, failed to complete his or her enrolled program after stable enrolment.

Graduate: In vocational programs, a student who successfully completed his or her program; in career/technical programs, a student who successfully completed at least 90 percent of his/her program requirements.

MAETT: The Ministry of Advanced Education, Training and Technology of the Province of British Columbia.

Occupational Students: Students who enrolled in non-academic programs, i.e., students in vocational or career/technical programs.

Survey Year: By MAETT's definition, a survey year starts on July 1 and ends on June 30 in the following year.

A Demographic Profile of VCC 1990/91 Former Students

Age

The average age of the cohort of VCC's 90/91 former students in occupational programs was 31. There was no significant difference between graduates and discontinuants in age. However, the 90/91 former occupational students differed in age from campus to campus. Among the three campuses, 90/91 occupational students on Langara Campus were the youngest, with an average age of 23, followed by the City Centre Campus 90/91 occupational students with an average age of 31. King Edward Campus' 90/91 occupational students were the oldest of the three groups, with an average age of 32. In the previous five years, the largest group of VCC occupational graduates were in the age range of 21-25. This trend changed with the 1990/91 occupational graduates. The largest group of the 90/91 occupational

graduates (18%) were between the age of 26 to 30. The same was observed in the 90/91 occupational discontinuants. The largest group of the 90/91 occupational discontinuants (21%) were also between 26 and 30 years of age. Longitudinally, the number of occupational graduates in the 21-30 age ranges have been declining over the past six years, whereas the number of graduates in the age range of 51 or older have been increasing. This trend is consistent with the population projection provided by the Planning and Statistics Division of the Ministry of Finance and Corporate Relations of British Columbia, which predicts that the number of young people in the age range of 18-24 in Vancouver will be declining in the next 10 years while the number of older people (55 or older) will increase.

Gender

In the previous five years, more female students graduated from VCC's occupational programs than male students. This trend continued in the 1990/91 survey year, in which more women (58%) completed their occupational programs at VCC than men (42%). For discontinuants, however, there was an interesting change. Prior to and until the 1988/89 survey year, the majority of the dropouts were male students. Beginning from the 1989/90 survey year, there were more female students who withdrew from VCC's occupational programs than male students. In the 1990/91 survey year, female dropouts (53%) continued to outnumber male dropouts (47%). One explanation for the higher graduation and dropout rates by women may be that women had a higher enrolment rate than men at VCC. In the 1990/91 survey year, on the average, fifty-seven percent (57%) women students enrolled in VCC's occupational programs.

Training-related Work Experience before Coming to VCC

In the previous five years, about half of the students who came to VCC for occupational training did not have any training-related work experience. This trend continued with both graduates and discontinuants in the 1990/91 survey year. The implication of this trend is that a large number of VCC occupational students have been introduced to a career field by the College's training. Some of the instructors in these programs have been playing a dual role: (1) as an instructor teaching job skills in the classroom and (2) at the same time as a liaison person ushering students into the reality of their trade outside the classroom.

Residence Distribution

In the previous five years, on the average sixty-six percent of VCC's students were from the City of Vancouver, seven percent from the neighboring City of Burnaby, and

five percent from the neighboring City of Richmond. The three cities have been traditionally considered as VCC's basic service region. In the past, students from this basic service area made up seventy-seven percent of the total student population at VCC. For the 1990/91 survey year, students from the basic service region continued to be the dominant student intake source. Longitudinally, the volume of students from the basic service region has been steadily increasing over the last six years while the number of students from outside the basic service region has been declining.

Financial Sources for Education

This information is only available for students from King Edward Campus and City Centre Campus. In the previous five years, the number of occupational graduates who paid their own tuition for their training has been increasing. In the 1985/86 survey year, only 50% of the occupational graduates paid their tuition. In the 1990/91 survey year, however, the percentage of occupational graduates who paid tuition for their training increased to 82%. Meanwhile, the percentage of occupational graduates sponsored by Employment and Immigration Canada has dropped to 18%. The trend with discontinuants is different. In the 85/86 survey year, 53% discontinuants paid their own tuition fees. The proportion of discontinuants who paid their own tuition fees in the 90/91 survey year only slightly increased to 59%. Proportionally, more discontinuants (31%) than graduates (18%) were sponsored by the Government of Canada in the 90/91 survey year.

Did Demographic Factors Account for the Graduate-Discontinuant Difference?

In an attempt to answer the questions "Do demographic variables affect a student's decision to persist or give up his/her training?" and "Which demographic variable accounts for the difference between the graduates and discontinuants?", a discriminant analysis was conducted. Two discriminant analysis procedures were used. In the first run, age, gender and GPA were entered in the analytic model. In the second run, GPA was dropped from the analytic model. The objective was to determine if statistically significant difference existed between graduates and discontinuants in age, gender and GPA. The results showed that although the discriminant function was statistically significant, the three variables only accounted for less than 1% of the difference between graduates and discontinuants. Tested univariately, GPA was the only variable that had a significant contribution to the difference between graduates and discontinuants. Using the three variables as predictors, a prediction rate

(hit ratio) with 96% accuracy was achieved. This means that in theory, with the existing data, if the three variables were used to predict a student's success rate (completion or withdrawal), 96 out of 100 times we would be able to classify a student correctly into the graduate or discontinuant categories. However, the model is not a practical one. Since many discontinuants withdrew from their training before they earned a GPA, GPA, then, is not always available. Furthermore, because of the disproportional ratio of discontinuants to graduates (less than 2%), without resorting to any statistical means, we could assign all students into the graduate category and only have a risk of mis-classifying 2% of the students. Thus, the prediction model with the existing data is no better than chance alone. Therefore, with the existing data, discriminant analysis did not yield a satisfactory model for prediction. A number of other statistical methods were also employed, including analysis of variance and Chi-square tests. Tests revealed that female students significantly outnumbered male students in the 1990/91 survey ($P < .017$). Tests also indicated that there was no significant difference between graduates and discontinuants in residence distribution and financial source. In other words, our data suggested that residence distribution and financial source did not seem to have contributed to the 90/91 former students' decision on persistence in or withdrawal from their programs.

Survey Results

Main Objective for Enrolling in an Occupational Program at VCC

For more than half of the 90/91 graduates/completers (55%), the main objective for attending VCC's occupational programs was to "learn the skills needed for a job", and for another 17 percent of the 90/91 graduates/completers, the main objective was to "improve the existing job skills". In comparison, only seven percent (7%) of the 90/91 graduates/completers enrolled in an occupational program for personal interest. Accumulated data at the Institutional Research Services show that the occupational graduates/completers' main objectives for attending VCC remain little changed over the past six years. This indicates that, for the majority of VCC students, the main objective for enrolling in an occupational program was to find or secure employment.

To What Extent Did 90/91 Occupational Graduates Meet their Objectives?

When asked to what extent their main objectives were met by attending VCC, 91% of the respondents felt that their objectives were met. The high rating of meeting objectives has not changed significantly from that of the last year (92%). In terms of meeting the main

objective of acquiring job skills, for the last six years the majority of the respondents have been reporting that they had acquired the job skills needed for employment.

What Did Occupational Graduates/Completers Do after VCC Training?

Despite the economic standstill in the last two years, more than half of the 90/91 occupational graduates/completers (55%) held full-time jobs nine months after completing job training at VCC, and still another 26% of the 90/91 occupational graduates/completers were employed part-time. Only 9% of the 90/91 occupational graduates/completers were unemployed and still looking for jobs nine months after leaving VCC. Longitudinally, full-time employment rate of VCC occupational graduates/completers has been rising since 1986.

Seeking Employment Related to VCC Training

For the 90/91 occupational graduates/completers, the majority (84%) looked for employment related to their training at VCC. Of those who did not seek training-related work, about one third (32%) were already employed and therefore did not want or need to look for employment. The large number of occupational graduates/completers who looked for training-related work is a further indication that for most students the main objective of attending VCC's occupational programs was to acquire job skills and find employment. Longitudinally, the number of occupational graduates/completers who sought training-related work has been increasing over the last six years.

Where did Occupational Graduates/Completers Seek Employment?

For the 90/91 occupational graduates/completers, Vancouver remained to be the primary geographic location where employment was sought. Nearly sixty percent (58%) of the 90/91 graduates/completers reported to have looked for work in Vancouver. One third (31%) of the graduates/completers sought employment in other Lower Mainland areas, and the remaining eleven percent (11%) searched for jobs in other areas. This pattern of employment search is largely due to the fact that most job opportunities in British Columbia have been created in the Lower Mainland, particularly, in and around metropolitan centres such as Vancouver and Burnaby. This trend has been steady over the past six years.

Employment Rate

In spite of the recession, at the time of the survey (about nine months after graduation), more than four out of every five 90/91 occupational graduates/completers (84%) were employed. This relatively high employment rate in the middle of the recession suggests that VCC's occupational programs have been successful in preparing the graduates/completers

for employment. The 90/91 occupational graduates/completers' employment rate is higher than that in the previous survey year (89/90).

Main Reasons for Unemployment

Of the small number of the 90/92 occupational graduates who were unemployed at the time of the survey, 21% (42 respondents) reported that they needed more education or training to obtain jobs; 17% (34 respondents) reported to have been laid off; 12% (23 respondents) did not work because there were no jobs available in their trained fields; another 12% (23 respondents) could not find employment in any fields; 7% (14 respondents) had not looked for work yet; 4% (8 respondents) did not work because the salary offered to them was too low; 2% (4 respondents) lacked license or trade certificate for obtaining employment; and the rest 26% (51 respondents) were not employed for unspecified reasons. The reported reasons for unemployment have not significantly changed from those of last year.

Training-Related Employment

About 4 out of every 5 (79%) of the respondents reported that their jobs were related to their VCC training. Longitudinally, the percentage of occupational graduates who found training-related employment has been increasing over the past three years. The gap between what was learned at VCC and what was useful on the job has been narrowing. Altogether, only 13% of the 90/91 occupational graduates/completers reported to hold non-training-related jobs.

Major Reasons for not Being Employed in Training-Related Fields

The small number of respondents who did not hold training-related jobs were asked why they were employed in non-training-related fields. Of the 241 respondents, 33% could not find training-related jobs; 6% did not like to leave the Lower Mainland to take training-related employment; 24% stayed in their non-training-related jobs because of better pay; 10% reported to have better opportunity for advancement in their existing jobs than in a training-related job; another 10% simply did not want to work in a training-related field; 15% stated that their training was not sufficient to obtain a job in their trained fields; 25% were not employed in training-related fields because of other reasons. Longitudinally, the percentage of respondents who had to take non-training-related jobs because no training-related employment was available jumped up from 19% in last year to 33% in this year. This is a reflection of the declining job market in hard economic times. Another noticeable trend is that proportionally there were more occupational graduates who would hold non-training-related jobs because

their non-training-related jobs offered better pay than training-related jobs. Last year, 15% of the 89/90 occupational graduates were not employed in training-related jobs because of better pay in their non-training-related jobs. In contrast, the percentage of 90/91 occupational graduates who would stay in non-training-related jobs because of better pay reached 24%. A possible explanation is that jobs in training-related fields may not always offer good wages. Still another noticeable change is that proportionally fewer occupational graduates working in non-training-related fields did not want to work in their trained fields in the 90/91 survey year (10%) than in the 89/90 survey year (15%).

How Adequately were Former Students Prepared with Basic Job Skills?

In order to assess how adequately the former students were prepared in terms of basic skills, we asked the 90/91 occupational graduates to rate six types of basic job skills on five-point scales, with 1 standing for "not at all adequately prepared" and 5 for "definitely adequately prepared". The six basic skills were: written communication, oral communication, reading, analytic/problem solving, self-learning, teamwork, and computer skills. The highest rating was given to teamwork (mean rating = 4.14), and the lowest rating was given to computer skills (mean rating = 3.11). The results implies that respondents did not think that they were as adequately prepared for employment with computer skills as with teamwork skills. In order to assess what is needed on the job, we also asked the former students to rate these six basic skills in terms of the frequencies of using these skills on five-point scales with 1 representing "never used" and 5 representing "used very often". The respondents rated oral communication as the most often used of the six types of basic skills (mean rating = 4.17) and computer skills as the least often used of the six basic types of skills (mean rating = 3.01).

Usefulness of VCC Training for Obtaining Employment

To assess the overall usefulness of VCC training for obtaining jobs, the former students were asked to rate the usefulness of their training at VCC on a 5-point scale. The results showed that 80% of the respondents indicated that their training was useful for obtaining employment, implying that VCC training has made positive contribution to their lives. Of the 812 respondents, 33% indicated that they would not have obtained their jobs without VCC training. Longitudinally, there is not much change in the trends of occupational graduates' ratings of the usefulness of VCC training for obtaining employment.

How Employment was Obtained?

Although the Counselling Departments and the faculty on the three campuses made

various efforts to help graduates find jobs, the largest number of the occupational graduates/completers (31%) found employment by themselves. Most of the remaining graduates either found jobs through newspaper advertisements (15%) or via friends' assistance (13%). In addition, about 15% of the respondents reported to have continued in their previous jobs instead of finding new jobs. Longitudinally, there is no significant change in the occupational graduates' job-finding trends over the past six years.

Usefulness of VCC Training on the Job

To assess the usefulness of VCC's training for the performance on the job, we asked the occupational graduates/completers to rate the usefulness of their training for job performance on a 3-point scale ranging from "very useful" to "not useful at all". The overwhelming majority of the respondents (88%) rated their training as either "very useful" (55%) or "useful to some extent" (33%) for their job performance. Only a small number of the remaining respondents (12%) rated their training as "not useful at all" for their job performance. Over the past six years, the positive ratings of VCC training for job performance have been consistent, indicating VCC's success in helping students gain life and work skills.

Quality of Equipment and Other Issues

To assess the state of the equipment in the occupational programs, the 90/91 graduates/completers were asked to rate the equipment used in their programs on a 5-point scale ranging from "very current" to "very out-of-date". While 32% of the respondents rated the quality of the equipment used in their programs as average, 53% of the respondents rated the equipment used in their programs as "current" or "very current", suggesting that the majority of the respondents were happy with the quality of equipment in their programs. In contrast, only 15% of the respondents held the opinion that the equipment used in their programs was "very out of date" or "out of date". Regarding the need for upgrading skills, 44% of the respondents indicated that their need for upgrading skills would be high. This implies that these respondents would be back to education or training in the near future. In terms of course availability, 27% of the respondents indicated that it would be difficult for them to attend the courses they needed for upgrading. However, it is not clear from the responses if the difficulty of attending skill-upgrading courses was due to lack of space, unsuitable class schedule or any other factors.

Further Education after Completing VCC Training

To assess the impact of VCC training upon the choice of fields for further education, completers of occupational programs were asked to rate how related their further education was to their training at VCC on a 3-point scale. It was found that 50% of the 241 respondents who were engaged in further studies rated the fields of their further education as "definitely related" to their previous VCC training and 32% as "related to some extent". In comparison, approximately 19% of the 241 respondents indicated that their fields of further education were not related to their previous VCC training at all. Longitudinally, however, 90/91 occupational completers seem to shift away from a five-year trend in selecting their fields for further education. In the previous five years (85/86-89/90), more occupational completers would choose a field of study closely related to their VCC training for further education than did the 90/91 occupational completers.

Problems of Transferring to Other Institutions

To assess the transferability of VCC credits to other institutions, we asked the occupational completers who continued their studies at other institutions after VCC training if they had problems when they applied for admission into their new institutions. In total, 53% of the respondents reported to have experienced no problem. For those who reported to have encountered difficulties at their new institutions, the common problem was that VCC credit hours were not accepted by the new institutions (12%). Historically, this trend has been consistent.

Adequacy of VCC Preparation for Further Education

To assess how well VCC prepared the 90/91 occupational completers for further studies, the question "How well did VCC prepare you for your further studies?" was asked of the occupational graduates. The majority of the respondents (55%) indicated that VCC preparation for their further study was either excellent or good in all areas. In comparison, only 4% of the respondents believed that VCC preparation was poor. This trend has not changed significantly over the last six years.

Plans for Further Education in the Next Five Years

When asked if they planned to take more education in the next five years, the response of the majority of the 90/91 graduates was positive. Specifically, 24% of the respondents indicated that they would go to a community college, 5% to an institute of technology, and 10% to a university. Additionally, another 23% of the respondents indicated that they would go for further education in the next five years but were uncertain about the type of institution

to go to yet. Longitudinally, community colleges have been the favorite choice of VCC occupational graduates for further education over the last six years and the percentage of occupational completers planning to take further education in community colleges has been increasing in the last three years.

Overall Rating of VCC Training

The 90/91 occupational graduates held high value of their VCC training. With all aspects considered, almost all respondents rated their training at VCC either as definitely worthwhile (67%) or as worthwhile to some extent (30%). In contrast, only 2% of the respondents indicated that their training at VCC was not worthwhile at all. Over the past six years, nearly all graduates from VCC's occupational programs have been consistently rating their VCC training as worthwhile.

Discussion

In the 90/91 survey year, a total of 3,685 occupational completers were surveyed, a 15% increase from the previous survey year (3,367). VCC occupational completers made up 27.5% of the total surveyable occupational graduates of all community colleges of British Columbia in the 90/91 survey year.³ Although the response rate of VCC occupational completers is lower than that of the provincial system average (36%) in the 90/91 survey year, locally, the response rate of VCC occupational completers went up from 29% in the 89/90 survey year to 32% in the 90/91 survey year. With a higher response rate and larger number of students surveyed, the results presented in this report are more reliable than those of the previous survey year.

One of the noticeable findings in this year's follow-up survey is that the overall employment rate of VCC occupational students has gone up despite the recession. In last year's survey (89/90), 76% of the respondents were employed. In the current survey year, the overall employment rate went up to 84%, which is also higher than that of the pooled average of all colleges in British Columbia (77%). The improved overall employment rate suggests that VCC occupational completers were more adapted to the employment market in the adverse economic situations in the 90/91 survey year than in the previous survey year. Furthermore, the higher overall employment rate over the provincial system average indicates that the completers of VCC occupational programs performed better than most of their counterparts from other community colleges in British Columbia in obtaining employment, demonstrating the high quality of VCC occupational programs. Admittedly, the higher-than-average overall

employment rate may be due in part to the fact that VCC occupational completers had the geographic advantage of living in big metropolitan areas where most recent jobs were created. Nonetheless, given the fact that there are a number of community colleges in the Lower Mainland which also have the geographic advantage of assessing to the most active job market in British Columbia, the high employment rate of VCC graduates does indicate the high quality of the College's occupational training programs.

Another interesting but not surprising finding is that fewer completers of VCC occupational programs found employment related to their training in the current survey year (84%) than in the 89/90 survey year (90%). This reflects the impact of the prolonged recession upon job market where fewer new jobs were created in 1991 than in the "good old times". In fact, most big companies have been downsizing while medium-to-small businesses have been struggling to maintain their operations with reduced budgets. As a result, British Columbia's Help Wanted Index in 1991 was only 75% of the 1981 level.⁴ In addition, there has been a restraint for creating new positions in the public sector, which employs a substantial number of VCC graduates. There is also an increasing flow of skilled labour force from other provinces to British Columbia, making the lean job market even leaner.⁵ There were just not enough new jobs created to keep up with the pace of the demand of the unemployed. Thus, facing all these adverse factors, still 84% of VCC graduates of occupational programs found employment related to their training in the 90/91 survey year. This demonstrates that VCC's training has made a difference for the 84% of VCC 90/91 occupational graduates in their search for employment.

Another indicator of success of VCC's occupational training programs in placing students into the work force is the relatively low unemployment rate of VCC occupational graduates. At the time of the survey (about nine months after graduation), only 9% of VCC occupational completers were unemployed and still looking for jobs. Nationally, the seasonally-adjusted unemployment rate stood at 11.8% in November of 1992, the highest national unemployment rate since July of 1983; locally, the unemployment rate in British Columbia was 10.2% in the same period.⁶ Across the institutions, the average unemployment rate of the occupational completers of all colleges in British Columbia was 10% in the 90/91 survey year. Compared with the national and local unemployment rates, completers of VCC occupational programs did well in finding employment.

Still another important finding of the 90/91 follow-up survey is the increased number

of occupational completers who took further training or education after completing training at VCC. In the 89/90 survey year, less than 5% of the occupational completers went on further training after graduation. The proportion of the occupational completers who took further education or training (mostly part-time) increased to 19% in the current survey year (90/91). The increased percentage of graduates taking further education is an indication that education plays a vital role in locating employment and improving job performance. With rapidly changing technology, the training and re-training cycle is shortening and the need for in-service updating skills is more urgent. This may explain the reason why 62% of the respondents would like to take further education in the next five years.

On the negative side, proportionally there were fewer respondents who were definitely satisfied with VCC training programs in this year's follow-up survey than in the 89/90 follow-up survey. About 67% of the respondents rated their VCC training as definitely worthwhile, down 7% from last survey (74%). This is also lower than that (73%) of the provincial system average in the current survey year. The decreased overall satisfaction rate correlates with the ratings of VCC preparation for further studies, usefulness of VCC training for job performance, and usefulness of VCC training for obtaining employment. There may be two explanations for the low satisfaction rate. Externally, job opportunities have not been as great as they used to be. It was difficult to find employment in the first place, let alone finding jobs related to students' training. Therefore, it took longer time for the 90/91 occupational graduates to find employment, and the obtained employment was often outside their field of training. Internally, VCC has been accommodating the steadily increasing number of students at a 1.5% growing rate each year with virtually unchanged resources (libraries, classroom space, laboratory equipment, etc.).⁷ Therefore, there were cases where students could not find after-class study space in the library or could not have the up-to-date laboratory equipment for their class assignments. Both of these factors contributed to the declined overall satisfaction rating of VCC's training by the 90/91 occupational graduates.

To meet the external challenge of the dwindling job market, there is a need to improve job placement services within VCC. Currently, nearly half of the occupational graduates found employment on their own. Only less than 10% of the graduates received placement assistance from VCC, mainly from instructors who volunteered to provide graduates with employment assistance through their connections. Compared with private training institutions which often have designated personnel (placement officers) contacting employment agencies

and employers for their graduates, VCC lacks organized placement services. The College has been doing well in helping students acquire job skills, but it does less well in assisting graduates in obtaining employment. By improving placement service within the College, VCC may help graduates obtain more jobs and thereby better appreciate their training received from the College. This may lead to higher satisfaction rate of VCC's training programs.

There seems to be no immediate solution to the internal problems. Lack of study space in the libraries and out-dated equipment in the laboratories have been the concerns of former students in the last three years and cannot be addressed without additional capital funding. Given the current budget and enrolment trends, it is unlikely that VCC will be able to solve these problems soon. Perhaps, however, VCC may be able to reduce the acuteness of the problem by better scheduling of classes and letting students use classrooms for self-study in after-class hours. As for updating instructional equipment, it is directly tied to funding and beyond the scope of this report for discussion.

Conclusion

Based on the results from the 90/91 follow-up survey, with all aspects considered, VCC has successfully provided the 90/91 occupational graduates with necessary job skills for employment. Despite the recession, the overwhelming majority of VCC occupational graduates and completers found employment related to their training at VCC and managed to hold on to their jobs. In addition, a large number of the 90/91 occupational graduates and completers considered their training at VCC as essential or very useful for obtaining employment, implying that VCC's training has made a positive contribution to the lives of these occupational graduates and completers.

Because of the limited space, detailed results by program were not presented in the current paper. To meet the need of departments for program evaluation and curriculum review, the 90/91 follow-up data results have also been analyzed with each program as unit of analysis. The detailed report on the survey results are available from the author.

Footnotes

¹ Unaudited FTE's quoted from VCC 92/93 Program Profile Proposal (March, 1992).

² Due to the limited space, the survey questionnaire is not attached to this paper.

However, it is available from the author upon request.

³ All the statistics of the provincial system average mentioned in this report were

quoted from the 1992 B.C. College Student Outcomes Report (Draft).

⁴ Based on statistics released by the Ministry of Finance and Corporate Relations of B.C. in, 1992, Labour Force Statistics, 92-01.

⁵ According to B.C. Migration Highlights (92-3), 80,302 people moved to B.C. from other provinces in 1991 alone, many of whom having readily employable job skills.

⁶ Quoted from Ministry of Finance and Corporate Relations of B.C. 1992. Labor Statistics, 92-11.

⁷ Quoted from VCC Institutional Research Services, 1992, VCC Enrolment Projections.