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**National Center for Human Resources Development
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**Community Colleges
Assessment Study
Summary Report on the
Graduate Tracer Survey**

**Presented
by**

the Joint Canadian-Jordanian Study Team

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Sustaining and Extending Technical Vocational
Education and Training (SETVET)

**SUSTAINING AND EXTENDING TECHNICAL
VOCATIONAL
EDUCATION AND TRAINING (SETVET)**

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First Draft as of May 28, 2005

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1. INTRODUCTION

The Sustaining and Extending Technical Vocational Education and Training (SETVET) project is being funded by the Canadian International Development Agency (CIDA). The project aims to support reform and further development of the Jordanian Training and Vocational Education system (TVET).

The community college system in Jordan is one area in which reform has taken place. Al Balqa' Applied University (BAU) was established in 1996 in an effort to make the community college system more responsive to labour market needs. BAU is directly responsible for all 15 public community colleges, and also accredits all private colleges. BAU operationally monitors and reports on the organization and the effectiveness of the Jordanian college system. This study can be seen as directly supporting the BAU monitoring and reporting role, as the chief outcome of the study is aimed at establishing the effectiveness of the colleges in terms of their performance as measured by the extent to which the colleges are providing programs that meet labour market needs.

The performance of the community colleges is being assessed against five criteria: impact, effectiveness, efficiency, relevance and sustainability. Secondary sources of information that underpin the study include BAU administrative data, previous Al Manar education and training studies, and Department of Statistics labour market data. Primary data collection involves interviews with community college staff, interviews with public and private sector employers, and a survey of college graduates.

2. THE PERFORMANCE ASSESSMENT CRITERIA AND STUDY QUESTIONS

In developing the methodology for this assessment study, a large number of study questions were posed under the five performance assessment criteria. The Graduate Tracer Survey was undertaken to help the joint Canadian-Jordanian Study Team address a subset of the study questions. Of course, information from the secondary sources and the other two primary sources (the colleges and employers) is also needed to provide complete answers to this subset of questions. In other words, the Graduate Tracer Survey alone will not provide all of the information required to answer this subset of questions.

Table 2.1 contains the specific study questions that are the focus of the Graduate Tracer Study.

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TABLE 2.1
The Graduate Tracer Survey Study (GTS) Questions

Performance Assessment Criteria	Study Questions Relevant to the GTS
<p>Impact: The degree to which the colleges seem to be producing the number of graduates required to meet current and future labour market demand.</p>	<ul style="list-style-type: none"> • How do youth (15-24 year olds) compare to workers in other age categories (taking gender differences into account) with respect to: <ul style="list-style-type: none"> - % employed - % employed by educational level <ul style="list-style-type: none"> - % employed by economic activity area - % employed by occupation? • What are the differences in monthly earnings of workers with respect to: <ul style="list-style-type: none"> - age - gender - educational level - occupation - economic activity area?
<p>The extent to which the colleges are perceived to have an overall positive impact on the lives of students.</p>	<ul style="list-style-type: none"> • To what degree do students attribute their labour market successes or failures and economic status to their college education? • Are students supportive of the colleges? • Do students feel there are better alternatives for their labour market preparation than the community colleges?
<p>Effectiveness: The extent to which the colleges are meeting the actual and perceived educational needs of students for labour market entry.</p>	<ul style="list-style-type: none"> • Do college graduates (those that pass and those that fail the comprehensive exams) say they find work in occupations or economic activity areas related to their college programs? • Do graduates feel their college education helped them in obtaining and succeeding in employment?
<p>Efficiency: The degree to which the colleges are satisfying labour market demand (in terms of numbers and skill-sets required) relative to their expected level of labour market supply and relative to the alternative sources of supply (labour market entry directly from secondary school, from university programs and from other technical/vocational training providers).</p>	<ul style="list-style-type: none"> • What is the significance of the pass/fail rate by major college program area on the comprehensive examinations in terms of satisfying labour market demand? In terms of the satisfaction of students with their labour market status after graduation? • How many times do college graduates have to write the comprehensive exams before passing it? Is there a major difference by program area? By type of college?

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Performance Assessment Criteria	Study Questions Relevant to the GTS
	<ul style="list-style-type: none"> • Do a significant proportion of graduates fail to find work in an area related to their college program and/or specialization? • Are sufficient data available to compare the labour market activity, employment and unemployment rates of college graduates to the rates for other streams to labour market entry? If so, how do college graduates fare?
<p>Relevance:</p> <p>The degree to which students perceive the college programs to have met their educational and labour market objectives.</p>	<ul style="list-style-type: none"> • To what extent do students believe they have achieved their objectives for enrolling in college programs? Is there a difference in the extent of meeting goals across different programs/specializations? • Do students believe that their college experiences prepared them adequately for either further studies/training in their fields or for employment in their chosen fields? Do their views differ by type of college or by program area? • Do students believe they obtained from their college experience all of the knowledge and skills needed for employment in their chosen fields?
<p>Sustainability:</p> <p>The degree to which the current college system can and should be sustained or expanded relative to the current and forecasted educational and labour market conditions, in terms of the numbers of public and private institutions, the numbers and types of program specializations offered, the numbers of enrolments and graduations, and the global costs involved</p>	<p>No questions requiring information from the Graduate Tracer Survey.</p>

3. THE GRADUATE TRACER SURVEY PROCESS, QUESTIONNAIRE, AND SAMPLE

3.1 The Questionnaire

The GTS form, presented at Appendix 1, was developed from the study questions shown in Table 2.1. It was designed for the Canadian-Jordanian Study Team to use in gathering detailed community college graduation follow-up information especially focused on labour market outcomes.

3.2 The Data Collection Process

The survey was given to community college graduates in groups assembled for this purpose at a number of colleges. Both recent (2003, 2004, and 2005) graduates and those who completed their college studies even several years ago (before 2003) were invited to fill out the survey forms at pre-arranged sessions. Graduates attended sessions held on Saturdays beginning in early April 2005 and ending in early May 2005. The Jordanian Team for the study was

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successful in gaining the cooperation of the following public and private colleges where the sessions were hosted.

- Gharnatah College
- Zarqa National College
- Arabic College
- Arab College
- Irbid College
- Al Huson College
- Aijlun College
- Al Salt College
- Amman Training College
- OTHERS TO BE ADDED

Graduates participated in the survey process voluntarily. Most of the participants were contacted by staff at the colleges where the sessions were held. The college Deans were provided with an information letter regarding the study to use in explaining to graduates the purpose of the study and the potential use of its results.

3.3 The Sample of Graduates

Other than establishing the locations where the survey sessions were held, the Study Team had little control over graduate participation. From the list of participating colleges shown earlier, it is clear the Study Team attempted to reach graduates in various geographical locations. The choice of colleges where sessions were held was also made with a view to getting the participation of graduates from a variety of college programs and specializations. Since participation in the survey was not limited to recent graduates, a broader age spread of survey respondents than would otherwise be the case could be obtained.

Table 3.1 shows the percentage of gender and age representation in the sample of the 745 respondents for whom complete and valid surveys were obtained. The gender balance achieved is fairly close to the gender representation in college attendance, shown in Al Baqua' statistics for 2004 to be 26% male and 74% female.

TABLE 3.1
Percentage of GTS Respondents by Gender and Age Category

Sample Characteristic	Percentage Representation
Gender	
Male	19.1
Female	80.9
Age Category	
15 – 19 years	1.8
20 – 24 years	80.5
25 – 39 years	17.8

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Respondents were asked to name the colleges they attended. They attended the colleges listed in Table 3.2. It is important to note that the representation of GTS respondents is not equal to the proportion of enrolments in 2004 at the four categories of colleges cited in the first study report stemming from the Community College Interview (private colleges = 55%, public colleges = 38%, other government = 6%, UNRWA = 1%). This factor should be kept in mind in drawing conclusions from the responses to the various GTS questions.

TABLE 3.2
Percentages of GTS Respondents Who Had Attended the Various Jordanian Community Colleges

College Attended by Category	Percent of Sample
Gharnatah	5.0
Zarqua National	6.0
Arabic	6.6
Arab	1.8
Private Total	19.4
Irbid	14.2
Al Huson	10.3
Aijlun	10.4
Al Salt	9.3
Public Total	44.2
Amman Training College	36.4
UNRWA Total	36.4
Other Government College Total	0.0
GRAND TOTAL	100.0

Graduates seemed to have difficulty in naming the college program they were enrolled in. Just 292 of the 745 valid responses contained a program name. However, a much larger number of respondents (625) entered the name of their specialization on the GTS. From the information filled in by the graduates, responses were grouped into 13 "specialization categories". Unfortunately, it was not possible to match the GTS sample responses exactly to any of the colleges' specializations categories. The GTS representation by area of specialization is shown in Table 3.3. It is fair to say that a reasonable variety of areas of specialization is found in the sample.

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TABLE 3.3
GTS Representation by Area of College Specialization

Area of Specialization	Number	Percent
Banking and Finance	51	8.2
Business Management and Marketing	72	11.5
Accounting	84	13.4
Information Technology/Management Information Systems	78	12.5
Secretarial Sciences	67	10.7
Medical Secretarial	32	5.1
Dental Laboratory Technology	24	3.8
Medical Laboratory Technology	18	2.9
Fashion (Cosmetology) and Interior Design	58	9.3
Social Services	16	2.6
Childhood Education	32	5.1
Library Sciences	11	1.8
All Others	82	13.1
Total	625	100.0

As was mentioned earlier, not all of the GTS respondents were recent graduates, although the majority graduated in 2003, 2004 or 2005. The numbers and percentages of graduates in the sample by year of graduation are displayed in Table 3.4

TABLE 3.4
Graduation Year of the Sample Respondents

Graduation Year	Number	Percent
2005	76	10.3
2004	289	39.2
2003	122	16.6
2002	85	11.5
2001	58	7.9
2000	58	7.9
1999 and earlier	49	6.6
TOTAL	737	100.0

Finally, the sample of GTS respondents can be described in terms of the numbers and percentages of those who said they either passed or failed the comprehensive examinations for their specialization, and in terms of the number of attempts needed to pass the examinations.

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In Table 3.5, the examination pass/fail statistics and the number of examination attempts before passing are given.

TABLE 3.5
Comprehensive Examination Outcomes for the GTS Sample

Comprehensive Examination Outcomes	Number	Percent
Number of Attempts		
Just once	551	80.1
Two times	122	17.7
Three times	12	1.7
Did not pass	3	0.4
Total	688	100.0
Comprehensive Examination Success		
Passed	657	95.9
Failed	28	4.1
Total	685	100.0

A summary profile of the GTS sample is:

- A significant majority of the sample were females, but this fairly reflects the gender balance in overall college enrolments;
- Sample respondents to the GTS were primarily 20 – 24 years of age;
- The sample over represents public college graduates and under represents private college graduates; and, no graduates from "other government colleges" such as the Schools of Nursing were included in the sample;
- More than half of the 88 college program specializations were represented by sample respondents;
- A majority of the sample respondents graduated from college between 2002 and 2005; and,
- Among the sample respondents, the comprehensive examinations pass rate was 95%.

It can be seen that the sample fairly represents all community college graduates over the past several years in terms of its demographic characteristics. It would have been preferred to have a better balance with respect to graduates from private and public colleges, but this is not a very limiting factor when it comes to applying the findings from the GTS.

4 GRADUATE VIEWS OF THEIR COLLEGE EXPERIENCE AND ITS RELEVANCE TO THE LABOUR MARKET

4.1 Reasons for College Attendance

GTS sample respondents were asked why they had gone to college. The respondents were allowed to choose more than one reason for attendance. Table 4.1 presents the results from this question.

TABLE 4.1
Reasons for Attending College Given by Sample Participants

Reasons	Number of Responses	Percentage of Total Responses
Prepare for a first job/career	380	25.0
Prepare for transfer to a university degree program	296	19.5
Personal interest/self enrichment	124	8.2
Acquire/improve skills for present job	83	5.5
Prepare for a different job/career	227	15.0
Improve basic skills	121	8.0
Explore academic or career areas	96	6.3
Other	190	12.5
Total	1,517	100.0

- The percentage of responses (up to 45%) indicating that the main reasons for going to a community college were to prepare for a first job, a different job, or to acquire skills for the present job supports the notion that a significant proportion of students see the mandate of the colleges as being preparation for the labour market.
- About a quarter of the respondents indicated that community college attendance was to be a stepping stone to a university degree.

An important issue to address is the extent to which the college graduates felt that their goals were met by going to a community college. A very general answer to that question is provided by the information given in Table 4.2.

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TABLE 4.2
Extent to Which Graduates' Goals Were Met

Extent of Goal Attainment	Number of Responses	Percentage of Total Responses
Completely or almost reached	211	32.3
Partially reached	211	32.3
Not at all reached	232	35.4
Total	654	100.0

- Almost two thirds of the graduates seemed to feel that their goal (reason for going to college), was met.

For those who entered college as a means to prepare for a job, it might be assumed that their perception of the adequacy of their preparation for work would signify goal satisfaction. Responses to the specific question about the usefulness of the skills developed in college as preparation for eventual employment are shown in Table 4.3.

TABLE 4.3
Usefulness on the Job of Skills Developed in College

Extent of Usefulness	Number of Responses	Percentage of Total Responses
Extremely helpful	87	22.3
Somewhat helpful	139	35.6
Neither helpful nor unhelpful	31	7.9
Only slightly helpful	71	18.2
Not helpful at all	62	15.9
Total	390	100.0

- The average rating given on the five-point scale shown in the above table (from extremely helpful to not helpful at all) was 2.7. This could mean that students whose goal in going to college was to prepare for employment found the skills developed there "somewhat helpful to neither helpful nor unhelpful".
- It might be argued that the college program or specialization undertaken by the student could affect goal attainment in terms of usefulness of skills developed for the job. For example, some would argue that the graduates in very technical specializations like mechanical design or autotronics might find their college learning more directly applicable to a job than would graduates in less technical areas such as secretarial science or medical secretary. To address this issue, an Analysis of Variance (ANOVA) was conducted using the specialization of the graduates (grouped into 13 categories) as the grouping factor and the responses of graduates on the 1 – 5 scale shown in Table 4.3 as the dependent factor. ANOVA is used to compare the mean or average scores of

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respondents to a question(s) on a survey form when the respondents can be grouped in some way. The question addressed by the ANOVA in this case might be framed as: "Is there a difference in the average rating of the degree of helpfulness of college attendance (on the 1 – 5 scale in Table 4.3) among survey respondents when they are classified according to their college specialization?"

- The ANOVA testing confirmed that survey respondents who had undertaken different specializations did not answer the question about the usefulness of their college experiences for eventual employment any differently, on average.

For the graduates who indicated that they had gone to college as a bridge to a university degree, it might be expected that they would enter a university program after college graduation. The GTS responses to a question on follow up education showed that up to 27% of the college graduates went on to take university or other specialization courses on a part-time or full-time basis. This response is consistent with the roughly 20% of GTS respondents who said they went to college in order to prepare for university attendance.

4.2 The Employment Outcomes for College Graduates

4.2.1 Employment Status after Graduation

The GTS respondents were asked directly if they were employed at the time of being surveyed. The results are shown in Table 4.4

TABLE 4.4
Employment Status of GTS Respondents

Employment Status (Are you now employed?)	Number of Responses	Percentage of Total Responses
Yes, part-time	178	25.0
Yes, permanent	79	11.1
No, but I have been offered a position	51	7.2
No	403	56.7
Total	711	100.0

- Just 44% said they had either a full-time or part-time job, or were about to start a job. And 57% said they were unemployed. This result should not be a complete surprise, as the GTS respondents were, on average, between 20 and 24 years of age. National unemployment rates typically show higher unemployment among youth (ages 15 to 24) than the national average, and certainly higher than for the 25 to 54 age group. Further, females participate in the labour force at a much lower rate than males (11.2% for females compared to 63.2% for males), and over 80% of GTS respondents were female.
- It also takes time in most countries for new college or university graduates to settle into employment. Two commonly cited reasons for this are: the desire of graduates to explore the labour market for a time before committing to a career field; and, the

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resistance among a majority of employers to hire people without experience in the job. The largest proportion of GTS respondents consisted of fairly recent college graduates. Over 55% had just completed their college programs in 2004 or 2005. They are new to the labour market and could be expected to require time to find appropriate employment.

- To verify the relationship between the recency of college graduation and level of employment and unemployment, the respondents' year of graduation was cross-tabulated with the responses to the question on employment status (four possible choices as shown in Table 4.4). A chi-square statistical test was done to determine if there were any significant differences in how respondents answered the employment status question that were associated with their year of graduation. It was found that responses to the employment status question differed depending on the GTS respondents' year of graduation. Generally, more recent graduates (those graduating in 2003 and 2004) showed the highest levels of unemployment.

4.2.2 The Graduate Job Search

It was expected that not all graduates would look for employment after completion of their college programs. In fact, 89.6% of the GTS respondents said they did look for employment after graduation, while just 10.4% said they did not. The reasons for not seeking employment after graduation varied. In Table 4.5 it is seen that the top three reasons given were: already had a job waiting (and did not need to look for employment); no jobs in the field of the graduate; and, took time to travel or go on vacation.

TABLE 4.5
Reasons for not Looking for Employment

Reason	Number of Responses	Percentage of Total Responses
Had a job waiting for me as soon as I finished college	102	26.8
Wanted to travel/go on vacation	50	13.1
Poor personal health/maternity leave	10	2.6
Personal or family responsibilities	22	5.8
Continuing with studies/part-time	29	7.6
Continuing with studies/full-time	24	6.3
Moving/relocating	3	0.8
No jobs in field	70	18.4
No particular reason	71	18.6
Total	381	100.0

College graduates, like other new entrants to the labour force, generally look for employment in more than one occupation and in a variety of fields. GTS respondents were asked to indicate the occupational categories in which they looked for employment after graduation. Table 4.6 presents a summary of their responses.

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TABLE 4.6
Occupations in which Graduates Sought Employment

Occupational Category	Number of Responses	Percentage of Total Responses
Professionals	132	11.9
Technicians and Associated Professionals	196	17.6
Clerks	165	14.8
Service Workers and Shop and Market Sales Workers	103	9.3
Skilled Agricultural and Fishery Workers	147	13.2
Craft and Related Trades Workers	90	8.1
Plant and Machine Operators and Assemblers	98	8.8
Elementary Occupations	181	16.3
Total	1,112	100.0

- A surprising observation from Table 4.6 is that a significant proportion of college graduates sought work in elementary occupations. This is no doubt a consequence of the labour market environment in Jordan, but it indicates a possible trend toward the under employment of college graduates.

One way of exploring the potential under employment of college graduates is to find out if the graduates tend to look for employment in jobs requiring a level of education less than a college diploma/certificate. GTS respondents were asked to indicate the minimum education level required (according to the job advertisements) for the jobs they applied for. The results for this question are shown in Table 4.7.

TABLE 4.7
Minimum Education Level Advertised for Jobs Sought

Minimum Education Level	Number of Responses	Percentage of Total Responses
Some secondary school	9	4.1
Secondary school diploma/certificate	23	10.3
Some postsecondary education	9	4.1
Some trade or vocational	3	1.4
Trade or vocational diploma/certificate	5	2.3
Some college	29	13.1
Diploma or certificate from college	84	38.0
Some university	21	9.5
University diploma or certificate below bachelor's level	6	2.7

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Minimum Education Level	Number of Responses	Percentage of Total Responses
Degree, level not specified	10	4.5
Bachelor's degree	12	5.4
Master's degree or higher	7	3.2
No qualifications specified	3	1.4
Total	221	100.0

- As might be expected, the most frequently mentioned minimum education level required for jobs sought by college graduates was a college diploma or certificate. However, respondents also indicated that they sought work in jobs requiring something less than a college diploma or certificate (fully 46% of responses in Table 4.7 indicate work sought in jobs requiring no college diploma, only a high school education or less, or not requiring any particular level of education). Again, this may be indicative of a trend toward the under employment of college educated workers.

A second way of seeing if there is potential under employment of college graduates is to examine their starting salaries. Table 4.8 contains the responses of GTS respondents to the question of starting salaries. Note that just a small percentage of the 745 respondents answered this question.

TABLE 4.8
Starting Salaries of College Graduates
(in JD monthly)

Starting Salary Range	Number of Responses	Percentage of Total Responses
Less than 50	13	10.4
50 – 99	35	28.0
100 – 199	65	52.0
200 – 299	8	6.4
300 – 399	1	0.8
400 or more	3	2.4
Total	125	100.0

- There is no real indication of under employment from the limited information provided by GTS respondents to this question. No less than 52% of respondents said they started at a salary of between 100 and 199 JD monthly. National statistics for Jordon (2004) indicate that 52.9% of ALL workers earn a salary of between 100 and 199 JD monthly.

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In terms of the methods college graduates used to look for employment, the findings from the GTS are similar to the kinds of results obtained when this same question is asked of college and university graduates in Canada and other countries. In Table 4.9, the proportion of respondents indicating the use of the various job search method(s) is shown.

TABLE 4.9
Methods Used by College Graduates to Look for Employment

Job Search Method	Number of Responses	Percentage of Total Responses
Resumes submitted to employers directly	478	18.7
Newspaper advertisements	466	18.3
On-campus/college recruitment by employers	259	10.2
Internet job advertisements and job boards	256	10.0
Register at the Civil Service Bureau	482	18.9
Personal contacts/ word of mouth	371	14.5
Professional recruitment agency	240	9.4
Total	2,552	100.0

4.3 College Experience in Relation to Employment

4.3.1 College Specialization and Job Obtained after Graduation

Respondents were asked to indicate the degree to which the job they obtained after graduation was related to their college specialization. The results from this question are displayed in Table 4.10.

TABLE 4.10
Relationship of College Specialization to Job Obtained

Relationship Scale	Number of Responses	Percentage of Total Responses
Yes, entirely related	28	28.2
Yes, a good portion is related	16	16.2
About half is related	13	13.1
Only partially related	16	16.2
Not at all related	26	26.3
Total	99	100.0

- Since the response rate to this question (99 out of 745 respondents to the GTS) is so poor, little can be concluded from this data.

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Even though no conclusion can be drawn from responses to the question that gave rise to the information contained in Table 4.10, a similar question was asked for which the response rate was very high (508 responses out of the 745 respondents). Graduates were asked to indicate if their college experience gave them all of the knowledge and skills needed for employment in their chosen field/specialization. On this simple yes or no question, 40.7% of those who responded said "yes" and 30.1% said "no". The remainder were unsure of their answer.

4.3.2 Perceptions of the Quality of a College Education

GTS respondents were asked to respond to a series of items that reflect on the quality and application of their college experiences to their eventual employment. The response rates for these items ranged from 485 to 515 out of the total of 745 respondents. These responses are therefore considered to be quite indicative of how college graduates view their college experiences as a means of preparing them for employment in one field or another.

Respondents provided ratings on five items using a 1 to 5 scale ranging from "Very satisfied" (value of 1) to "Very unsatisfied" (value of 5). The mean or average ratings of respondents on each of the five items is given in Table 4.11. Clearly, the lower the number for an item, the stronger the rating (i.e. the more satisfied the graduate is with respect to that item).

TABLE 4.11
Satisfaction of College Graduates with their College Experiences as Preparation for Employment

Area of Satisfaction/Dissatisfaction	Number of Responses	Average/Mean Rating
College program content	485	2.57
College courses up-to-date	511	2.55
Overall quality of instruction	515	2.26
Equipment up-to-date	505	2.74
Quality of field training	504	2.50

- Based on the average ratings, it can be concluded that the graduates are moderately satisfied with their college experiences as a means of preparing them for employment. They seemed most impressed with the overall quality of instruction, and least impressed with the equipment used, which they likely found to be a bit out of date once they began work.
- Of course, the respondents were graduates in a variety of fields (specializations). Thus, the question arises as to any differences among graduates in the level of satisfaction with the college experience that might be due to the specializations they are in. To test this notion, Analysis of Variance (ANOVA) was conducted using 13 specialization categories as the grouping factor and the 1 to 5 ratings on each of the five items shown in Table 4.11 as the dependent variables. The question addressed with this procedure is: Are there any statistically significant differences between the mean or average ratings obtained for respondents in each of the 13 specialization groups on the five individual items of Table 4.11?

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- The ANOVA results revealed that there was no significant difference in average responses between the 13 specialization groups for the first four items of Table 4.11, but a difference between groups was found for the item "quality of field training".
- As a follow up to the ANOVA for the fifth item dealing with the quality of field training, the Scheffe post-hoc statistical test was performed to locate the difference between means. This procedure addresses the issue of which group averages are different from another. The ANOVA said there was a difference between some groups, and the Scheffe procedure is used to identify where those differences lie. According to the Scheffe test, the following specialization groups differed significantly from one another in terms of average ratings on the quality of field training:
 - Banking and Finance differed from Library Sciences; and,
 - Fashion (Cosmetology) and Interior Design differed from Library Sciences.

4.4 College Services

In the concluding section of the GTS, graduates were asked about their level of satisfaction with certain college and student services. The scale used for these items consisted of a simple yes or no, with the possibility of indicating that a specific service was not applicable to them. In Table 4.12, the percentage of graduates responding "yes", they were satisfied with the service, is shown for each type of service.

TABLE 4.12
Graduate Satisfaction with College and Student Services

Type of Service	Number of Yes Responses	Percentage of Yes Responses out of the Total of all Responses
College Services		
Admissions/Registration	340	70.2
Accounts	341	71.5
Library	355	74.3
Bookstore	232	49.8
Computer Services	258	53.9
Security	340	71.6
Food Services	222	46.9
Student Services		
Academic Advising	207	44.0
Employment Services	138	29.9
Personal Counselling	202	44.1
Special Needs Services	153	44.8
Financial Information	260	57.1

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- As can be seen in Table 4.12, graduates found student services as a whole to be much less adequate than the general college services. As well, the colleges would seem to need some considerable improvement in the provision of:
 - Employment services;
 - Academic advising;
 - Personal counseling; and,
 - Special needs services.

5 A FEW CONCLUSIONS

5.1 The GTS Sample

- A total sample size of 1,200 graduates was the initial target. The Study Team succeeded in obtaining valid results from 745 respondents. A sample of this size, given the number of college graduates each year (about 14,000) and the number of survey items, would be accurate within plus or minus 6%.
- A fair representation of the graduate population was obtained for the sample in terms of the number of college specializations of the graduates, the geographical locations of graduates, the year of graduation, and the gender and age make up.

5.2 Some Observations about the GTS Responses

- The comprehensive examination pass rate exceeds 95%. If the exams were a good proxy for labour market preparedness, the colleges would be doing well in achieving their mandate. The Employer Interviews conducted for this study shed doubt on the veracity of the exams as a confirmation that students have obtained the necessary job skills.
- Just half of the respondents in this study said they attended a community college to prepare for a job. Up to a quarter of them said they attended college as a bridge to a university degree.
- Graduates were far from convinced that the colleges prepared them adequately for entry into employment. Less than a third said their goal of being prepared for work as a result of college attendance was met. More than 40% felt that the skills they attained were not all that useful for employment. And no more than 40% felt that they obtained all of the knowledge and skills needed for employment in their chosen field.
- Graduates do not find employment quickly. Although over 89% of respondents said they looked for work right after graduation, just 57% of the total sample indicated that they were employed. Generally, workers with college diplomas have a lower unemployment rate than those with degrees or those with less than a secondary education.

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- College graduates apparently have to take jobs in areas not related to their fields of study, and often in elementary occupations. This would indicate the possibility of an undesirable level of under employment among college graduates.
- On the plus side, graduates who find work seem to earn salaries in the national average salary range.
- Overall, graduates expressed satisfaction with most aspects of their college experience. They were least favourable toward the currency of the equipment (including software) used in the colleges.
- In terms of college services, the GTS findings confirm the need to put in place, or enhance where it already exists, employment, guidance and counselling services.

5.3 Preliminary Responses to the Study Questions

In Table 5.1, some findings are highlighted that relate to the study questions outlined at the beginning of this report (Table 2.1 – page2). These findings are based on the analysis of the graduates' responses to the various scaled questions in the Graduate Tracer Survey.

TABLE 5.1
Summary of Findings Relative to the Study Questions

Study Questions Relevant to the College Graduates	Findings from the GTS Responses
<p>Impact</p> <ul style="list-style-type: none"> • How do youth (15-24 year olds) compare to workers in other age categories (taking gender differences into account) with respect to: <ul style="list-style-type: none"> - % employed - % employed by educational level <ul style="list-style-type: none"> - % employed by economic activity area - % employed by occupation? • What are the differences in monthly earnings of workers with respect to: <ul style="list-style-type: none"> - age 	
<ul style="list-style-type: none"> - gender - educational level - occupation - economic activity area? • To what degree do students attribute their labour market successes or failures and economic status to their college education? • Are students supportive of the colleges? 	

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<ul style="list-style-type: none"> Do students feel there are better alternatives for their labour market preparation than the community colleges? 	
<p>Effectiveness</p> <ul style="list-style-type: none"> Do college graduates (those that pass and those that fail the comprehensive exams) say they find work in occupations or economic activity areas related to their college programs? Do graduates feel their college education helped them in obtaining and succeeding in employment? 	
<p>Efficiency</p> <ul style="list-style-type: none"> What is the significance of the pass/fail rate by major college program area on the comprehensive examinations in terms of satisfying labour market demand? In terms of the satisfaction of students with their labour market status after graduation? How many times do college graduates have to write the comprehensive exams before passing it? Is there a major difference by program area? By type of college? Do a significant proportion of graduates fail to find work in an area related to their college program and/or specialization? Are sufficient data available to compare the labour market activity, employment and unemployment rates of college graduates to the rates for other streams to labour market entry? If so, how do college graduates fare? 	
<p>Relevance</p> <ul style="list-style-type: none"> To what extent do students believe they have achieved their objectives for enrolling in college programs? Is there a difference in the extent of meeting goals across different programs/specializations? Do students believe that their college experiences prepared them adequately for either further studies/training in their fields or for employment in their chosen fields? Do their views differ by type of college or by program area? Do students believe they obtained from their college experience all of the knowledge and skills needed for employment in their chosen fields? 	
<p>Sustainability</p> <p>No questions requiring information from the Graduate Tracer Survey.</p>	

