Final Report
SURVEY OF 1995 UNIVERSITY GRADUATES

Prepared for
MARITIME PROVINCES HIGHER EDUCATION COMMISSION

By
BASELINE MARKET RESEARCH LTD.
Fredericton NB and Halifax NS

November 1996

- Aussi disponible en français -

Table Of Contents

Table Of Contents
(Continued)

List Tables and Charts

Chart 1

Chapter 1 Introduction

The Maritime Provinces Higher Education Commission (MPHEC), in partnership with the governments of the Maritime Provinces, retained the services of Baseline Market Research Ltd. (Baseline) to conduct a survey of 1995 graduates of 17 universities in the three Maritime Provinces (Survey) one year after graduation.

This survey of the Class of 1995 represents the first regional approach to a graduate follow-up survey in Canada.

The cooperation of the universities is both recognized and appreciated. Staff from the MPHEC invested considerable time and energy in order to ensure successful completion of this project.

The project Steering Committee added wisdom and guidance when needed, allowing the research team to use the skills developed.

Background Information

This project was designed to build on the biennial, national survey of all post secondary graduates which has been conducted by Statistics Canada since 1978. In 1984, the coverage of the national survey was expanded to include completers of trade and vocational programs. The most recent national survey was completed with 1990 graduates in June, 1992. In May 1996, Statistics Canada released its report on a five-year follow-up survey with graduates of the Class of 1986. Data from these surveys represent the primary source of information available on university graduates today.

While the national surveys provide a wealth of information, MPHEC and the Maritime Provinces determined that there was a need for more current information collected in a timely manner.

The New Brunswick Department of Advanced Education and Labour conducted the first university graduate survey in 1995. This survey of New Brunswick residents graduating from New Brunswick Universities accessing Student Aid was one of the catalysts that for this more comprehensive graduate follow-up.

Research Objectives

The Survey was designed to provide the following:

- the same type of information as that collected in the National Graduate Follow-Up but on a different time frame - one year after the graduation period - in order to allow MPHEC to measure the presence or absence of significant differences between one and two years after graduation; items of analysis would include labour force status and industry trends in employment;

- more specific information on migration of graduates before and after graduation, as well as profiling the population of graduates who migrate and those who do not;

- additional labour market information in terms of new supplies of highly skilled or qualified labour, new entrants, re-entries and those continuing in the labour force with a higher level of skills;

- a more adequate sample size for decision-making at the regional/provincial level;

- additional information about pre-enrolment activity, student satisfaction levels with their university experience and student debt load;

- a base of information which will provide the opportunity for analysis related to employment and under employment conditions by gender, transitions from fields of study to occupations and comparisons of entry level conditions among various occupations.

MPHEC established a Steering Committee to oversee this project and this committee played an active role in the design and implementation of the Survey. Baseline acknowledges the direction and assistance provided by the Steering Committee over the course of this project.

The format for presentation of information collected through the Survey of the Class of 1995 is as follows:

- In Chapter 2, an overview of the methodological approaches employed to meet the research objectives is presented.

- Chapter 3 presents a demographic profile of the Class of 1995.

- Chapter 4 provides a comprehensive profile of employment for the Class of 1995 since graduation.

- Chapter 5 reviews the earnings from employment since graduation with a special emphasis on gender-based differences in wages.

- Chapter 6 explores the geographic mobility of graduates following degree completion.

- Chapter 7 provides information on the activities of graduates in the 12 months before enrolment in a university program.

- Chapter 8 presents the graduates' assessments and evaluations of their university experience and includes the graduates' perceptions about the value of a university education.

- Chapter 9 presents detailed information on the financing of a university education, based on the patterns for the Class of 1995.

- Chapter 10 provides a summary of post-degree education patterns for graduates.

- Chapter 11 provides a summary of observations related to the research process for this survey of the Class of 1995.

Chapter 2 Methodology

Through precise application of appropriate sampling techniques, the sample of respondents for the 1995 Survey provides a true representation of the Class of 1995. The resources allocated provided for a sample size adequate to ensure accurate estimates of the patterns for the overall population of graduates.

Sampling

The design of the sampling plan required consideration of the following specifications by MPHEC:

- the data generated through this Survey had to be applicable to the overall population of 1995 graduates of the 17 universities in the Maritime Provinces;
- an attempt was to be made to complete a census of all 1995 graduates of the University of Prince Edward Island; and
- the final sample had to ensure proportional representation of graduates based on the degrees granted and the major fields of study (FOS).

Contact attempts were to be made with all graduates selected for the sample, regardless of their area of residence.

Sample Frames

MPHEC requested a complete listing of all graduates from the 17 universities participating in this survey; this provided a comprehensive sample frame from which potential survey participants were to be selected.

The listings provided contained contact information for the graduates, a summary of information about their FOS and basic demographic information. In some cases, complete information was not available, but additional assistance was provided by staff from MPHEC. This assistance resulted in a comprehensive, if not complete, sample frame of graduates from all of the 17 universities.

Baseline determined the number to be selected for sampling based on the number of graduates within each of the three provinces and on the number of graduates per institution. Table 1 presents a summary of the total graduates from Maritime universities in 1995 along with the size of the sample selected for each area/school and the actual number of interviews completed.

TABLE 1
SAMPLE ALLOCATION AND INTERVIEW SUMMARY

UNIVERSITIES	GRADUATES (*)		TOTAL SELECTED	INTERVIEWS COMPLETED	
New Brunswick	3,666	33.5%	2,535	1,275	32.4%
Mt. Allison University	438	4.0%	302	180	4.5%
St. Thomas University	239	2.2%	239	140	3.6%
Université de Moncton	932	8.5%	622	330	8.4%
University of New Brunswick	2,057	18.8%	1,372	625	15.9%
Nova Scotia	7,282	66.5%	4,849	2,623	67.3%
Acadia University	771	7.0%	510	329	8.4%
Atlantic School of Theology	10	.09%	10	8	.2%
Dalhousie University	2,465	22.5%	1,687	827	21.2%
Mount Saint Vincent University	582	5.3%	385	225	5.8%
Nova Scotia Agricultural College	174	1.6%	174	109	2.7%
Nova Scotia College of Art and Design	165	1.5%	165	68	1.7%
Saint Mary's University	1,153	10.5%	765	450	11.5%
St. Francis Xavier University	793	7.2%	623	308	7.9%
Technical University of Nova Scotia	476	4.3%	223	102	2.6%
University College of Cape Breton	540	4.9%	155	101	2.6%
University of King's College	98	.9%	98	55	1.4%
Université Sainte-Anne	55	.5%	54	41	1.0%
Prince Edward Island					
University of Prince Edward Island	555	100%	555	439	79.1%
Overall Totals	11,503		7,939	4,337	

(*) Since a census was to be conducted with UPEI Graduates, percentages for New Brunswick and Nova Scotia are based on the sub-total for those provinces while the percentage reported for UPEI is based on the overall response rate for UPEI graduates.

Sample Selection

As noted, an attempt was made to complete a census of PEI graduates using the listing provided by the University of Prince Edward Island.

All potential respondents from New Brunswick and Nova Scotia were selected through random selection. Data bases were sorted by the coding available for FOS and every nth name was selected, based on the sampling fraction for a particular data base. This random sampling approach ensured the generation of data which could be used for inferences about the overall population of graduates in New Brunswick and Nova Scotia.

There was need to confirm that the sample actually represents the overall population in order to determine the need for additional weighting, if significant discrepancies were identified. In order to do this, Baseline reviewed the distributions for the sample and population for FOS. All major areas were proportionately represented in the sample. Available population characteristics were also compared and these are summarized in Table 2.

TABLE 2
COMPARATIVE STATISTICS
POPULATION AND SAMPLE

	Population	Sample (**) (Weighted Data)
Degrees Granted (*)		
Certificate (1)	2%	2%
Certificate (2)	8%	8%
Bachelor's Level	72%	72%
First Professional Degree	5%	6%
Certificate (3)	<1%	<1%
Master's Level	12%	11%
Earned Doctorate	1%	.1%
Gender		
Male	44%	42%
Female	56%	58%
Average Age - Overall	28 yrs.	28 yrs.
Average Age by Degree		
Certificate (1)	26 yrs.	27 yrs.
Certificate (2)	30	30
Bachelor's Level	26	26
First Professional Degree	30	30
Certificate (3)	41	41
Master's Level	35	36
Earned Doctorate	37	39

(*) Throughout this report, Certificate (1) Is used to refer to career/technical level diplomas or certificates at UCCB and NSAC; Certificate (2) is used to refer to a university diploma or certificate below the Bachelor's level and Certificate (3) is used to refer to a university diploma or certificate above the Bachelor's level. (**) See next section for full description of weighting.

The degree of similarity between the characteristics of the overall graduate population and the sample population confirms the representativeness of the sample. The final sample does, in fact, represent the overall population. A more detailed profile of the sample (graduates) is presented in Chapter 3.

Accuracy of Inferences from Sample Data

In the process of analysis, the data were weighted to adjust to the actual distribution of graduates across the three provinces. Given the comparability of sample and population characteristics and the high response rate with PEI graduates, it is assumed that weighting also made the required adjustments to allow data from an incomplete census to be treated as data from a random sample. The weight factors for overall totals are presented in Table 3.

Table 3
Data Weights

Province	Sample Size	Data Weight
New Brunswick	1,275	1.0466
Nova Scotia	2,623	1.0854
Prince Edward Island	439	.4743

The margin of error for estimates about population parameters varies in relation to the size of the sample and the particular response patterns, assuming a process of random selection and application of the appropriate sample weights. It is assumed that the highest level of accuracy for data from this survey is at the global level where one could state, for example, that the estimates of population parameters could be considered accurate, given a total sample of 4,337, within an interval of .08% to 1.4% at the 95% level of confidence.

The margin of error varies for the New Brunswick and Nova Scotia samples. The confidence interval for estimates of population parameters based on data from New Brunswick graduates ranges from 1.5% to 2.4%. The confidence interval for the data from Nova Scotia graduates ranges from 1.1% to 1.9%. Both are stated for the 95% level of confidence.

Technically, the margin of error for the sample of UPEI graduates cannot be calculated because the data result from an incomplete census; however, given the percentage of graduates contacted and the absence of significant variation between the sample and known information available for the overall population, these data are assumed to be similar to that which would be generated from application of random sampling techniques.

Baseline urges caution in the use and interpretation of sub-group analyses. It is suggested that analyses of sub-group patterns based on such variables as institution or FOS should be considered as directional indicators rather than as precise estimates of actual patterns in a sub-group. Should such statistics be published, they should be presented in conjunction with a clear statement about the associated margin of error. It is noted that the margin of error for a sub-group would be far larger than that indicated for either the regional sample or the provincial samples.

Questionnaire Design

A draft research questionnaire was developed by the MPHEC Steering Committee. This instrument was designed to ensure comparability of information from the regional survey with existing and to-be-released information from Statistics Canada on other graduate follow-up surveys.

The draft instrument was revised to adjust for question wording and ordering and made ready for use with a computerized data collection system (Computer Assisted Telephone Interview) by Baseline's staff. The questionnaire was available in both official languages for data collection.

Data Collection

All data collection activity was completed through Baseline's central interview facilities using the firm's CATI system. Interviewers were provided with an orientation session which covered background information on the Survey and all interviewers were trained in the use of the research instrument prior to the start of data collection.

Contact attempts were made with all graduates chosen through the random selection process, regardless of their location of residence. All data collection activity was completed between July 10 and August 16, 1996. In that period, contact attempts were made with a total of 6,978 graduates resulting in the completion of 4,334 interviews.. Table 4 presents a summary of the overall contact efforts within each province.

TABLE 4
DATA COLLECTION CONTACT SUMMARY

	Province		
Contact Activity	PEI	NB	NS
Total Contact Attempts	555	2,268	4,849
Busy or unanswered (1)	28	282	648
Numbers not-in Service/Grad Unknown at Number	50	326	1,201
Total Numbers for Contact	477	1,660	3,000
Graduate Unavailable (Travelling, in military)	6	10	40
Outstanding Call-Backs (2)	20	330	201
Refusals	12	45	136
Completed Interviews	439	1,275	2,623
Survey Response Rate	92%	77%	87%

(1) Unanswered numbers were dialled on an average of six different occasions. (2) Outstanding call backs indicate those graduates with whom contact was made and did not return calls to complete an interview.(3) The Response Rate reflects the ratio of the number of completed interviews to the total number of graduates with whom at least one contact was made.

In its 1996 report, Statistics Canada reported that only .7% of the graduates refused to complete an interview, once contacted; however, it is noted that this would have been a re-interview with the Class of 1986. In this Survey, between 2.5 and 4.2% of the graduates actually refused to complete an interview. The balance, with whom contact was made and an interview not completed, either instructed interviewers to call back repeatedly, did not return messages or were unavailable throughout the survey period.

Data Coding And Analysis

All data collected through the Survey were edited and coded by Baseline's research staff. Preliminary tables were prepared using the analysis package within the CATI system. A complete set of these tables has been prepared for a technical appendix to this report.

Data were transferred from the data collection system to an SPSS-format for further analysis. All statistical testing procedures were completed within SPSS, a statistical software package.

All data analysis operations were supervised by Baseline's Research Director.

The plan for analysis was developed in order to accommodate need for information at the regional and provincial level, as well as in relation to degree received and FOS. As noted, data presented at the regional level are weighted and data within provinces are not weighted. Unless otherwise indicated, tables presenting information for graduates in the three provinces are based on unweighted data.

Notations are made throughout this report to indicate those relationships between variables (presented in tables) which have been determined to be statistically significant. Relationships identified as statistically significant are determined at the 99% level of confidence (with $p \leq .01$).
Determination of statistical significance results from standard testing procedures. Simply stated, statistical significance indicates that the relationship between variables (distribution of responses) did not occur simply by chance - that patterns within subgroups are different (statistically).

Statistical significance does not necessarily mean that the relation is important. While statistical significance is a mathematical term, importance is based on the assignment of value by those who use information in relation to policy decisions. Likewise, policy makers may determine that relationships which are different but not statistically significant are important and should be considered in policy decisions. While the two perspectives may converge, it is not essential that they actually do.

The reader may refer to the Glossary for definitions of other statistical terms used in this report.

Chapter 3 Graduate Profile

While many observe that Generation X is the first generation in many years to face the possibility of not being "better off" than the previous generation, such is not the case for the Class of 1995. While economic conditions may be more challenging, in fact the majority of the graduates represents a first generation university experience and have at least attained a higher level of education than their parents. The parents/guardians of many have not had a similar educational experience. Such is not necessarily the case for those who completed the first professional degree. Graduates in these degrees tend to come from homes in which a significant percentage of parents/guardians have shared the experience of a university education.

More women than men complete university, although significant variations remain in the gender distributions in some areas. One can observe that graduates in engineering, mathematics and applied sciences are predominately male while those in the health professions, humanities and arts are predominately female.

The gender differences are declining among the groups attaining the first professional degree since men and women are equally represented among those who received this degree in 1995.

Table 5 presents a summary of the level of degree granted by province and Table 6 summarizes the types of degrees granted by province. In Table 6 and throughout this report data are presented in relation to 9 major fields of study. A complete listing of the different programs within each major group is contained in Appendix C.

TABLE 5
DEGREES GRANTED BY PROVINCE

Degree Received	PEI Graduates n=439	NB Graduates n=1275	NS Graduates n=2623
Certificate (1)	-	-	3%
Certificate (2)	11%	9%	7%
Bachelor's Level	82%	80%	71%
First Professional Degree	7%	2%	6%
Certificate (3)	-	<1%	.<1%
Master's Level	<1%	9%	12%
Earned Doctorate	-	<1%	<1%
	100%	100%	100%

Columns in Table 5 and elsewhere in this report may not sum 100% due to rounding.

TABLE 6
MAJOR FIELD OF STUDY BY PROVINCE

Major Field of Study (FOS)	PEI Graduates n=439	NB Graduates n=1275	NS Graduates n=2623
Arts and Sciences (General)	<1%	>1%	3%
Education	10%	20%	13%
Fine and Applied Arts	<1%	2%	3%
Humanities-Related	21%	14%	14%
Social Sciences-Related	42%	38%	36%
Agricultural and Biological Sciences	18%	6%	10%
Engineering and Applied Sciences	5%	8%	6%
Health Professions	<1%	6%	6%
Mathematics and Physical Sciences	3%	6%	8%
	100%	100%	100%

Table 6 uses labels to describe the 9 major fields of study. Detailed information about each major group is presented in the appendices.

Table 7 presents a demographic profile of the graduates from each province.

TABLE 7
DEMOGRAPHIC PROFILE OF GRADUATES BY PROVINCE
(Weighted and Unweighted Data)

Demographic Characteristics	Overall (Weighted) n=4,334	PEI Graduates n=439	NB Graduates n=1275	NS Graduates n=2623
Gender				
Female	58%	55%	59%	58%
Male	42%	45%	41%	42%
Average Age (Years)	27	26	28	28
Marital Status				
Single	72%	78%	69%	72%
Married	26%	20%	29%	25%
Separated, Widowed, Divorced	2%	2%	1%	2%
NA (*)	<1%	<1%	<1%	<1%
Mother Tongue				
English	85%	95%	70%	91%
French	10%	3%	26%	3%
Both Official Languages	<1%	<1%	<1%	<1%
Other Language	4%	2%	3%	5%
Dependent Children				
Yes	15%	13%	18%	14%
No	85%	87%	82%	86%

Aside from the variations in relation to mother tongue, the graduate populations in the three provinces are quite similar.

Table 8 presents a summary of demographic characteristics in relation to the degree received and Table 9 presents a demographic profile in relation to the major fields of study.

TABLE 8
DEMOGRAPHIC PROFILE OF GRADUATES BY DEGREE RECEIVED
(Weighted Data)

CHARACTERISTICS	DEGREE RECEIVED						
Gender (*)	Cert. (1)	Cert. (2)	Bachelor's	First Profess.	Cert. (3)	Master's	Earned Doctorate
Female	49%	62%	59%	50%	41%	56%	26%
Male	51%	38%	41%	50%	59%	44%	74%
Average Age	27 yrs.	30 yrs.	26 yrs.	29 yrs.	41 yrs.	36 yrs.	39 yrs.
Marital Status (*)							
Single	73%	62%	79%	62%	41%	34%	10%
Married	25%	34%	19%	35%	39%	60%	87%
Separated, Widowed, Divorced	1%	3%	1%	2%	20%	5%	3%
NA	1%	1%	1%	1%	–	1%	–
Mother Tongue							
English	93%	72%	86%	94%	100%	82%	74%
French	–	24%	10%	2%	–	9%	10%
Both Official Languages	1%	3%	1%	–	–	–	–
Other Language	6%	1%	3%	4%	–	9%	16%
NA	–	–	–	–	–	–	–
Dependent Children (*)							
Yes	17%	24%	10%	13%	59%	41%	58%
No	83%	76%	90%	87%	41%	59%	42%

(*) indicates statistically significant differences.

TABLE 9
DEMOGRAPHIC PROFILE OF GRADUATES BY FOS
(Weighted Data)

Characteristics	MAJOR FIELD OF STUDY								
Gender (*)	Arts/Science Gen.	Education	Fine/Applied Arts	Humanities	Social Science	Ag-Bio Sciences	Engin. App. Sci	Health Prof.	Math-Phy Sci
Female	48%	63%	70%	62%	59%	69%	18%	82%	38%
Male	52%	37%	30%	38%	41%	31%	82%	18%	62%
Average Age	27	31	26	27	27	25	27	27	26
Marital Status (*)									
Single	76%	54%	80%	80%	73%	84%	64%	65%	78%
Married	22%	43%	18%	18%	25%	15%	36%	33%	21%
Separated, Widowed, Divorced	2%	3%	2%	2%	2%	1%	–	2%	1%
Mother Tongue (*)									
English	96%	84%	92%	92%	88%	91%	94%	79%	88%
French	3%	14%	5%	6%	10%	7%	3%	19%	4%
Both Official Languages	–	2%	2%	1%	–	–	–	1%	2%
Other Language	–	–	1%	1%	2%	2%	3%	1%	6%
Dependent Children (*)									
Yes	15%	29%	7%	16%	7%	17%	14%	14%	11%
No	85%	71%	93%	84%	93%	83%	86%	86%	89%

(*) indicates statistically significant differences.

Each graduate contacted was asked to provide information about the education level of both parents. Table 10 presents this information for the graduates in each province and Table 11 presents the information in relation to the degree received.

The variations between provinces were not statistically significant.

The variations observed between the level of education completed by parents/guardians and the degree completed by the graduate are statistically significant. The following observations are based on the information in Table 11:

- overall 22% of male parents/guardians and 32% of female parents/guardians had completed a bachelor's degree or a higher degree;

- parents of those earning their first professional degree were more likely than the overall population of parents/guardians to have completed a higher level of education: 45% of the male parents/guardians and 34% of the female parents/guardians had completed at least a bachelor's degree; this pattern was not observed in relation to those graduates who received other degrees, suggesting that those who pursue their first professional degree come from significantly different households than the overall population of graduates; and

- 53% of male parents/guardians, overall, had completed no more than a high school education; this information is relatively similar to information presented in the Statistics Canada study (of 1986 graduates) in which 55% of male parents/guardians had completed no more than a high school education.

TABLE 10
EDUCATIONAL BACKGROUND OF PARENTS OF GRADUATES BY PROVINCE
(Weighted and Unweighted Data)

EDUCATION LEVEL COMPLETED	Overall (Weighted) n=4,337	PEI Graduates n=439	NB Graduates n=1275	NS Graduates n=2623
FATHER OR MALE GUARDIAN				
Elementary or less	11%	8%	16%	10%
Some Secondary	14%	21%	14%	13%
Secondary Diploma	27%	33%	26%	26%
Community College Experience	1%	2%	1%	1%
Community College Diploma	9%	6%	10%	10%
University Experience/Certificate	7%	6%	7%	7%
Bachelor's Degree	15%	12%	14%	16%
University Certificate (3)	<1%	1%	1%	1%
Professional Degree	4%	2%	3%	4%
Master's Degree	7%	6%	6%	8%
Earned Doctorate	4%	3%	2%	4%
MOTHER OR FEMALE GUARDIAN				
Elementary or less	8%	3%	10%	7%
Some Secondary	11%	11%	14%	10%
Secondary Diploma	31%	33%	30%	31%
Community College Experience	1%	2%	1%	2%
Community College Diploma	11%	13%	11%	11%
University Experience/Certificate (2)	16%	18%	15%	15%
Bachelor's Degree	16%	17%	12%	18%
University Certificate (3)	<1%	–	1%	–
Professional Degree	<1%	1%	1%	1%
Master's Degree	4%	2%	4%	5%
Earned Doctorate	<1%	–	1%	–

"–" represents zero or less than 1%.

TABLE 11
EDUCATIONAL BACKGROUND OF PARENTS' OF GRADUATES BY DEGREE
(Weighted Data)

EDUCATION LEVEL	DEGREE GRANTED							
FATHER OR MALE GUARDIAN	Overall (Weighted)	Cert. (1)	Cert. (2)	BA-Level	First Professional	Cert. (3)	Master's	Ph.D
Elementary or less	11%	13%	18%	10%	6%	33%	18%	13%
Some Secondary	14%	21%	15%	14%	10%	33%	18%	16%
Secondary Diploma	27%	30%	29%	27%	31%	–	25%	19%
Community College Experience	1%	1%	–	1%	–	–	–	–
Community College Diploma/Certificate	9%	14%	7%	10%	4%	–	5%	–
University Experience/Certificate (2)	7%	10%	6%	7%	4%	–	7%	7%
Bachelor's Degree	15%	6%	15%	15%	17%	–	13%	26%
University Certificate (3)	<1%	–	1%	–	–	34%	1%	–
Professional Degree	4%	–	3%	4%	10%	–	3%	–
Master's Degree	7%	4%	3%	8%	12%	–	7%	3%
Earned Doctorate	4%	1%	3%	4%	7%	–	3%	16%
MOTHER OR FEMALE GUARDIAN								
Elementary or less	8%	10%	13%	6%	7%	–	13%	20%
Some Secondary	11%	20%	13%	11%	5%	40%	16%	10%
Secondary Diploma	31%	35%	30%	31%	30%	40%	27%	30%
Community College Experience	1%	1%	1%	2%	1%	–	1%	–
Community College Diploma/Certificate	11%	11%	12%	12%	9%	–	9%	–
University Experience/Certificate (2)	16%	10%	14%	16%	16%	20%	15%	13%
Bachelor's Degree	16%	13%	15%	17%	22%	–	14%	23%
University Certificate (3)	<1%	–	–	1%	1%	–	–	–
Professional Degree	<1%	–	–	1%	2%	–	1%	–
Master's Degree	4%	–	2%	4%	7%	–	3%	4%

Earned Doctorate	<1%	-	-	-	1%	-

Based on the demographic profile presented, it can be observed that the graduate populations were relatively similar across the three provinces with the exceptions, as one would expect, of differences in relation to mother tongue. In all provinces a significant percentage of students came from homes in which the majority of parents had not previously completed a university degree.
Overall, the Class of 1995 consisted of approximately 10% more women than men and one can observe that traditional gender patterns in relation to FOS continue. The most obvious example is based on the information which indicates that 82% of the graduates in engineering are men and 82% of the graduates in studies related to health professions are women. Men are disproportionately represented among graduates in Mathematics and Physical Sciences (62%) while women are disproportionately represented among graduates in Education (63%).

The gender differences are not as apparent at most degree levels; however, 74% of those receiving an earned doctorate were males and 62% of those receiving a Certificate (2) were females.

The likelihood of having dependent children was lower for those who received bachelor's and first professional level degrees and higher for those with a master's and an earned doctorate.

Age patterns are consistent across degree programs with age increasing as the level of education completed increases, with the exception of the certificate programs which apparently attract a slightly older student.

Chapter 4 Employment Experience of Graduates

The Class of 1995 encountered a work world in which there were no guarantees. Adaptability to change should be the guiding premise.

While the overall patterns indicate that approximately 85% of graduates in the labour force were employed in the study's reference week, traditional patterns continue with those in the technical fields more likely to be employed, although not necessarily employed at full capacity. Under employment is more the norm at the bachelor's level than employment at full capacity. There are a significant number of university-educated clerks, waiters and waitresses in the region.

While some graduates are perhaps more likely to earn more money than other new workforce entrants, overall, the majority have to prepare for temporary or seasonal employment and hourly rather than salaried positions.

Use of Terminology

This chapter requires the use of terminology which may be most familiar to those who have had experience with labour market statistics. In order to enhance the clarity of the information presented in this chapter, the following definitions may prove useful:

- **Employed full-time**: graduates working at a job or business thirty hours or more per week.
- **Employed part-time**: graduates working at a job or business less than 30 hours per week;
- **Unemployed**: graduates not working but looking for work as well as those who have accepted a full-time job to start in the future;
- **Labour force**: graduates working (employed), not working but looking for work (unemployed) and graduates not working who have accepted a full-time job to start at a definite date in the future (unemployed);
- **Not in the labour force**: graduates who are not working and not looking for work or unavailable for work;
- **Unemployment rate**: the number of unemployed graduates as a percentage of the graduates in the labour force (employed and unemployed); and
- **Labour force status**: whether graduates are employed, unemployed or out of the labour force.

Overall Employment Since Graduation

Since graduating in 1995, 96% of the graduates have held at least one employment position with the total class averaging 1.78 different jobs. Table 12 summarizes the overall patterns of employment since graduation.

Table 12
Employment Since Graduation
(Weighted and Unweighted Data)

Total Jobs Since Graduation	Overall (Weighted)	PEI	NB	NS
No Employment	4%	2%	4%	4%
One Job	41%	33%	44%	41%
2-3 Jobs	48%	57%	46%	48%
4 or More Jobs	7%	8%	6%	7%
Total	100%	100%	100%	100%
Average # Jobs Since Graduation	1.78	2.00	1.76	1.81

While the differences in patterns across provinces are not statistically significant, the percentage of graduates with two or more jobs since graduation may suggest a more temporary nature of the work available.

Among those who have not been employed since graduation (n=180 in the weighted data set):

- 73% had completed a bachelor's level degree and 13% had completed a master's degree;
- there appeared to be no common patterns related to FOS although those majoring in English Language/Literature (9%), French Language/Literature (6%), History (6%), Psychology (7%), Business/Commerce (7%) and Chemistry (5%) accounted for a total 40% of graduates in this group;
- 63% were women and 37% were men;
- 43% had returned to school by the time of contact; and
- 35% considered themselves to be unemployed and seeking employment while 7% were waiting for a job to start in the reference week.

Employment Activity in Reference Week

In order to establish a common point for measurement of changes over time, graduates were asked about their specific employment activity in the last week of June, 1996. This period is referred to as the reference week in this report.

The chart which follows presents a summary of the employment-related activity of graduates in the reference week. Table 13 presents the reference week activities for graduates from the three provinces.

Graduate Activity in Reference Week

(Weighted Data)

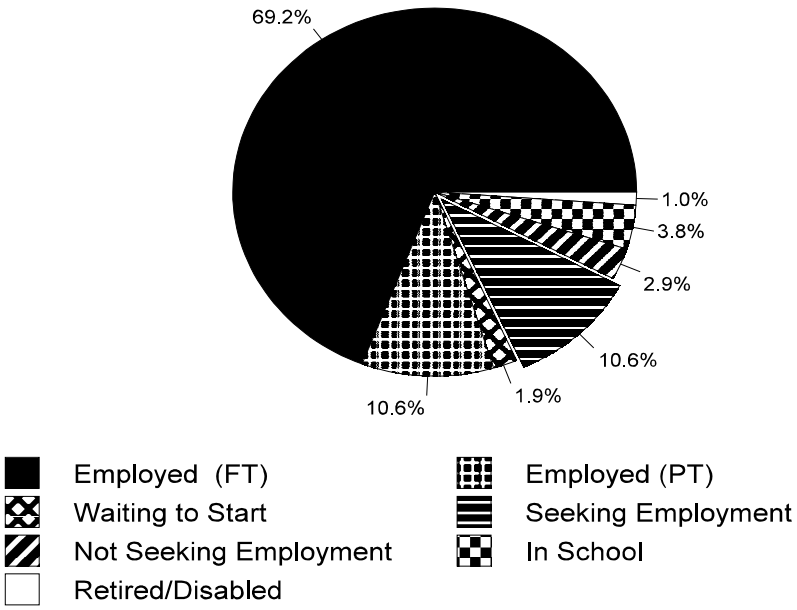


TABLE 13
ACTIVITY IN REFERENCE WEEK BY PROVINCE
(Weighted and Unweighted Data)

ACTIVITY	Overall (Weighted)	PEI	NB	NS
Employed Full-time	68%	71%	65%	69%
Employed part-time	11%	8%	10%	12%
Waiting job start	2%	4%	3%	2%
Unemployed	11%	9%	14%	9%
At Home	3%	3%	3%	3%
In School	4%	4%	4%	4%
Disabled/Retired	1%	1%	1%	1%

The variations in provincial patterns indicated in Table 13 are statistically significant and provide the basis for the following observations:

- a contributing factor to the percentage employed in Prince Edward Island may have been the season of the year since graduates were contacted at the start of the 1996 tourist season;
- overall, New Brunswick has the lowest level of full-time employment and the highest percentage of graduates seeking employment; and
- all provinces appear to have an equal percentage of graduates who have returned to school, are disabled or not seeking employment, approximately 8%, in each province.

Table 14 and Table 15 present the reference week activity in relation to degree received and FOS.

TABLE 14
REFERENCE WEEK ACTIVITY BY DEGREE RECEIVED
(Weighted Data)

ACTIVITY	Cert. (1)	Cert. (2)	Bachelor's	First Professional	Cert. (3)	Master's	Earned Doctorate
Employed Full-time	72%	71%	66%	75%	100%	77%	71%
Employed Part-time	7%	8%	12%	5%	–	8%	3%
Waiting for Job Start	–	2%	2%	6%	–	2%	–
Seeking Employment	15%	10%	12%	8%	–	7%	26%
Not Seeking Employment	5%	3%	3%	4%	–	2%	–
In school	1%	5%	5%	2%	–	4%	–
Retired/Disabled	–	1%	<1%	–	–	<1%	–

TABLE 15
REFERENCE WEEK ACTIVITY BY FOS
(Weighted Data)

ACTIVITY	Arts/Science Gen.	Education	Fine/Applied Arts	Humanities	Social Science	Ag-Bio Sciences	Engin. App. Sci	Health Prof.	Math-Phy Sci
Employed Full-time	73%	65%	59%	59%	72%	60%	74%	82%	64%
Employed Part-time	6%	14%	16%	15%	10%	13%	4%	10%	7%
Waiting for Job Start	2%	2%	4%	4%	2%	2%	2%	3%	3%
Seeking Employment	10%	15%	17%	12%	9%	13%	10%	2%	14%
Not Seeking Employment	5%	2%	3%	4%	3%	3%	2%	2%	2%
In School	3%	1%	1%	4%	3%	9%	8%	1%	10%
Disabled/Retired	1%	<1%	–	2%	1%	–	–	–	–

The variations within sub-group patterns observed in Table 14 and Table 15 are statistically significant and provide the basis for the following observations:

- the information in Table 14 indicates that full-time employment is more strongly associated with receipt of a Certificate (3), a master's level degree and a first professional degree; as is demonstrated in another section of this report, it is interesting to note that those who received their first professional degree in 1995 were also among those most likely to be employed in positions directly related to their areas of study;

- the information in Table 15 indicates that those graduates in health-related studies were more likely have full-time employment in the reference week while those graduates in Fine and Applied Arts and Humanities were less likely to be employed in full-time positions.

Labour Force Participation and Employment Rate

According to Statistics Canada, the labour force consists of those who are employed, awaiting the start of employment at a definite date and those who are seeking employment. In this survey, while those awaiting the start of employment were identified, it was not determined if they had a specific start date. Although this is a discrepancy in terms of the definition of labour force, graduates who indicated that they were awaiting the start of employment are included in the estimate of the labour force for this report as unemployed.

Table 16 presents the information collected related to labour force activity and employment rates for 1995 graduates. Table 17 presents this information in relation to the degree received and Table 18 presents the information in relation to the major field of study.

TABLE 16
LABOUR FORCE AND EMPLOYMENT RATE IN REFERENCE WEEK BY PROVINCE
(Weighted and Unweighted Data)

	Overall (Weighted)	PEI	NB	NS
LABOUR FORCE ACTIVITY				
Employed	79.0%	79.5%	75.7%	80.7%
Unemployed	13.4%	13.0%	17.2%	11.5%
Not In Labour Force	7.6%	7.5%	7.1%	7.8%
EMPLOYMENT RATE				
Employed	85.5%	86.0%	81.5%	87.5%
Unemployed	14.5%	14.0%	18.5%	12.5%

TABLE 17
LABOUR FORCE AND EMPLOYMENT RATE IN REFERENCE WEEK BY DEGREE RECEIVED
(Weighted Data)

	Cert. (1)	Cert. (2)	BA-Level	First Professional	Cert. (3)	Master's	Earned Doctorate
LABOUR FORCE ACTIVITY							
Employed	79.3%	79.2%	78.1%	80.7%	100%	84.5%	74.1%
Seeking Employment	14.6%	12.0%	14.1%	14.2%	–	8.1%	25.9%
Not in the Labour Force	6.1%	8.8%	7.8%	5.1%	–	7.4%	–
EMPLOYMENT RATE							
Employed	84.6%	86.9%	84.7%	85.1%	100%	92.2%	74.1%
Not Employed	15.4%	13.1%	15.3%	14.9%	–	8.8%	25.9%

TABLE 18
LABOUR FORCE AND EMPLOYMENT RATE IN REFERENCE WEEK BY FOS
(Weighted Data)

	Arts/Science Gen.	Education	Fine/App. Arts	Humanities	Social Science	Ag-Bio Sciences	Engin. App. Sci	Health Prof.	Math-Phy Sci
LABOUR FORCE ACTIVITY (*)									
Employed	78.5%	79.2%	74.5%	73.5%	82.0%	73.5%	77.9%	92.5%	71.7%
Seeking Employment	11.9%	17.1%	20.8%	16.2%	11.3%	14.6%	11.8%	5.0%	16.3%
Not in Labour Force	9.6%	3.7%	4.7%	10.2%	6.7%	11.9%	10.3	2.5%	12.0%
EMPLOYMENT RATE (*)									
Employed	86.9%	82.1%	78.4%	82.0%	88.2%	82.8%	86.8%	94.9%	81.5%
Not Employed	13.1%	17.9%	21.6%	18.0%	11.8%	17.2%	13.2%	5.1%	18.5%

(*) Statistically significant at .00000

The following observations are based on the information presented for labour force statistics, and the employment rate:

- overall, graduates from Nova Scotia institutions have the highest level of employment while graduates from New Brunswick institutions have the highest level of unemployment;
- those with an earned doctorate have the lowest employment rate while those with a certificate (2) have the highest employment rate; and
- those with FOS related to health professions have a significantly higher employment rate than graduates in all other FOS.

Activities of Those Not Employed

Within the total sample, 20.5% of 1995 graduates were either unemployed or not in the labour force during the reference week. Among those graduates not employed:

- approximately 80% had held at least one job since graduation;
- 53% were actively seeking employment in the reference week, with 96% of those seeking employment looking for full-time work;
- among those not actively seeking employment in this sub-group (47%)
    - 59% had returned to school (representing 21% of the overall group not employed);
    - 16% had personal responsibilities which limited their participation in the labour market;
    - 5% cited a disability;
    - 3% described the job search situation as hopeless and that they had stopped looking for work; and
    - 17% cited a number of other reasons for unemployment (including travelling, and "just taking time off before looking or returning to school").

Sixty percent (60%) of the unemployed graduates were women.

Eighty percent (80%) had received a bachelor's level degree in 1995, 8% a master's level and 4% had received their first professional degree.

Among those not employed, 32% had majored in a social sciences-related FOS, 18% had majored in the Humanities and 15% had majored in Education.

Among those not employed in the reference week:

- 80% had income from employment in 1995;
- 12% had income from self-employment in 1995;
- 17% had income from investments;
- 5% had income from pensions;
- 4% had income from social assistance; and
- 29% had income from unemployment insurance in 1995.

The income and past employment patterns of those unemployed in the reference week do not suggest a pattern of dependency, rather they suggest a pattern of interim unemployment (most likely resulting from employment in a temporary position) a return to school, or time off for travelling.

Employment in the Reference Week

Overall, approximately 79% of all graduates were employed in full-time or part-time positions in the reference week.

Overall 82% of those employed were employed by one employer, 8% were working for more than one employer and more than one job, 4% were self-employed, 5% were working in a paid position and self-employed. The primary position for 95% of graduates was a paid employment position.

Twenty percent (20%) of those employed in the reference week were in positions in which employment began prior to 1995.

Eighty-six percent (86%) of employed graduates were in full-time positions in the reference week.

Overall, 40% of employed graduates were paid on a salary basis, 53% were paid on an hourly basis and 7% were paid through other or a combination of methods, including drawings (for those self-employed), per diem, commissions and piecework.

The 10 occupations in which the highest percentage of graduates were employed in full-time positions are presented in the table which follows. These 10 occupations account for approximately 29% of all graduate employment.

The information presented in Table 19 provides the basis for the following observations:

- it is apparent that the higher the level of degree received, the greater the likelihood that full-time employment will be in an occupation clearly related to the graduates' FOS;

- while the bachelor's level represents a wider variety of choices and, therefore, would be less likely to have large percentages of graduates in a few selected fields (as with the first professional degree), the data suggesting that large numbers of bachelor-level graduates are employed in retail sales positions indicates significant under employment of graduates at this level.

TABLE 19
PRIMARY OCCUPATIONS (TOP 10) EMPLOYING GRADUATES
(Weighted Data)

OCCUPATION	PERCENTAGE OF TOTAL EMPLOYED (n=3,422)
Retail Salespeople	5%
Elementary School Teachers	5%
Secondary School Teachers	3%
Food and Beverage Servers	3%
Registered Nurses	3%
Community and Social Service Workers	2%
College and other Vocational Instructor	2%
Financial Auditors and Accountants	2%
Cashiers	2%
Customer Service Clerks	2%
Total Employment Represented	29%

Table 20 demonstrates the major occupations in which graduates were employed (full-time) in the reference week in relation to the particular degree they received. It is noted that each occupation was treated as a separate entity in developing this table. For example, the various teaching positions (such as elementary and secondary education) were not combined into a single category. The information in Table 20 confirms the higher likelihood of being employed in a related field for those who received degrees other than at the bachelor's level.

An alternative presentation of the employment profile of graduates is presented in relation to the National Occupational Classification. This matrix, used to classify all employment positions in Canada into 26 major groups, is based on the skill level and skill type demanded for each position. The skill

level is generally defined as the amount and type of education and training required to enter and perform the duties of an occupation. The skill levels range from those at which up to two years of secondary school and short work experience are required (D) to those occupations which require a university degree (A). The degrees required are not specified for Skill Level A. Theoretically, all graduates who have received a bachelor's level or higher would be employed at Skill Level A. Material has been provided in the appendix material to provide a more detailed description of this occupational classification matrix.

TABLE 20
PRIMARY OCCUPATIONS (TOP 5 EMPLOYING GRADUATES) BY DEGREE
(Weighted Data)

CERTIFICATE (1)	%	CERTIFICATE (2)	%
General Farm Workers	12%	Secretaries (Non-Legal)	5%
Animal Health Technologists	10%	Registered Nurses	3%
Retail Sales People	7%	Family/Marriage Counsellors	3%
Landscaping/Ground Maintenance	5%	Civil Engineering Technicians	3%
Retail Trade managers	3%	Dental Hygienists	3%
Sub-Total Percentage	37%	Sub-Total Percentage	17%
BACHELOR'S LEVEL		**FIRST PROFESSIONAL**	
Retail Sales People	5%	Lawyers	23%
Food and Beverage Servers	3%	Veterinarians	13%
Elementary School Teachers	3%	General Practitioners	9%
Registered Nurses	3%	Secondary School Teachers	9%
Financial Auditors and Accountants	3%	Elementary School Teachers	8%
Sub-Total Percentage	17%	Sub-Total Percentage	62%
CERTIFICATE (3)		**MASTER'S LEVEL**	
School Administrators - Elementary	20%	Elementary School Teachers	14%
Secondary School Teachers	20%	Secondary School Teachers	7%
Elementary School Teachers	20%	School Administrators - Elementary	5%
Natural/Applied Sciences Program Officers	20%	College/Vocational Instructors	5%
Library/Archives - Technical Assistants	20%	Education Policy Researchers	4%
Sub-Total Percentage	100%	Sub-Total Percentage	35%
EARNED DOCTORATE			
University Professors	18%		
Geologists, Geochemists	14%		
Biologists and Related Occupations	14%		
Chemists	9%		
Civil Engineers	9%		
Sub-Total Percentage	64%		

TABLE 21
DISTRIBUTION OF 1995 GRADUATES ACROSS EMPLOYMENT GROUPS
TOTAL EMPLOYED IN FULL-TIME POSITIONS IN REFERENCE WEEK = 2,931

NOC OCCUPATIONAL GROUPS												
SKILL LEVEL	1 Business, Finance/ Administration	2 Natural and Applied Sciences	3 Health	4 Soc. Sci, Education, Govt, Religion	5 Art, Culture, Recreation and Sport	6 Sales and Service	7 Trades, Transport, Equipment Operators	8 Occ. Unique to Primary Industry	9 Occup. Unique: Processing, Manufacturing, Utilities	Management	Row Totals	Row %
Management										Group 00 4 (m) 50% (f) 50% Gps 01-09 181 (m)52% (f) 48%	4 181	.1% 6.1%
A	Group 11 132 (m) 47% (f) 53%	Group 21 253 **(m) 76%** **(f) 24%**	Group 31 210 (m) 19% (f) 81%	Group 41 591 (m) 41% (f) 59%	Group 51 63 (m) 28% (f) 72%						1,249	42.3%
B	Group 12 162 (m) 25% (f) 75%	Group 22 126 (m) 66% (f) 34%	Group 32 26 (m) 4% (f) 96%	Group 42 94 (m) 28% (f) 72%	Group 52 96 (m) 40% (f) 60%	Group 62 85 (m) 63% (f) 37%	Group 72/73 42 (m) 90% (f) 10%	Group 82 24 (m) 78% (f) 22%	Group 92 6 (m) 83% (f) 17%		661	22.6%
C	Group 14 227 (m) 38% (f) 62%		Group 34 27 (m) 23% (f) 77%			Group 64 311 (m) 35% (f) 65%	Group 74 30 (m) 80% (f) 20%	Group 84 28 (m) 74% (f) 26%	Group 94/95 24 (m) 55% (f) 45%		647	22.1%
D						Group 66 110 (m) 39% (f) 61%	Group 76 24 (m) 78% (f) 22%	Group 86 35 (m) 68% (f) 32%	Group 96 19 (m) 59% (f) 41%		188	6.4%
Column Totals	521 17.8%	379 12.9%	263 8.9%	685 23.4%	159 5.4%	506 17.3%	96 3.3%	87 2.9%	49 1.6%	185 6.3%	2,930 100%	100%

The information in Table 21 suggests that 49% of all graduates who were employed in full-time positions in the reference week were employed at or above Skill Level A. The information in Table 21 re-affirms the disproportional distribution of employment by gender within 20 of the 26 major occupational groups.

Employer Demands

Among all graduates who were employed in the reference week, 57% were in positions for which a specific level of education was required; however, 23% of those positions required a level of education below that of the graduate in the position.

Sixty-four percent of employed graduates were in positions for which an employer had specified a certain field of study as essential. As one would expect, the percentage of graduates in positions requiring a specific field of study increase as the level of degree received increases. For example, while 60% of employed graduates at the bachelor's level were in positions specifying a particular field of study, 85% of those with an earned doctorate were in such positions. Overall, the data collected suggest that over 90% of employed graduates at all levels other than Certificate (1) who were in positions requiring a specific field of study were actually working in positions requiring their FOS.

As would be expected, given the percentage of graduates at the bachelor's level, the majority (63%) of graduates were employed in positions for which no prior work experience was considered essential.

While work experience was not required for the majority of positions held, information provided by graduates indicated that the majority, 73% overall, entered the work place with prior work experience. Interestingly, only 56% who were in positions requiring prior experience considered that experience to be essential for the position. It would appear that graduates and the people who employ them have somewhat different perceptions about work experience required for different positions.

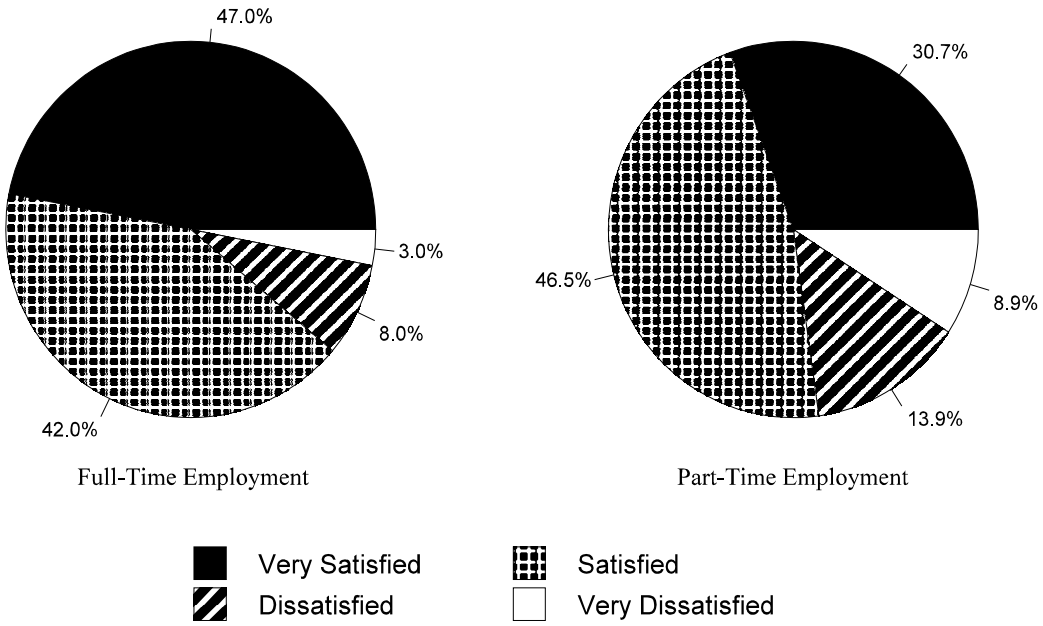
Seventy-six percent (76%) of graduates completed their degree requirements prior to the start of their first job following graduation. This statistic varies in relation to the degree completed. For example, those who received a Certificate (2) and a degree at the master's level were more likely to indicate that they had not completed their program before accepting employment, suggesting that these programs were completed in conjunction with employment.

Satisfaction with Employment

Overall, the majority of graduates were satisfied with the employment position held in the reference week, but the level of satisfaction varied in relation to the full-time or part-time status of the position. This information is presented in the chart below.

Satisfaction with Employment

(Weighted Data)



In reviewing the data in relation to the gender of the graduate, no statistically significant differences were observed in the expressed levels of job satisfaction.

Further review of the expressed levels of job satisfaction indicated that the overall level of job satisfaction increased as the degree level increased.

Without attempting to speculate as to contributing factors, it is noted that married graduates expressed the highest level of job satisfaction compared with all other demographic sub-groups.

Perceived Importance of Work in a Related Field

The majority of those who received degrees or certificates above or below the bachelor's level perceived that it would be important for them to find work related to their FOS. Table 22 summarizes the opinions expressed.

TABLE 22
IMPORTANCE OF WORK IN AN AREA RELATED TO FOS BY DEGREE RECEIVED
(Weighted Data)

	Cert. (1)	Cert. (2)	BA-Level	First Profess.	Cert. (3)	Master's	Earned Doctorate
Level of Importance							
Very Important	51%	53%	44%	57%	60%	50%	65%
Somewhat Important	37%	36%	36%	34%	40%	37%	29%
Not Very Important	9%	9%	16%	7%	–	11%	6%
Not at All Important	4%	2%	4%	2%	–	2%	–

Based on the information in this chapter:

- the 1995 graduates of Maritime universities are more likely to be employed than unemployed;
- overall, 96% have held at least one job since graduation and a significant percentage of those not working in the reference week have returned to school;
- while there is a need for concern about the under employment of graduates at the bachelor's level across the region, graduates in other areas are more likely to be employed and more likely to be in employment situations which are related to their degree;

- graduates in health-related studies have the highest level of full-time employment (84%) while those in fine and applied arts and humanities have the lowest levels of full-time employment (59%);

- graduates who received one of the certificates offered through Maritime universities had high rates of full-time employment and had employment in fields related to their area of study; this should be expected since most of these graduates are older, more likely to have been employed prior to enrolment and more likely (especially for those receiving a Certificate (3) to be continuing employment over the course of study;

- gender-based differences related to both FOS and the types of employment obtained continue to be evidenced, regardless of the changes in enrolment patterns for women in non-traditional fields;

- the three provinces had statistically significant differences in the employment rate for their university graduates, with graduates in New Brunswick having the highest unemployment rate at 18.5%, compared to 14% for graduates in Prince Edward Island and 12.5% for graduates in Nova Scotia; and

- the three provinces had the same percentages for graduates returning to school (4% overall), graduates disabled or retired (1%) and graduates not employed and not seeking employment (3%).

The chapter which follows explores the work situation for 1995 graduates in relation to their earnings from employment.

Chapter 5 Earnings of 1995 Graduates

While the 1995 graduate may often be under employed, they are not necessarily under paid. On average, a bachelor's level graduate, working in a full-time position, earns approximately $480 dollars per week or $24,960 per year. Although many graduates have prior work experience, more are employed in positions for which such experience is not required.

Wages increase in relation to the degree received, suggesting that a university education continues to be a good financial investment from a wage perspective.

As difficult as it may be to justify or explain, women, overall, continue to earn less than men, averaging approximately 84% of the average wage of a male graduate, if both are employed in full-time, comparable positions (at the two-digit NOC classification).

In 1996, the employed graduates in the Class of 1995, working in a position on a full-time basis, had an average gross weekly wage of $536.93. Weekly average wages for full-time positions ranged from $ 75.00 to $3,000. It is noted that 16 graduates reported working on a full-time basis, in a paid position with a gross income of $100 per week or less. A review of the data indicates that these are valid responses. For example, some were teachers working in a developing country, others were working a full-work week but paid on a per diem basis and others were self-employed and drawing limited amounts from that employment. These amounts were included in the calculation of the overall, average wage.

The employed graduate working in a part-time position in the reference week had an average gross weekly wage of $240.35.

Table 23 summarizes the overall wage patterns for employment in the reference week by gender. Based on the information presented the median wage for females in full-time employment is 83% of the median wage for males in full-time positions. In the survey of the Class of 1986, re-visited in 1991, the reported median income for females in full-time positions was 86% of the male median, down from 93% at the time of initial contact in 1988.

TABLE 23
WEEKLY GROSS EARNINGS IN THE REFERENCE WEEK
(Weighted Data)

Average Wages	Overall	Females	Males
Full-Time Employment			
Mean	$ 536.93	$ 492.51	$ 592.20
Median	$ 475.00	$ 425.00	$ 500.00
Mode	$ 500.00	$ 500.00	$ 500.00
Part-Time Employment			
Mean	$ 241.58	$ 230.83	$ 269.75
Median	$ 200.00	$ 200.00	$ 200.00
Mode	$ 200.00	$ 200.00	$ 200.00

Table 24 presents the reported wages for full-time employment in relation to the degree received.

TABLE 24
WEEKLY GROSS EARNINGS (FULL-TIME EMPLOYMENT) BY DEGREE RECEIVED
(Weighted Data)

Average Wages	Overall	Females	Males
Degree Granted			
Overall for Graduates	$ 536.93	$ 492.51	$ 592.20
Certificate (1)	$ 421.08	$ 343.52	$ 482.59
Certificate (2)	$ 540.10	$ 554.67	$ 517.51
Bachelor's Level	$ 479.66	$ 437.25	$ 535.89
First Professional	$ 656.50	$ 589.17	$ 710.20
Certificate (3)	$ 781.15	$ 278.50 (*)	$ 1,238.67
Master's Level	$ 846.32	$ 812.24	$ 881.94
Earned Doctorate	$ 829.63	$ 1,066.67	$ 775.24

(*) The information in this row is correct; differences result from the types of certificates received and the career choices of the five individuals involved; the data indicate that men and women made very different career choices.

Overall, as confirmed in other graduate follow-up surveys, increased levels of education result in increased earnings. The differences between wages for males and females appear to be reduced at the master's level and are reversed at the level of an earned doctorate.

Table 25 presents information on the weekly wages for full-time employment in relation to the Major Groups on the NOC matrix for occupations. A review of the information in this table, along with the information in Table 23, confirms the overall differences in the wages paid to men and women who graduated from a Maritime university in 1995.

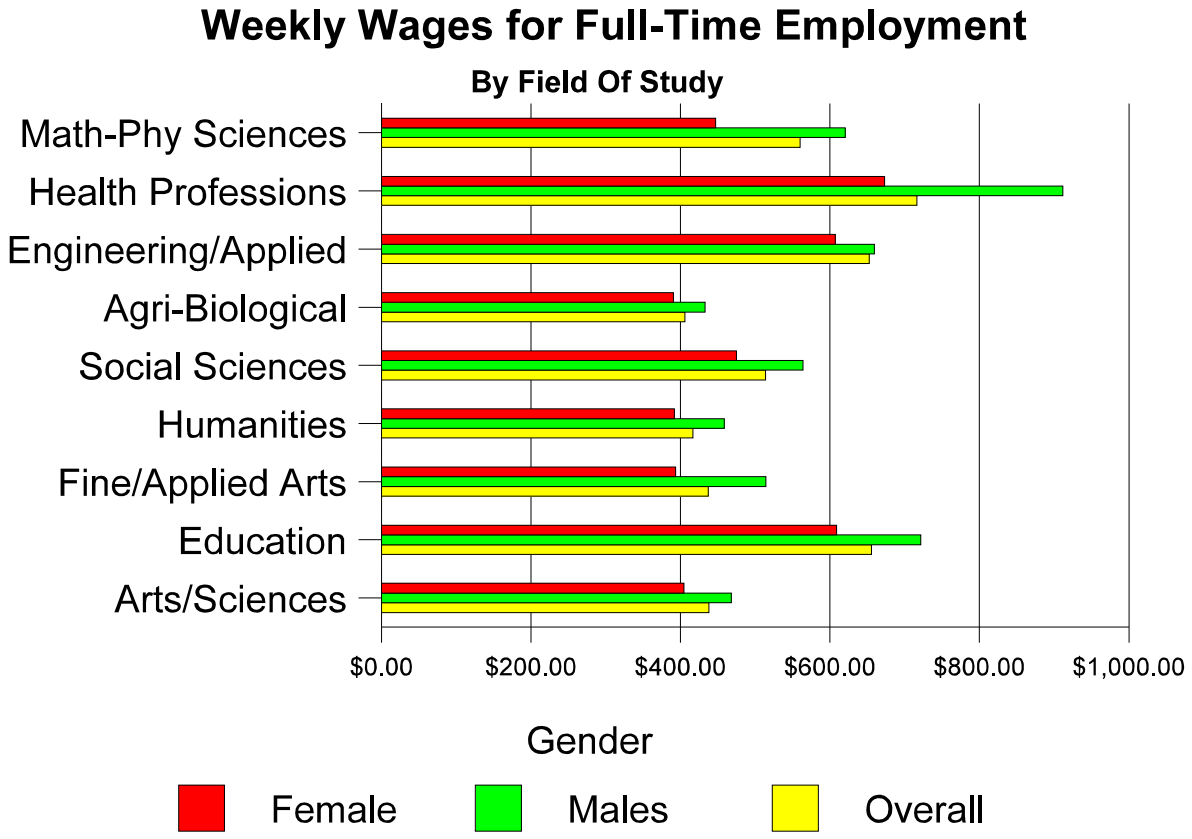
TABLE 25

AVERAGE GROSS, WEEKLY WAGES FOR FULL-TIME EMPLOYMENT

WITHIN MAJOR OCCUPATIONAL GROUPS BY GENDER

NOC OCCUPATIONAL GROUPS												
SKILL LEVEL	1 Business, Finance/ Administration	2 Natural and Applied Sciences	3 Health	4 Soc. Sci, Education, Govt, Religion	5 Art, Culture, Recreation and Sport	6 Sales and Service	7 Trades, Transport, Equipment Operators	8 Occ. Unique to Primary Industry	9 Occup. Unique: Processing, Manufact-urig, Utilities	Management	Row Totals	Row %
										Group 00 (m)$1,134 (f) $ 750 Groups 01-09 (m) $746 (f) $551	4 181	.1% 6.1%
A	**Group 11** **(m)$628** **(f) $531**	**Group 21** **(m)$722** **(f)$556**	**Group 31** **(m)$922** **(f) $735**	**Group 41** **(m)$676** **(f)$604**	**Group 51** **(m)$ 514** **(f)$505**						**1,249**	**42.3 %**
B	**Group 12** **(m) $584** **(f) $481**	**Group 22** **(m) $534** **(f) $443**	**Group 32** **(m)----** **(f) $439**	**Group 42** **(m) $517** **(f) $430**	**Group 52** **(m)$447** **(f) $333**	**Group 62** **(m)$516** **(f)$459**	**Group 72/73** **(m)$569** **(f) $441**	**Group 82** **(m) $891** **(f) $533**	**Group 92** **(m) $479** **(f) $500**		**661**	**22.6 %**
C	**Group 14** **(m) $446** **(f) $406**		**Group 34** **(m)$372** **(f) $296**			**Group 64** **(m)$430** **(f) $314**	**Group 74** **(m) $455** **(f) $311**	**Group 84** **(m) $487** **(f)$350**	**Group 94/95** **(m) $549** **(f)$353**		**647**	**22.1 %**
D						**Group 66** **(m)$295** **(f)$305**	**Group 76** **(m) $480** **(f) $330**	**Group 86** **(m) $427** **(f) $416**	**Group 96** **(m) $455** **(f)$297**		**188**	**6.4%**
Column Totals	**521**	**379**	**263**	**685**	**159**	**506**	**96**	**87**	**49**	**185**	**2,930**	**100 %**

The chart which follows presents a summary of the full-time earnings for the major fields of study for graduates. Overall, patterns related to wages earned by graduates from Maritime universities are consistent with the patterns reported in the most recent follow-up survey released by Statistics Canada, with consideration of the need for adjustments relative to the economic differences between the Maritime region and Canada as a whole.



	Arts/Sc	Educat	Fine/A	Human	Social	Agri-Bi	Engine	Health	Math-P
Overall	$438.1	$655.7	$437.3	$416.7	$513.9	$406.0	$652.8	$716.4	$560.0
Males	$467.9	$721.4	$514.2	$458.6	$564.1	$432.7	$659.4	$911.4	$620.5
Femal	$404.8	$609.0	$393.4	$391.9	$474.7	$390.3	$606.9	$673.3	$447.0

Chapter 6 Mobility of Graduates

Much has been written about the "brain drain" from the Maritime Provinces. In fact, while Nova Scotia is experiencing a greater loss of graduates than the other provinces, overall one has to recognize that 44% of the people who left the region following graduation did not live in the region before enrolment.

Much relocation of graduates involved movement within the three provinces rather than relocation to other parts of Canada.

Foreign students who enrol in a Maritime university are twice as likely to remain in Canada as they are to return to the pre-enrolment residence.

Maritime students who relocate to other parts of Canada following graduation do not reap significant economic benefits from relocation: they are not more likely to be employed and only slightly more likely to earn more money per week, on average than graduates who remained in the region.

The Survey was designed to provide MPHEC with information on the overall mobility of graduates following receipt of a degree. The design also provided for the collection of information which would produce a profile of non-residents who chose to complete their university education at a Maritime university as well as a profile of those who chose to relocate to other areas following the completion of the program of study.

Universities within Nova Scotia have the highest percentage of graduates who were not residing in the province prior to enrolment. A summary of the pre-enrolment residence of all graduates is presented in Table 26.

TABLE 26
PRE-ENROLMENT RESIDENCE OF GRADUATES
(Weighted and Unweighted Data)

PRE-ENROLMENT RESIDENCE	Overall (weighted)	Location of University		
		PEI	NB	NS
Newfoundland	4%	1%	3%	5%
Prince Edward Island	7%	**80%**	3%	4%
Nova Scotia	45%	6%	8%	**66%**
New Brunswick	29%	5%	**77%**	7%
Quebec	2%	2%	3%	2%
Ontario	7%	2%	4%	8%
Manitoba	<1%	<1%	<1%	<1%
Saskatchewan	<1%	<1%	-	<1%
Alberta	<1%	<1%	<1%	1%
British Columbia	1%	<1%	<1%	1%
Yukon/NWT	<1%	-	<1%	-
Outside Canada	3%	2%	2%	4%
Total (rounded)	100%	100%	100%	100%

The information in Table 26 indicates that 80% of the graduates in PEI were residents of PEI prior to enrolment. Comparable figures for New Brunswick and Nova Scotia are 77% and 66% respectively.

Approximately 3% (n=143) of the graduates interviewed resided outside Canada prior to their enrolment. Analysis of the information collected from foreign students has produced the profile which follows.

- Three percent (3%) enrolled at UPEI, 15% enrolled at universities in New Brunswick and the balance (82%) enrolled at universities in Nova Scotia.

- The majority (83%) of the graduates completed their programs on a full-time basis;

- Forty-seven (47%) were males and 53% were females;

- The majority (71%) received a bachelor's level degree, 17% received a master's level degree, 5% received the first professional degree, 5% received an earned doctorate and 2% were enrolled in one of the certificate programs.

- Forty-four percent (44%) were students in the 12 months before enrolment and 40% indicated that the primary activity in this period involved employment. The percentage employed in the 12 months before enrolment was higher than the average percentage (25%) reported by graduates residing in Canada prior to enrolment.

- Ninety-three percent have held at least one employment position since graduation. In the reference week, 71% were employed in full-time positions, 8% were employed in part-time positions, 3% were awaiting the start of employment, 7% had returned to school, 4% were not seeking employment and 7% were actively seeking employment.

- These graduates enrolled in a wide range of fields of study. For example, 14% studied in the area of business/commerce/finance, 8% in psychology, 4% in general biology, 2% in veterinary medicine and 4% in computer science. No more than 4% of these graduates was represented in any other FOS.

- Forty percent (40%) of graduates from outside Canada indicated personal responsibility for educational financing (lower than the average of 64% reported for the overall population - see Chapter 9). Sixty percent (60%) received a scholarship or bursary. Twenty-nine percent borrowed money through a government student loan program and 18% borrowed through other sources. The incidence of borrowing through a government loan was lower than reported for the overall sample (49%).

- Following graduation, 38% returned to a residence outside Canada and 62% re-located to a residence in Canada. Thirty-two percent (32%) resided in Nova Scotia, 11% in New Brunswick, 1% in Prince Edward Island, 8% in Ontario, 3% in British Columbia and the balance in other provinces.

  The reference week activities for those foreign residents who chose to remain in Canada following graduation were as follows:

  - 64% were employed full-time;
  - 11% were employed part-time;
  - 2% were awaiting a job start;
  - 12% were unemployed and seeking employment;
  - 6% were in school; and
  - 6% were not seeking employment.

No clear pattern of employment was identified for those graduates who chose to reside in Canada. For example, 7 were employed in engineering- related occupations, 6 in computer science and 4 were in teaching. The average weekly salary for a non-resident choosing to live in Canada was $601 per week.

Among those who chose to reside in Canada following graduation, 62% received a bachelor's level degree, 20% received a master's level degree, 7% earned a doctorate, and 6% received a first professional degree.

The points noted and further analysis of the information provide the basis for the following observations:

- other than issues related to the financing of education and pre-enrolment residence, the foreign student graduate is quite similar to the graduate who was a resident of Canada at the time of enrolment; and

- those who resided outside Canada before enrolment were more likely to remain in Canada following degree completion than to return to a residence outside Canada; approximately 40% chose to remain in one of the Maritime Provinces.

In addition to the material related to non-residents of Canada, Baseline also analyzed information collected from all graduates who chose to reside in a province other than where the degree was completed. Overall, 811 Canadian residents who graduated from Maritime universities chose to relocate to another province following graduation. Within this group, approximately 56% of those who relocated had been residents of the Maritime provinces prior to enrolment:

- 28% were residing in Nova Scotia prior to enrolment;
- 15% were residing in New Brunswick;
- 3% were residents of Prince Edward Island; and
- 44% were residing outside the Maritime provinces prior to enrolment.

Table 27 presents a summary of residence patterns for Canadian residents who relocated to another province following graduation.

TABLE 27
POST GRADUATION RESIDENCE BY PRE-ENROLMENT RESIDENCE
FOR CANADIAN RESIDENTS
(Weighted Data, n=811)

Post-Graduation Residence	Pre-Enrolment Residence									
	NFLD	PEI	NS	NB	PQ_	ON	MN	SK	AB	BC
Newfoundland	84%	5%	11%	6%	2%	1%	–	–	–	–
Quebec	<1%	4%	6%	16%	76%	2%	–	–	–	–
Ontario	7%	43%	48%	46%	20%	90%	22%	17%	14%	14%
Manitoba	<1%	4%	1%	<1%	–	<1%	56%	–	–	–
Saskatchewan	<1%	3%	2%	2%	–	–	–	83%	–	–
Alberta	3%	18%	16%	16%	2%	2%	11%		62%	–
British Columbia	4%	13%	16%	16%	–	4%	11%		24%	86%
Totals	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Among the graduates who were residing in Prince Edward Island prior to enrolment and chose to relocate following graduation (n=105):

- 73% completed a bachelor's level degree;
- 4% had completed a master's level degree; and
- 7% had completed the first professional degree.

- 62% were employed full-time in the reference week, 8% were employed part-time, 6% were waiting for a job to start, 12% were in school, 9% were seeking employment and 4% were not seeking employment;

- the relocation distance is not as great for PEI graduates as for those from New Brunswick and Nova Scotia: approximately 35% of Island graduates relocated to Nova Scotia and 16% relocated to New Brunswick, although 11% did relocate to Alberta;

- some of the fields of study for those who relocated included education (8%), psychology (14%), business/commerce (11%), engineering (10%), animal health/science (4%) and veterinary medicine (3%);

- occupations in which former residents were employed in other provinces/areas included college instructors (6%) and retail sales (6%).

Among the graduates who were residing in Nova Scotia prior to enrolment and chose to relocate following graduation (n=325):

- 71% completed a bachelor's level degree;
- 13% had completed a master's level degree; and
- 10% had completed the first professional degree;
- 72% were employed full-time in the reference week, 7% were employed part-time, 3% were waiting for a job to start, 7% were in school, 7% were seeking employment and 4% were not seeking employment;

- some of the fields of study for those who relocated included education (11%), english/literature/history (9%), business/commerce (8%), engineering (5%), nursing (3%), computer science (4%), law (3%), medicine (3%),

- occupations in which former residents were employed in other provinces/areas included nursing (4%), engineering (6%), retail sales (5%), teaching (4%) and computer programming (2%).

Among the graduates who were residing in New Brunswick prior to enrolment and chose to relocate following graduation (n=222):

- 83% completed a bachelor's level degree;
- 7% had completed a master's level degree; and
- 6% had completed the first professional degree.

- 63% were employed full-time in the reference week, 11% were employed part-time, 4% were waiting for a job to start, 10% were in school, 9% were seeking employment and 2% were not seeking employment;

- some of the fields of study for those who relocated included engineering (11%), business/commerce/(9%), biology (8%) and nursing (6%); and

- occupations in which former residents were employed in other provinces/areas included nursing (8%), engineering (6%), retail sales (5%), teaching (4%) and computer programming (2%).

Based on the information presented , relocation did not appear to make significant improvements, in either the rate of employment or in the type of work obtained, for former Maritime residents.

Table 28 presents a summary of the relocation patterns for residents of the three provinces who chose to relocate to other areas.

TABLE 28
POST GRADUATION RESIDENCE OF FORMER MARITIME RESIDENTS
(Unweighted Data)

Post Graduation Residence	PEI (n=105)	NB (n=222)	NS (n=325)
Newfoundland	2%	3%	8%
PEI	-	6%	6%
Nova Scotia	35%	32%	-
New Brunswick	16%	-	17%
Quebec	1%	8%	4%
Ontario	19%	24%	33%
Manitoba	1%	<1%	<1%
Saskatchewan	2%	<1%	1%
Alberta	11%	6%	11%
British Columbia	6%	10%	11%
Outside Canada	7%	10%	10%

The information in Table 28 suggests that historical migration patterns continued for some graduates but the more dominant pattern suggests movement among the Maritime provinces. While one-third of those who relocated following graduation in Nova Scotia moved to Ontario, one-third of New Brunswick graduates who relocated moved to Nova Scotia as did approximately one-third of the graduates who were former residents of PEI.

Chapter 7 Pre-University Experience of Graduates

In the 12 months before enrolment in a bachelor's level university program, the majority of graduates were attending a secondary education program.

Those who entered a master's level program, certificate or professional degree program were more likely to have spent the 12 months before enrolment working.

At the time of enrolment, graduates considered acquisition of the skills related to jobs, income advancement, in-depth knowledge in a field of study and self-improvement to be relatively equal in overall importance.

In order to provide decision-makers with an overall perspective on the Class of 1995, graduates were asked to provide information about previous educational experiences, primary activities in the 12 months before enrolment and assessments related to their expectations at the time of enrolment.

Educational Background

In the 12 months before enrolment in a university program, the primary activity for the majority of graduates (61%) was completing secondary school and approximately 9% were attending school and working. An additional 25% indicated that the primary activity before enrolment involved work and the balance (5%) cited other situations such as personal or family responsibilities and illness.

As would be expected, the type of primary activity prior to enrolment varied in relation to the degree program, as demonstrated in Table 29.

The information in Table 29 indicates that the majority who enrolled in programs leading to a bachelor's degree or lower were likely to enrol directly from another education program and the majority who enrolled at or above the master's level entered from a work situation.

TABLE 29
PRIMARY ACTIVITY IN 12 MONTHS BEFORE ENROLMENT
(Weighted Data)

ACTIVITY	Cert. (1)	Cert. (2)	Bachelor's	First Profess.	Cert. (3)	Master's	Earned Doctorate
Attending School	55%	52%	68%	63%	20%	24%	45%
School/Work	5%	6%	10%	3%	-	5%	6%
Working	34%	37%	17%	30%	80%	67%	49%
Other	6%	5%	5%	4%	-	4%	-

Graduates provided information on other levels of education completed prior to enrolment. It is noted that some graduates tended to cite the highest level of prior education completed rather than all specific levels of education. Analysis of the information collected provided the basis summary which follows.

- Among all graduates who completed a bachelor's level degree in 1995, 9% completed a prior bachelor's degree and 4% had completed a community college diploma or certificate;

- Among graduates completing a master's level degree in 1995, 93% had completed a prior bachelor's degree, 6% had completed a Certificate (1) , 2% a prior professional degree and 6% had completed a prior master's.

- Among those completing a Certificate (1) in 1995, 26% had previously completed a bachelor's degree as had 89% of those who completed a Certificate (2).

- Within the group receiving an earned doctorate, 68% had completed a prior master's degree.

Examples of FOS for those graduates who received a Certificate (1) in 1995 and had completed a prior bachelor's degree included gerontology (10%), business/commerce (20%), social work (5%), health administration (5%), counselling and guidance (5%), criminology (4%) and nursing (3%).

Examples of FOS for those graduates who received their second master's degree in 1995 included education administration (15%) or education (7%), business/commerce (11%) and social work (11%).

Examples of FOS for those graduates who received their second bachelor's degree in 1995 included education programs (35%), social work (6%), business/commerce (3%) and law (3%).

It may be of interest to note that the patterns for those who completed a degree program in 1995 and had previously completed a certificate or diploma program through a community college were somewhat

unclear. For example, while the majority (72%) completed a bachelor's level degree in 1995, 12% completed a master's, 1% completed an earned doctorate and 12% completed a Certificate (2). These graduates were more likely to have completed a degree within the arts and science area, but there were no particular patterns related to a single or dominant field of study; if anything, the FOS for these graduates approximated the types of FOS reported for those with a prior Certificate (2) who completed a bachelor's degree in 1995.

The only statistically significant difference noted in the comparison of prior education experience for graduates was that Nova Scotia universities had the highest percentage (26%) of graduates who had completed another bachelor's level degree before enrolment for the program completed in 1995. This would appear to be directly related to the types of degrees granted in the three provinces.

Expectations at the Time of Enrolment

All graduates were asked to recall their perceptions at the time of enrolment about the importance of: acquisition of the skills needed for a particular job; in-depth knowledge in a particular field of study; skills leading to self-improvement; and the opportunity to improve their chances for a good income.

Given the responses provided, as demonstrated in the tables which follow, while it would be assumed that graduates would have an interest in acquiring in-depth knowledge in a field of study, it is suggested that one may also assume that those enroling in university also place significant emphasis on acquiring job-related skills and on acquiring the skills needed to earn a good income at the time of enrolment.

TABLE 30
PERCEIVED IMPORTANCE OF POTENTIAL OUTCOMES AT TIME OF ENROLMENT
(Weighted and Unweighted Data)

Potential Outcome/Importance	Overall (Weighted)	Cert. (1)	Cert. (2)	Bachelor's	First Professional	Cert. (3)	Master's	Earned Doctorate
To Acquire Skills for a Particular Job								
Very Important	61%	80%	60%	60%	85%	40%	55%	57%
Somewhat Important	29%	20%	29%	29%	13%	40%	36%	36%
Not Very Important	7%	–	8%	8%	1%	20%	7%	7%
Not at All Important	3%	–	3%	3%	<1%	–	2%	–
To Improve the Chances of a Good Income								
Very Important	53%	71%	47%	57%	43%	60%	38%	26%
Somewhat Important	33%	26%	37%	32%	39%	20%	36%	52%
Not Very Important	12%	4%	12%	10%	14%	20%	22%	16%
Not at All Important	2%	–	4%	1%	4%	–	4%	6%
To Acquire In-Depth Knowledge in a FOS								
Very Important	56%	70%	59%	53%	74%	41%	60%	87%
Somewhat Important	38%	28%	36%	39%	22%	59%	37%	13%
Not Very Important	6%	1%	5%	7%	4%	–	2%	–
Not at All Important	<1%	1%	<1%	<1	–	–	1%	–
To Improve Oneself in General								
Very Important	59%	54%	58%	59%	50%	61%	63%	61%
Somewhat Important	36%	40%	38%	36%	42%	39%	33%	29%
Not Very Important	4%	5%	4%	4%	6%	–	4%	10%
Not at All Important	<1%	1%	–	1%	2%	–	–	–

Chapter 8 The University Experience

The Class of 1995 expressed a high degree of satisfaction with the facilities, services and faculty at universities in the Maritime provinces.

According to graduates, a university education is well worth the required investment of time and money.

It is interesting to note that graduates perceive themselves to have improved their skills in writing, communication, independent thinking and the ability to make decisions, but most also perceive that a university education did not contribute to extensive development of skills in math. If problem-solving and decision-making skills of graduates are limited to a qualitative analaysis, as may be the case with the absence of improvement in mathematical (quantitative) skills, there has to be concern about the basis for the assessment of improvements in decision-making.

Graduates also believe that the university experience has provided increased knowledge about career opportunities to some (55%) or to a great extent (39%). Interestingly, perceptions of increased knowledge about employment opportunities were found to be unrelated to the actual employment situation in the reference week.

Seventy-four percent (74%) of the graduates attended university as full-time students, 18% attended on a part-time and full-time basis and 8% attended only on a part-time basis.

Those who studied exclusively on a part-time basis were older, on average 41 years of age. Part-time study was undertaken because of other commitments to full-time work (74%), part-time work (9%), lack of adequate finances (8%), family responsibilities (12%), lack of availability of the FOS on a full-time basis (4%) or other reasons. Part-time study was more frequently associated with studies in education.

Approximately 30% of the graduates who received a degree from a Maritime university in 1995 began to accumulate credits toward the degree prior to 1990.

Graduates were asked to reflect on the university experience while following a program and evaluate various aspects of the services provided by the university attended. Graduates were also asked about the perceived value of the investment of time and money required and about the skills which were developed as a result of the university experience.

In measuring the graduates' level of satisfaction or perceptions about the value or extent of an outcome, graduates used a four-point scale. The lower the scale score, the higher the level of satisfaction or perceived impact.

Satisfaction with Facilities

Overall, the majority of students were very (22%) or somewhat (62%) satisfied with the facilities such as libraries, laboratories and computing resources at the university attended. The mean ranking score was 1.88. There was no significant differences between the expressed levels of satisfaction by graduates from each of the three provinces. Expressed levels of satisfaction did not vary in relation to the degree or FOS.

Satisfaction with Class Sizes

The majority of graduates were very (49%) or somewhat (44%) satisfied with the size of the classes offered at the Maritime universities. As would be the logical expectation, the expressed level of satisfaction with class sizes increased as the level of degree received increased. Graduates in New Brunswick expressed a higher level of dissatisfaction with the size of classes offered, but the difference was more of degree than substance. For example, the average scale score for all graduates was 1.5 and it was 1.6 for New Brunswick graduates, 1.47 for PEI graduates and 1.57 for graduates in Nova Scotia.

Higher levels of satisfaction were indicated by responses from graduates in Arts and Sciences - General and Fine and Applied Arts and lower levels of satisfaction were expressed by graduates in Agriculture and Biological Sciences and Engineering and Applied Sciences.

Satisfaction with Faculty

Graduates were asked to indicate their level of satisfaction or dissatisfaction with the services provided by faculty through two measures: expressed satisfaction with the overall quality of teaching and satisfaction with access to faculty.

Overall, 31% of graduates were very satisfied with the quality of teaching and 61% were somewhat satisfied. The mean score resulting from the use of the four-point scale was 1.78.

Expressed levels of satisfaction with the overall quality of teaching were highest for those who received a Certificate (2) with 80% being very satisfied, and lowest for graduates receiving an earned doctorate with 26% being very satisfied.

The level of satisfaction (as indicated by the mean scale score in parentheses) with the overall quality of teaching was higher for graduates in Humanities (1.67) and lower for graduates in Engineering and Applied Sciences (1.93) and Health Professions (1.86).

When asked to express the level of satisfaction or dissatisfaction with the access to faculty during university, 52% of graduates were very satisfied and 40% were somewhat satisfied. The mean scale score for satisfaction with access was 1.56.

While the variations in relation to satisfaction with access and degree and FOS were not statistically significant, it is interesting to note that graduates in Humanities expressed higher than average satisfaction (1.49) while graduates in Engineering and Applied Sciences (1.66) and Health Professions (1.69) expressed lower levels of satisfaction.

While some areas are stronger than others, overall, one can conclude that the graduate population was satisfied with both the quality of teaching available and the access to faculty over the course of the university program.

Perceived Value of Required Investments

In general, one can make the observation that 1995 graduates believe that the university experience was worth the required investment of time and money.

Overall:

- 44% of graduates indicated that they were very satisfied and 48% were somewhat satisfied that the university program was worth the investment of the time; and

- 34% of graduates indicated that they were very satisfied and 49% somewhat satisfied that the university program was worth the financial investment.

The overall assessment of the value of the investment of personal time and the financial investment varied somewhat across sub-groups. Perceptions about the value of the financial investment were statistically significant while the others were not. As one might expect, those who were employed on a part-time basis or unemployed were less satisfied, overall with the value of the financial investment in a university education. This information is summarized in Table 31.

TABLE 31
SATISFACTION WITH TIME AND FINANCIAL INVESTMENT IN A UNIVERSITY EDUCATION
(Weighted Data)

	Reference Week Activity						
Level of Satisfaction	Employed Full-time	Employed Part-time	Awaiting Start	Seeking Employment	Not Seeking	In School	Other
Time Investment*							
Very Satisfied	46%	38%	36%	38%	48%	51%	68%
Satisfied	47%	53%	57%	51%	43%	44%	32%
Dissatisfied	6%	8%	7%	7%	8%	4%	-
Very Dissatisfied	1%	1%	-	4%	1%	1%	-
Financial Investment*							
Very Satisfied	36%	27%	36%	24%	39%	45%	54%
Satisfied	50%	49%	50%	50%	42%	42%	41%
Dissatisfied	12%	20%	11%	19%	16%	12%	5%
Very Dissatisfied	2%	4%	3%	7%	3%	1%	-

(*) Statistically significant differences.

Perceptions of Outcomes of a University Education

Graduates were asked for their assessments of the impact of a university education in terms of skill development and awareness of employment opportunities.

Skill Development

Graduates were asked for their assessment of the extent to which a university education contributed to the development of writing, math, communication and decision-making skills as well as the ability to think independently and critically. Table 32 presents a summary of the assessments provided in relation to the degree received.

In an environment which is placing increasing emphasis on technological skills, many of which may be related to skills based in mathematics, it is surprising to observe the perceived lack of skill development in math. While math skills may be required in many areas, the only fields of study in which significant development of these skills appears to take place are Engineering and Applied Sciences and Mathematics and Physical Sciences.

The graduates' assessment of the extent to which writing skills have been developed vary in relation to the FOS. For example, development is less extensive in Engineering, physical sciences and Fine and Applied Arts and most extensive in Humanities.

The information in Table 32 also suggests that most graduates perceive a university making a significant contribution to development of the ability to think independently and critically and to the expansion of decision-making skills.

TABLE 32
GRADUATES PERCEPTION OF EXTENT OF SKILL DEVELOPMENT THROUGH A UNIVERSITY EDUCATION
(Weighted Data)

	Reference Week Activity						
Extent of Skill Development	Certificate (1)	Certificate (2)	Bachelor's Degree	First Professional	Certificate (3)	Master's Degree	Earned Doctorate
Writing Skills (*)							
Great Extent	28%	23%	38%	23%	60%	36%	52%
Some Extent	54%	46%	45%	45%	20%	46%	39%
Not Very Much	16%	25%	15%	27%	20%	14%	6%
Not At All	2%	6%	2%	5%	–	4%	3%
Math Skills (*)							
Great Extent	33%	34%	21%	2%	–	10%	23%
Some Extent	48%	25%	32%	15%	20%	21%	29%
Not Very Much	16%	14%	22%	19%	40%	21%	16%
Not At All	3%	27%	25%	64%	40%	48%	32%
Communication Skills (*)							
Great Extent	36%	29%	46%	52%	41%	41%	48%
Some Extent	57%	53%	44%	39%	59%	48%	42%
Not Very Much	7%	15%	8%	7%	–	8%	10%
Not At All	–	3%	2%	2%	–	3%	–
Independent Thinking (*)							
Great Extent	49%	45%	60%	59%	61%	55%	68%
Some Extent	45%	47%	36%	36%	39%	39%	32%
Not Very Much	5%	6%	3%	4%	–	5%	–
Not At All	1%	2%	1%	1%	–	1%	–
Decision Making							
Great Extent	45%	40%	44%	47%	61%	35%	45%
Some Extent	49%	51%	48%	46%	39%	54%	49%
Not Very Much	5%	8%	7%	5%	–	9%	3%
Not At All	1%	1%	1%	2%	–	2%	3%

(*) Statistically significant differences.

Knowledge About Career Opportunities

While many graduates consider it important that a university education provides the skills required for employment, approximately one-third indicated that his/her university program did not provide extensive knowledge about career opportunities. The perceptions vary in relation to FOS and degree received, as indicated in Table 33.

TABLE 33
EXTENT OF KNOWLEDGE PROVIDED ABOUT CAREER OPPORTUNITIES (*)
(WEIGHTED DATA)

	Reference Week Activity						
	Certificate (1)	Certificate (2)	Bachelor's Degree	First Professional	Certificate (3)	Master's Degree	Earned Doctorate
Great Extent	39%	16%	16%	31%	–	13%	14%
Some Extent	55%	39%	47%	46%	80%	37%	43%
Not Very Much	5%	32%	29%	20%	20%	36%	40%
Not At All	1%	13%	8%	3%	–	14%	3%

(*) Statistically significant differences.

Interestingly, there appears to be no relationship between employment status of the graduate in the reference week and perceptions about the extent of knowledge provided about career opportunities.

Chapter 9 Financing A University Degree

Fifty-one percent of the Class of 1995 completed university with no debt load. For 49% who borrowed in order to finance a part of the cost, the debt load carried with the degree was about equivalent to the price of a used car - around $12,000.

In the period between graduation and contact for the survey, 4% who borrowed from government student loans had repaid the full debt and approximately 14% of the average debt outstanding per student loan had been repaid.

Financing appears to pose more significant, longer-term problems for those who borrowed in excess of $25,000 to finance a bachelor's level degree.

Approximately one-quarter of graduates experienced problems with debt repayment in the first year following graduation.

Within the overall population of graduates:

- approximately 64% claimed personal responsibility for the cost of his/her university education;
- 10% suggested financing had been a shared responsibility between the graduate and his/her parents;
- 20% indicated that the costs had been the sole responsibility of a parent or spouse; and
- 6% suggested that the costs had been covered by someone other than a graduate or a parent/spouse.

The overall patterns did not vary significantly in relation to the province in which the graduate completed his/her degree.

The only apparent variations in relation to the degree received indicated that graduates receiving a first professional or master's level degree were more likely to indicate personal responsibility for financing a university education while those who earned a doctorate degree were more likely to indicate that financing had been the responsibility of someone other than the graduate or a parent.

Graduates used the following sources in order to cover the cost of a university education:

- 52% had received a scholarship or bursary;
- 49% had borrowed money through a government student loan program;
- 12% received funding through an employer;
- 10% had borrowed money through a lending institution;
- 6% had participated in a co-op program; and
- 5% had borrowed money/obtained loans from family members.

The utilization of resources to finance a university education varied somewhat in relation to the degree received, but the pattern was not consistent. For example:

- 57% of those receiving a professional degree received a scholarship or bursary compared with 78% at the doctoral level and 54% at the bachelor's level;

- government loans were more likely at the professional degree level (69%) and bachelor's level (53%) and less likely at the doctoral (10%) and Certificate (1) level (35%);

- as one would assume, assistance from employers was more often associated with the master's and doctoral levels; and

- loans other than government loans were most often associated with a professional degree (25%).

The use of resources to finance a university education did not vary in relation to a graduate's province of study.

Government Student Loans

Approximately 49% of the graduates who received a degree from a Maritime university in 1995 used a government student loan to finance at least a portion of the cost. The term "government student loan" was used as a generic term without reference to a particular type of student loan.

The total amount borrowed ranged from $200 to $65,000, averaging $12,478 across the group that borrowed. The median amount borrowed was $11,000 and the mode was $10,000.

The amount of government loans borrowed and outstanding at each degree level is presented in Table 34.

TABLE 34
SUMMARY OF GOVERNMENT STUDENT LOANS
(Weighted Data)

Degree Received	Range of Borrowing	Mean	Median	Mode
Overall				
Amount Borrowed	$ 200 - $65,000	$ 12,478	$ 11,000	$ 10,000
Amount Outstanding	$ 0 - $65,000	$ 10,730	$ 10,000	$ 0
Certificate (1)				
Amount Borrowed	$ 600 - $24,000	$ 9,693	$ 10,000	$ 10,000
Amount Outstanding	$ 0 - $22,000	$ 8,759	$ 8,900	$ 9,000
Certificate (2)				
Amount Borrowed	$ 200 - $30,000	$ 9,519	$ 9,000	$ 10,000
Amount Outstanding	$ 0 - $29,500	$ 8,581	$ 7,000	$ 0
Bachelor's				
Amount Borrowed	$ 300 - $50,000	$ 12,581	$ 12,000	$ 11,000
Amount Outstanding	$ 0 - $45,000	$ 10,882	$ 10,000	$ 0
First Professional				
Amount Borrowed	$ 1,000 - $65,000	$ 15,793	$ 15,000	$ 15,000
Amount Outstanding	$ 0 - $65,000	$ 13,057	$ 12,000	$ 0
Certificate (3)				
Amount Borrowed	$ 5,000 - $35,000	$ 15,795	$ 7,000	$ 7,000
Amount Outstanding	$ 0	$ 0	$ 0	$ 0
Master's				
Amount Borrowed	$ 800 - $35,000	$ 10,833	$ 9,000	$ 10,000
Amount Outstanding	$ 0 - $33,000	$ 8,594	$ 7,300	$ 0
Earned Doctorate				
Amount Borrowed	$ 4,000 - $11,000	$ 7,710	$ 8,000	$ 8,000
Amount Outstanding	$ 0 -$11,000	$ 5,012	$ 4,000	$ 0

Among all graduates who borrowed through government student loans:

- 81% received a bachelor's level degree and 6% received a professional degree;
- 57% were females;
- 67% were employed on a full-time basis in the reference week, 11% were employed part-time, 3% were in school and the balance (19%) were not employed and not in school; and
- those employed full-time averaged $501.89 in the reference week and those employed part-time averaged $244.11.

Among those who borrowed $25,000 or more through a government student loan:

- 77% received a bachelor's level degree and 16% received a professional degree;
- 63% were females;
- 63% were employed on a full-time basis in the reference week, 16% were employed part-time, 3% were in school and the balance (18%) were not employed and not in school; and
- those employed full-time averaged $520.54 in the reference week and those employed part-time averaged $245.84.

Four percent (4%) of the graduates had repaid the entire amount of government student loans by the time of survey contact. Within this group of graduates (n=168), the amount borrowed ranged from $200 - $35,000, averaging $6,826 with a median of $5,000 and a mode of $3,000. Seventy-six percent (76%) were employed full-time in the reference week and 10% were employed part-time. Seventy-eight percent of the graduates within this group had received a bachelor's degree and 10% had received a master's degree.

At the time of survey contact, the average amount outstanding on the government student loans was $10,730, suggesting that approximately 14% of individual loans were paid back in the first year following graduation.

Twenty-two percent of those who borrowed through a government student loan reported difficulty in meeting the loan payments over a period of 2 months or more since graduation. Within this group, the average amount borrowed was $14,683 and the average amount outstanding was $13,461 suggesting that 8% of the outstanding loan had been repaid at the time of contact compared to 14% for the population as a whole.

Within the group which expressed difficulty with repayment 58% were employed full-time and 14% were employed part-time in the reference week and 2% had returned to school. Other than a lower level of employment and a higher average amount borrowed, this group did not differ from the overall sample in terms of the key demographic variables or in areas related to degree and field of study.

Based on the information collected, it appears that the key variable related to repayment of government loans is the employment status of the graduate and not the amount borrowed or demographic factors.

Other Loans

Fifteen percent (15%) of graduates borrowed from sources other than government student loans, 7% borrowed from both private and government loan sources and 44% of the total borrowed from neither source.

It is noted that a private loan may have been borrowed from more than one source. According to information provided:

- 30% of those borrowing from other sources borrowed from families;
- 67% borrowed from a financial institution; and
- 67% had also borrowed from other sources.

The average amount borrowed from non-government sources ranged from $200 to $80,000, averaging $7,087 with a mode and median of $5,000.

Table 35 summarizes the amount of private loans borrowed and the amount outstanding by degree received. Approximately 30% of those who had borrowed through a private loan had repaid the total loans by the time of survey contact.

TABLE 35
BORROWING THROUGH PRIVATE LOANS
(Weighted Data n=654)

Overall	Range	Mean	Median	Mode
Amount Borrowed	$ 200 - $80,000	$ 7,087	$ 5,000	$ 5,000
Amount Outstanding	$ 100 - $80,000	$ 4,503	$ 2,400	$ 0
Certificate (1)				
Amount Borrowed	$ 850 - $7,600	$ 3,408	$ 3,000	$ 3,000
Amount Outstanding	$ 0 - $7,600	$ 1,776	$ 159	$ 0
Certificate (2)				
Amount Borrowed	$ 500 - $20,000	$ 5,691	$ 5,000	$ 2,000
Amount Outstanding	$ 0 - $15,000	$ 4,190	$ 3,900	$ 0
Bachelor's Level				
Amount Borrowed	$ 200 - $63,500	$ 6,318	$ 4,500	$ 5,000
Amount Outstanding	$ 0 - $60,000	$ 3,836	$ 2,300	$ 0
First Professional				
Amount Borrowed	$ 800 - $80,000	$ 13,453	$ 5,000	$ 5,000
Amount Outstanding	$ 0 - $80,000	$ 10,616	$ 5,000	$ 0
Certificate (3)				
Amount Borrowed	NA	NA	NA	NA
Amount Outstanding	NA	NA	NA	NA
Master's Level				
Amount Borrowed	$ 325 - $30,000	$ 7,049	$ 5,000	$ 5,000
Amount Outstanding	$ 0 - $30,000	$ 3,808	$ 0	$ 0
Earned Doctorate				
Amount Borrowed	$ 6,000 - $10,000	$ 8,036	$10,000	$10,000
Amount Outstanding	$ 0 - $4,000	$ 2,036	NA	NA

Combined Loans

As noted, approximately 7% of the graduates borrowed from both government and private sources to finance his/her university education. On average the combined loans ranged from $1,200 to $105,000 with an average of $20,034, a median of $17,000 and a mode of $15,000.

The total amount of combined borrowing varied in relation to the degree level:

- the 246 bachelor's level graduates carrying combined loans had an average debt of $17,215 at the time of graduation; and

- the 51 professional degree graduates carrying combined loans had an average debt of $34,085 at the time of graduation;

At the time of contact, those who had used both government and private loans to finance their education were carrying an average debt of $16,234.

The information collected suggests that approximately 49% of the 1995 graduates had incurred a debt in order to complete a university degree program; approximately 8% had repaid the student loan debt between the time of degree completion and survey contact, approximately one year. In that same period, the overall debt to government student loan programs for the 1995 graduates had been reduced by approximately 14%. Debt incurred through private sources had been eliminated by approximately 30% of those using such sources and the overall debt to these sources had been reduced by an average of 52%.

Chapter 10 Studies after Graduation

Following receipt of a degree, approximately 35% of the Class of 1995 returned to school in order to complete a program or take courses for credit. Overall, graduates who received a Certificate (1) (53%) and a bachelor's level degree (38%) were more likely to continue their education after graduation. Graduates from PEI were slightly more likely (42%) to return to school for credit courses following graduation than were graduates from either New Brunswick (35%) or Nova Scotia (35%).

There were no statistically significant differences in the demographic characteristics of the group that returned to school and the group which did not return to school.

Graduates who completed a Certificate (1) and returned to school (n=19) were most likely (65%) to enrol in a program leading to a bachelor's level degree. Those who continued from a bachelor's level were more likely to pursue another bachelor's degree (34%) or a master's degree (25%).

Among those who had returned to school since graduation, 20% had completed the program to which they had returned in the months between graduation and survey contact, spending an average of 7.96 months in classes since graduation.

In addition to the graduates who returned to school for credit courses/programs, approximately 20% had taken other courses since graduation. Graduates from PEI were more likely (26%) to return to school than graduates from either New Brunswick (19%) or Nova Scotia (19%).

Approximately 3% of graduates had completed a course through distance education since graduation. The utilization of distance education did not vary across the three provinces.

Chapter 11 Observations on the Survey Process

The key findings have been highlighted for each chapter and the highlights have been provided as an introduction to this report. These summarize key points of information from the Survey of the Class of 1995.

Because this was the first survey of university graduates conducted on a regional basis, a review of the approach developed has provided insights which may be useful in planning for future surveys at the regional level.

The importance of detailed contact information for graduates was affirmed at the start of this research. Alumni offices sometimes proved to have more accurate information than other offices in the university system, perhaps reflecting the increasing importance of fundraising activity by a university. In planning ahead, it is advised that alumni offices be the second point of contact for all missing information.

The research instrument will require adaptation for future use. Additional development work should be undertaken to ensure that the questions which attempt to explore perceptions about the university experience provide more precise measures. Data are available in relation to FOS at the five-digit level for further analysis at the provincial level; however, for clarity of presentation, it is suggested that the recoding of these FOS into a manageable number of areas for analysis should be refined to ensure that all major areas are adequately displayed in the reporting format.

The operational structure for the survey worked well and a similar structure is recommended for future surveys. The amount of time allocated for reporting and analysis provided the researchers with the opportunity to "know the data" as well as being able to report on the information collected. Understanding data does require time and it is strongly recommended that the time between the end of data collection and reporting be maintained at six to eight weeks.

While the graduates were willing to participate in this survey, it should not be taken as a sign that they should be repeatedly contacted for additional surveys. Good information collected only when necessary should become the rule. A population contacted too frequently will tend to become one less willing to respond.

While there is always a need for detailed information about a sub-group, this survey should remain a survey of the overall population of graduates in order to be able to review policy decisions based on overall outcomes. It is strongly recommended that replications of this approach employ random sampling methods and continue to place strong emphasis on controlled data collection and detailed analysis of findings.