THE ADULT EDUCATION

AND

TRAINING SURVEY

MICRODATA USER'S GUIDE

THE SPECIAL SURVEYS DIVISION
STATISTICS CANADA

1995

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1.   INTRODUCTION

The Adult Education and Training Survey 1994 was conducted by Statistics Canada with the cooperation and support of Human Resources Development Canada.   The reference year for this survey was 1993. This manual has been produced to facilitate the manipulation of the microdata file of the survey results.

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2. BACKGROUND

The 1994 Adult Education and Training Survey is the fifth in a series of surveys designed to measure adults'[1] participation in education and training. During the 1980's, Statistics Canada conducted the 1984 Adult Education Survey (AES) on behalf of the Department of the Secretary of State and the 1986 Adult Training Survey (ATS) on behalf of Employment and Immigration Canada. In the late 1980's, Employment and Immigration Canada and the Department of the Secretary of State, in consultation with various interest groups, determined that the number of adult Canadians pursuing education and/or training programs was increasing. Concurrently, there was a growing interest regarding education and retraining as economic development issues. These concerns resulted in Employment and Immigration Canada commissioning Statistics Canada to conduct the Adult Education and Training Survey (AETS) in November 1990.

The main objective of all these surveys was to measure the participation rates of adult Canadians. However, for each survey the questionnaire has changed to reflect changing data requirements. In general, each successive questionnaire has evolved into a more detailed and comprehensive survey instrument. This evolution has seen expanded data collection, with greater emphasis placed on profiling the role of the employer, and the identification of barriers to training.

Continued concern about economic development issues, the growing importance of adult education and training, and the role of employers in this training process resulted in the decision to conduct another survey in January of 1992. The 1992 AETS was redesigned to enhance the quality of data and to explore areas not covered in the 1990 survey. A major element of the redesign was to change the collection methodology resulting in the elimination of proxy responses. This allowed for collecting information of greater detail and enhanced data quality.

With the continued restructing of the Canadian workforce it was deemed important to continue monitoring the education and training patterns of Canadian adults. Therefore it was decided to conduct the 1994 Adult Education and Training Survey based on the same methodology as the 1992 survey with only minor modifications to the questionnaire. This will allow data users to compare findings between the 1992 and 1994 surveys, a practice that is not recommended with the previous surveys.

3. SURVEY OBJECTIVES

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[1] Adults include all those individuals 17 years of age or over.

The objectives of the 1994 Adult Education and Training Survey were:

- to measure the incidence of adult education/training in Canada in a comprehensive manner;

- to provide a socio/economic/demographic profile of individuals who participated and did not participate in education/training;

- to profile the types, durations and locations of training/education that individuals received;

- to profile employer involvement in the training/education process;

- to identify barriers to training and education.

4.   CONCEPTS AND DEFINITIONS

The following sections outline concepts and definitions of interest to the users. Section 4.1 describes the concepts and definitions used in the Labour Force Survey while the concepts and definitions given in Section 4.2 are specific to the Adult Education and Training Survey. Users should refer to Chapter 12 of this document for a copy of the actual survey forms used in the 1994 survey.

4.1   From the Labour Force Survey

Labour Force Status

Status of the respondent in the labour market : a member of the non-institutional population 15 years and over is designated as either **employed, unemployed** or **not in the labour force.**

Employed

Employed persons are those who, during the reference week:
(a)   did any work[2] at all
(b)   had a job but were not at work due to:
      - own illness or disability
      - personal or family responsibilities
      - bad weather
      - labour dispute
      - vacation
      - other reason not specified above (excluding persons on layoff and persons whose job attachment was to a job starting at a definite date in the future).

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[2]   Work includes any work for pay or profit, that is, paid work in the context of an employer-employee relationship, or self-employment. It also includes unpaid family work where unpaid family work is defined as unpaid work which contributed directly to the operation of a farm, business or professional practice owned or operated by a related member of the household. Such activities may include keeping books, selling products, waiting on tables, and so on. Tasks such as housework or maintenance of the home are not considered unpaid family work.

Unemployed

Unemployed persons are those who, during the reference week:
(a) were without work, had actively looked for work in the past four weeks (ending with reference week), and were available for work[3];

(b) had not actively looked for work in the past four weeks but had been on layoff[4] and were available for work;

(c) had not actively looked for work in the past four weeks but had a new job to start in four weeks or less from the reference week, and were available for work.

Not in the Labour Force

Those persons in the civilian non-institutional population 15 years of age and over who, during the reference week, were neither employed nor unemployed.

Industry and Occupation

The Labour Force Survey provides information about the occupation and industry attachment of employed and unemployed persons, and of persons not in the labour force who have held a job in the past five years. Since 1984, these statistics have been based on the 1980 Standard Occupational Classification and the 1980 Standard Industrial Classification. Prior to 1984, the 1971 Standard Occupational Classification and the 1970 Standard Industrial Classification were used.

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[3] Persons in this group meeting the following criteria are regarded as available:
(i) were full-time students seeking part-time work who also met condition (ii) below. (Full-time students looking for full-time work are classified as not available for work in the reference week.)

(ii) reported that there was no reason why they could not take a job in the reference week, or if they could not take a job it was because of "own illness or disability", "personal or family responsibilities", or "already had a job".

[4] Persons are classified as being on layoff only when they expect to return to the job from which they were laid off.

Reference week

Entire calender week covered by the Labour Force Survey each month. It is usually the week containing the 15th day of the month. The interviews are conducted during the following week, called the Survey Week, and the labour force status determined is that of the reference week.

Full-time

Full-time employment consists of persons who usually work 30 hours or more per week, plus those who usually work less than 30 hours but consider themselves to be employed full-time (e.g. airline pilots).

Part-time

Part-time employment consists of all other persons who usually work less than 30 hours per week.

4.2   From the Adult Education and Training Survey

Apprenticeship program

An apprenticeship program combines on-the-job training (by observation and practice) with shorter periods of related in-class training (by attending technical courses where the more theoretical aspects are taught) to produce a fully qualified journeyman trades person. The employer undertakes, by contract, to employ and train an apprentice under the supervision of a qualified journeyman. In Quebec, it is possible to receive apprenticeship training without related in-class training.

Career or future job

The purpose of training/education is career or job-related when the training/education is taken to learn new skills for a current or future job, increase earnings, improve job opportunities in current or another field, improve opportunities for advancement/promotion, etc..

College program

College programs include those programs taken at colleges of applied arts and technology or CAATS in Ontario, collèges classiques and CEGEP's in Québec and those programs which normally require successful completion of secondary school.

Commercial training school

These are private schools licensed by the province which are profit oriented and are engaged in providing professional and vocational training.

Community colleges

These include colleges of applied arts and technology or CAATS (in Ontario), colleges classiques and CEGEPS (in Quebec) and those programs which normally require successful completion of secondary school.

Company trainer

A company trainer is designated to train and in many instances training is included in his/her job description.

Correspondences or distance education

Any form of education in which the teachers and students are not at the same place is considered distance education. Examples include correspondence education and teaching by T.V. and radio. Students usually study from their own home, on a part-time basis. Instruction is received via mail, in the form of reading assignments or exercises and/or electronic media (such as television, audio-visual tapes, audio cassettes, etc.). In British Columbia, programs taken through the Open Learning Institute qualify as distance education.

NOTE: The student must have been registered in the program to be included.

During the past 12 months

This refers to any period between January 1, 1993 and December 31, 1993.

Educational leave

Educational leave is granted to any employee for educational or training purposes (i.e., general upgrading, new skills, post-secondary education, etc.). Educational leave is usually considered for courses/programs taken on a full-time basis and lasting for one month or more. Such leave may be either paid or unpaid.

Educational software

A respondent is considered to have used computer software when a computer was used to learn any subject, as in computer-based tutorials. The computer must do some teaching to be considered a teaching tool. Computers are not considered teaching tools when they are used for tasks such as typing assignments or finding books in a library.

Employer

Throughout the questionnaire, employer referred to the employer at the time the education/training was taken. If no education/training was taken, then employer was considered to be the employer at the last main job held.

Full-time program/Part-time program

The full-time or part-time classification of a program is determined by the educational institution. All schools classify their students as being full-time or part-time depending on the number of courses in which they are registered. Full-time and part-time status can vary by program, type of institution and province. Therefore, whether a person was marked as a full-time student or not depends on how he/she was classified by the school, college or university which he/she attended.

Full-time training

This is defined as time spent in a training course/program which occupied most of each work week.

Full-time training which lasted less than one month

It implies intensive, continuous training of less than one month. This training is usually taken during normal working hours.

Hobby, recreational, or interest courses

Hobby, recreational, and interest courses are taken for the purpose of learning a hobby; physical, social or psychological development; or personal interest in a particular subject matter.

On-the-job training

On-the-job training is training received under normal working conditions that enables employees to acquire new knowledge or skills that enhance job performance. The training could be provided by a colleague or under the direction of supervisory personnel.

Personal interest

The purpose of training/education is personal when the training/education is taken for reasons not related to an individual's job or career. This would also include courses or programs designed to improve social skills and courses taken for reasons of personal development.

Program

A selection of several courses or a combination or courses usually chosen from a syllabus, a calendar or a list. Courses within a program are usually taken for credit towards a degree, diploma or certificate.

Seminars or Workshops

Seminars and workshops are short courses or conferences in which a specific subject is studied and debated by participants.

Time-off

It is considered time-off when the respondent took training during usual working hours and received all or part of their salary. Depending on respondent perception, it may also include flexible hours and vacation leave.

Trade-vocational program

A trade or vocational school is a public educational institution that offers diplomas and certificates at the trade level. This term is used to classify skill courses that prepare trainees for occupations not at the professional or semi-professional levels. The emphasis is on manipulative skills with varying degrees of complexity and the performance of established procedures and techniques. Although entrance requirements vary, they frequently require less than a high school diploma for admission.

Training centre

Large companies, the federal government, and some franchisers own or rent special facilities (training centres) where they train their employees. Respondents working in a regional or branch office may consider the Head Office as the training centre or as having special facilities.

Tuition

Tuition is a fee paid for instruction.

Tutorials

Tutorials are personal instruction or guidance given to a trainee by a professional instructor. Tutorials can also refer to the "hands-on" component of a course (i.e., computer lab) or a group of exercises/problems designed to give a trainee practice in doing something that has been taught.

University program

A university is a degree/diploma/certificate granting institution which usually offers programs in at least the arts and sciences. Admission to university is usually dependent upon graduating from secondary school.

Vocational or trade school

Technical and trades training varies between and within provinces. It is offered in both public and private institutions such as community colleges, institutes of technology, trade schools and business colleges. It may also take place on the job, in apprenticeship programs or training in industry.

5. SURVEY METHODOLOGY

The Adult Education and Training Survey was administered in January 1994 to a sub-sample of the dwellings in the Labour Force Survey (LFS) sample, and therefore its sample design is closely tied to that of the LFS. The LFS design is briefly described in Sections 5.1 to 5.4[5]. Sections 5.5 and 5.6 describe how the AETS departed from the basic LFS design.

5.1 Population Coverage

The LFS is the largest continuing household survey in Canada whose sample consists of approximately 68,000 dwellings across Canada. Conducted monthly, the LFS sample of individuals is representative of the civilian, non-institutionalized population 15 years of age or older in Canada's ten provinces. Specifically excluded from the survey's coverage are residents of the Yukon and Northwest Territories, persons living on Indian Reserves, full-time members of the Canadian Armed Forces and inmates of institutions. These groups together represent an exclusion of approximately 2% of the population aged 15 or over. The portion of the population covered by the LFS is referred to as *eligible persons*.

5.2 Sample Design

The LFS sample is based upon a stratified, multi-stage design employing probability sampling at all stages of the design. The design principles are the same for each province. A diagram summarizing the design stages appears on page 15.

5.2.1 Primary Stratification

Provinces are first stratified into economic regions – geographic areas of more or less homogeneous economic structure formed on the basis of federal provincial agreements. Economic regions are relatively stable over time.

These economic regions are treated as primary strata and further stratification is carried out within them (see section 5.2.3).

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[5]   A detailed description of the LFS design is available in the Statistics Canada publication entitled **Methodology of the Canadian Labour Force Survey,** 1984-1990 (catalogue #71-526).

5.2.2 Types of Areas

Economic regions are further disaggregated into 3 categories: self-representing areas (SRU's), non-self-representing areas (NSRU's) and special areas. Generally SRU's are urban areas whose population as of the 1981 Census exceeds 15,000 persons or whose unique labour force characteristics demand their establishment as SRU's. For the most part, SRU boundaries are coincident with delineations established for the Census.

All SRU's in each economic region are included in the survey and, as the name implies, each is represented by its own sample.

NSRU's are the areas lying outside the SRU's and they consist largely of small urban centres and rural areas. Each economic region contains one NSRU which is represented by its own sample.

A small proportion (approximately 1%) of the LFS population is found in institutions (for example, live-in staff of hospitals or schools or permanent residents of hotels or motels), on military bases (civilian personnel only) or in remote areas of provinces which are not readily accessible to LFS interviewers. For administrative purposes, this portion of the population is sampled separately through the special area frame. This portion of the sample is selected on a province-wide basis, without reference to the stratification used for SRU and NSRU areas.

5.2.3 Secondary Stratification

SRU areas are next individually delineated into design strata, which reflect areas of similar socio-economic status as identified in the 1981 Census. The extent of the stratification (i.e. number of strata) depends upon the size of the SRU.

In economic regions in which the NSRU population constitutes a significant proportion of the economic region population, the NSRU is next delineated into separate urban and rural strata. Within each of these strata, further stratification is carried out to reflect differences on a number of labour force characteristics.

In special areas, strata are formed on a province-wide basis. The strata reflect the main types of special groups in the population which require special administrative sampling procedures. These are: military establishments, institutions and remote areas.

5.2.4 Cluster Delineation and Selection

Within each of the secondary strata found in SRU areas, a number of geographic contiguous groups of dwellings, or clusters, are formed based upon a combination of 1981 Census counts and field enumeration. These clusters generally are coincident with city blocks or block faces. The selection of a sample of clusters (generally 6 or 12 clusters) from each of these secondary strata represents the first stage of sampling in SRU areas.

Within each of the secondary strata in NSRU areas, a number of large geographic areas are delineated in such a way that each one reflects the composition of the stratum within which it is located with respect to a number of socio-economic characteristics. Two or four of these areas, known as primary sampling units (or PSU's) are selected into the sample from each secondary stratum. Within each selected PSU, a number of smaller geographically contiguous groups of dwellings, or clusters, are then formed using well-defined physical features which are recognizable both on maps and in the field.

In special areas, census enumeration areas (geographic areas covered by individual enumerators for the Census) represent the first stage of selection. Within those selected, where necessary, geographically contiguous groups of dwellings or clusters are formed and the selection of a sample of these represents the second stage of sampling.

5.2.5 Dwelling Selection

In all three types of areas (SRU, NSRU and special areas) selected clusters are first visited by enumerators in the field and a listing of all private dwellings in the cluster is prepared. From the listing a sample of 6 dwellings (on average) is then selected. This represents the final stage of sampling.

In the 17 largest SRU's, a sample of apartments in large apartment buildings is selected from a separate register based upon information supplied by CMHC. The purpose of this is to ensure better representation of apartment dwellers in the sample as well as to minimize the effect of growth in clusters, due to construction of new apartment buildings.

5.2.6 Person Selection

Demographic information is obtained for all persons for whom the selected dwelling is the usual place of residence. LFS information is obtained for all civilian household members 15 years of age or older.

LFS - SAMPLE DESIGN

At every stage of the sample design, probability sampling techniques are used to ensure that the sample is random yet representative of the intended survey population.

The sample design is similar for each province.

Each province consists of a number of economic regions - areas of similar economic structure formed on the basis of federal-provincial agreements.

Each economic region is divided into Self-representing Units (SRU's), Non-self-representing Units (NSRU's) and Special Areas. SRU's are cities whose population exceeds 15,000 persons or whose unique characteristics demand their establishement as self-representing units. NSRU's are those areas lying outside the SRU's. Special Areas consist of military establishments, hospitals and other institutions, and remote areas.

SRU's and NSRU's are delineated into Primary Sampling Units (PSU's) which are areas that can be conveniently visited by an interviewer. A sample of PSU's is selected.

Selected PSU's are then delineated into clusters of dwellings which correspond to blocks or block faces (in urban areas) and correspond to recognizable physical boundaries (in rural areas). A sample of the clusters is selected and all private dwellings in selected clusters are listed by field enumerators.

Within each selected cluster, a sample of dwellings is selected from the list of dwellings.

Within each selected dwelling, LFS information is obtained for each civilian household member 15 years of age or older.
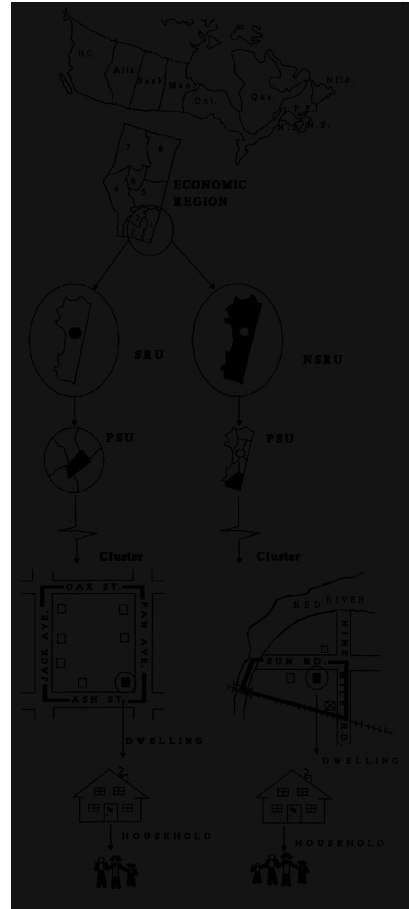
5.3   **Sample Size**

The sample size of eligible persons in the LFS is determined so as to meet the statistical precision requirements for various labour force characteristics at the provincial and subprovincial level, to meet the requirements of federal, provincial and municipal governments as well as a host of other data users.

The monthly LFS sample consists of approximately 68,000 dwellings. After excluding dwellings found to be vacant, dwellings demolished or converted to non-residential uses, dwellings containing only ineligible persons, dwellings under construction, and seasonal dwellings, about 58,000 dwellings remain which are occupied by one or more eligible persons.

5.4   **Sample Rotation**

The LFS employs a panel design whereby the entire monthly sample of dwellings consists of 6 panels, or rotation groups, of approximately equal size. Each of these panels can be considered by itself to be representative of the entire LFS population. All dwellings in a rotation group remain in the LFS sample for 6 consecutive months after which time they are replaced (rotated out of the sample) by a new panel of dwellings selected from the same or similar clusters.

This rotation pattern was adopted to ensure that the sample of dwellings constantly reflects changes in the current housing stock and to minimize any problems of non-response or respondent burden that would occur if households were to remain in the sample for longer than 6 months. It also has the statistical advantage of providing a common sample base for short-term month-to-month comparisons of LFS characteristics.

Because of the rotation group feature, it is possible to readily conduct supplementary surveys using the LFS design but employing less than the full size sample.

5.5 **Modifications to the L.F.S Design for the Adult Education and Training Survey**

The Adult Education and Training Survey employed five of the six rotation groups in the January 1994 LFS sample. For the AETS, the coverage of the LFS was modified to include all members of the household 17 years of age and over. This included all household members 70 years of age and over. However, unlike the LFS where information is collected for all eligible household members, the AETS only collected information from one pre-selected household member and proxy responses were not permitted.

5.6 **Sample Size by Province for the Adult Education and Training Survey**

The following table provides the sample size, of the LFS/AETS sample. The AETS was administered to one individual per household so the sample size is effectively the number of sampled households for 5 rotation groups of the LFS.

PROVINCE	SAMPLE
Newfoundland	2,152
Prince Edward Island	1,131
Nova Scotia	3,172
New Brunswick	2,781
Quebec	9,568
Ontario	13,680
Manitoba	3,119
Saskatchewan	3,649
Alberta	4,276
British Columbia	4,231
CANADA	47,759

6.   DATA COLLECTION

Data collection for the LFS is carried out each month during the week following the LFS reference week, usually the third week of the month.

6.1 Interviewing for the LFS

Statistics Canada interviewers, who are part-time employees hired and trained specifically to carry out the LFS, contact each of the sampled dwellings to obtain the required labour force information. Each interviewer contacts approximately 70 dwellings per month.

Dwellings new to the sample are contacted through a personal visit.   The interviewer first obtains socio-demographic information for each household member and then obtains labour force information for all eligible members. Provided there is a telephone in the dwelling and permission has been granted, subsequent interviews are conducted by telephone.   As a result, approximately 85% of all dwellings are interviewed by telephone.   In these subsequent monthly interviews, as they are called, the interviewer confirms the socio-demographic information collected in the first month and collects the labour force information for the current month.

In all dwellings, information about all household members is obtained from a knowledgeable household member - usually the person at home when the interviewer calls.   Such 'proxy' reporting, which accounts for approximately 55% of the information collected, is used to avoid the high cost and extended time requirements that would be involved in repeat visits or calls necessary to obtain information directly from each respondent.

At the conclusion of the LFS monthly interviews, interviewers introduce the supplementary survey, if any, to be administered to some or all household members that month.

If, during the course of the six months that a dwelling normally remains in the sample, an entire household moves out and is replaced by a new household, information is obtained about the new household for the remainder of the six-month period.

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6.2   Supervision and Control

All LFS interviewers are under the supervision of a staff of senior interviewers. The senior interviewers are responsible for: ensuring that interviewers are familiar with the concepts and procedures of the LFS and any supplementary surveys; and for periodically monitoring the interviewers and reviewing their completed documents. The senior interviewers are, in turn, under the supervision of the LFS program managers, located in each of the eight Statistics Canada regional offices.

6.3   Non-Response to the LFS

Interviewers are instructed to make all reasonable attempts to obtain LFS interviews with members of eligible households. For individuals who at first refuse to participate in the LFS, a letter is sent from the Regional Office to the dwelling address stressing the importance of the survey and the household's cooperation. This is followed by a second call (or visit) from the interviewer. For cases in which the timing of the interviewer's call (or visit) is inconvenient, an appointment is arranged to call back at a more convenient time. For cases in which there is no one home, numerous call backs are made. Under no circumstances are sampled dwellings replaced by other dwellings for reasons of non-response.

Each month, after all attempts to obtain interviews have been made, a small number of non-responding households remain. For households non-responding to the LFS and for which LFS information was obtained in the previous month, this information is brought forward and used as the current month's LFS information. No AETS information was collected for these households.

6.4   Non-Response to the Adult Education and Training Survey

For households responding to the LFS, the next stage of data collection was to administer the AETS to the selected household respondent. In total 47,759 individuals were identified and an AETS interview was completed for 41,645 individuals. This represents a response rate of 87.2% for the AETS. More detailed information on response rates is presented in Chapter 8 (Data Quality).

6.5 Data Collection Modifications for the Adult Education and Training Survey

The 1994 Adult Education and Training Survey was administered to one randomly pre-selected individual per household. The random selection was carried out at the head office prior to survey week. Labels identifying the selected individuals were produced and then attached to the questionnaires.

Upon completion of the Labour Force Survey interview, the interviewer asked to speak to the pre-selected person for the AETS. If the selected person was not available the interviewer arranged for a convenient time to phone back. Proxy response was not allowed hence the collection period was extended a week to allow the interviewers time to contact the pre-selected individuals.

In some cases the interviewers were required to manually select the respondent using a grid on the questionnaire label. Manual selection was required in only three situations:

i)   there was a completely new household since the last LFS interview;

ii) there was a change in the household composition for household members aged 17 and over;

iii) the label was printed with SELECT MANUALLY indicating that there was no information on the household from previous months on which to base a pre-selection.

7. DATA PROCESSING

The main output of the AETS is a "clean" microdata file. This section presents a brief summary of the processing steps involved in producing this file.

7.1 Data Capture

Capture of AETS data was accomplished using minicomputers located in each of Statistics Canada's Regional Offices. During this process any document containing at least one interviewer-completed item was captured and an unedited version of the computer record was electronically transmitted to Ottawa for further processing.

7.2 Editing

The first stage of survey processing undertaken at head office was the replacement of any 'out-of-range' values on the data file with blanks. This process was designed to make further editing easier.

The first type of errors treated were errors of questionnaire flow, where questions that did not apply to the respondent, and should therefore not have been answered, were found to contain answers. In this case a computer edit automatically eliminated superfluous data by following the flow of the questionnaire implied by answers to previous, and in some cases, subsequent questions.

The second type of error treated was another error in questionnaire flow, which in this case involved a lack of information in questions which should have been answered. In these cases a non-response or "not stated" code was assigned to the items.

7.3 Coding of Open-ended Questions

A few data items on the questionnaire were recorded by interviewers in an open-ended format. These were items relating to field of study or specialization of the program and title or name of the courses taken during 1993. A total of 23 open-ended questions were included in the survey. These were items relating to the name of the courses and programs taken by respondents.

Using Automated Coding by Text Recognition (ACTR), a generalized automated coding system, 8,868 education texts were coded automatically. The remaining 10,791 were resolved manually (not stated codes are excluded from this count). The manual coding was double checked for reliability and disagreements were resolved through discussion. A complete list of the education codes used for coding the texts can be found in Appendix A.

7.4 **Creation of Derived Variables**

A number of data items on the microdata file have been derived by combining items on the questionnaire in order to facilitate data analysis. The following derived variables have been created:

- Training Status

    1 Employer sponsored training only
    2 Non-employered sponsored training only
    3 Both employer and non-employer sponsored training
    5 Non-participant

- Respondent took a program

- Respondent took a course

- Respondent took employer sponsored training

- Respondent took non-employer sponsored training

- Total number of programs taken

- Total number of courses taken

- Total number of non-employer sponsored courses taken

- Total number of programs taken in section B.

- Total number of courses taken in section C.

- Total number of programs taken in section D.

- Total number of courses taken in section E.

- Total number of courses taken in section F.

- Total Income

.   Respondent Worked in 1993/1994

       1 Yes
       2 No

.   Occupation 1

       1 White collar
       2 Blue collar
       3 Not in labour force

.   Occupation 2

       1 Professional, managerial
       2 Clerical, sales, service
       3 Blue collar worker
       4 Not in labour force

.   Occupation 3

       01 Managerial, administrative and related
       02 Natural sciences, engineering and mathematics
       03 Social sciences and religion
       04 Teaching and related
       05 Medicine and health
       06 Artistic, literary, recreational and related
       07 Clerical and office operation
       08 Sales
       09 Services to community and individuals, n.e.c.
       10 Primary (farming, fishing, trapping, forestry,
           mining, etc.)
       11 Manufacturing and processing
       12 Construction and transportation
       13 Materials handling and other
       14 Never worked before/permanently unable to work
       15 Last worked more than 5 years ago

.   Job Tenure

       01 1 to 6 months
       02 7 to 12 months
       03 1 year (13 to 24 months)
       04 2 years (25 to 36 months)
       05 3 years (37 to 48 months)
       06 4 years (49 to 60 months)
       07 5 years (61 to 72 months)
       08 6 years (73 to 84 months)
       09 7 years (85 to 96 months)
       10 8 years (97 to 108 months)
       11 9 years (109 to 120 months)
       12 10 years (121 to 132 months)

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                13  11 years (133 to 144 months)
                14  12 years (145 to 156 months)
                15  13 years (157 to 168 months)
                16  14 years (169 to 180 months)
                17  15 years (181 to 192 months)
                18  16 years (193 to 204 months)
                19  17 years (205 to 216 months)
                20  18 years (217 to 228 months)
                21  19 years (229 to 240 months)
                22  20 years (241 to 999 months)
```

.   Industry 12

```
                01  Agriculture
                02  Other primary
                03  Manufacturing
                04  Construction
                05  Utilities
                06  Transportation and communications
                07  Trade
                08  Finance, insurance and real estate
                09  Education, health and welfare
                10  Business, commercial, personal and
                    miscellaneous services
                11  Public administration
                12  Unemployed/not in the labour force
```

.   Type of Industry

```
                1  Goods producing industries
                2  Service producing industries
                3  Unemployed/not in the labour force
```

.   Type of Employee

```
                1  Private sector employees
                2  Public sector employees
                3  Unemployed/not in the labour force
```

.   Geographical Aggregation

```
                1  Urban
                2  Rural
                3  Other
```

.   Dwelling Type

```
                1  Single
                2  Multiple
                3  Other
```

- Age Groups

      1 17-24 years of age
      2 25-34 years of age
      3 35-44 years of age
      4 45-54 years of age
      5 55-64 years of age
      6 65 years of age and over

- Number of Preschool Children

      0 No preschoolers
      1 1 Preschooler (age 0-5)
      2 2 or more preschoolers

- Q24agg_2 Major Field of Study Aggregated

  01 Educational, Recreational and Counselling Services
  02 Fine and Applied Arts
  03 Humanities and Related Fields
  04 Social Sciences and Related Fields
  05 Commerce, Management and Business Administration
  06 Agricultural and Biological Sciences/Technologies
  07 Engineering and Applied Sciences
  08 Engineering and Applied Science, Technologies
     and Trades
  09 Health Professions, Sciences and Technologies
  10 Mathematics and Physical Sciences
  11 Other (including NEC and primary and secondary school)
  12 Upgrading (Academic)
  13 Personal Development
  14 Recreational Activity
  97 Uncodable

- Q24agg_3 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q24agg_4 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q24agg_5 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q46agg_1 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q46agg_2 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q46agg_3 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q46agg_4 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q46agg_5 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q65agg_2 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q65agg_3 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q65agg_4 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q65agg_5 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q85agg_1 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q85agg_2 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q85agg_3 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q85agg_4 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)
- Q85agg_5 Major Field of Study Aggregated (see Q24agg_2 for aggregated codes)

- Q102agg_1 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q102agg_2 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q102agg_3 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q102agg_4 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

- Q102agg_5 Major Field of Study Aggregated

  (see Q24agg_2 for aggregated codes)

. Number of Courses or Programs Taken for 'Current or Future Job' Reasons

. Number of Courses or Programs Taken for 'Personal Interest' Reasons

. Number of Courses or Programs Taken for Other Reasons or Reasons or Reasons Not Known

. Duration of Programs in Section B, in Hours

. Duration of Courses in Section C, in Hours

. Duration of Programs in Section D, in Hours

. Duration of Courses in Section E, in Hours

. Duration of Courses in Section F, in Hours

. Total Duration of all Courses and Programs, in Hours

. Duration of training by reason (number of hours of training taken for current or future job, taken for personal interest, taken for other reasons, taken for reasons not given by the respondent), Section B

. Duration of training by reason (number of hours of training taken for current or future job, taken for personal interest, taken for other reasons, taken for reasons not given by the respondent), Section C

.   Duration of training by reason (number of hours of
     training taken for current or future job, taken for
     personal interest, taken for other reasons, taken for
     reasons not given by the respondent), Section D

.   Duration of training by reason (number of hours of
     training taken for current or future job, taken for
     personal interest, taken for other reasons, taken for
     reasons not given by the respondent), Section E

.   Duration of training by reason (number of hours of
     training taken for current or future job, taken for
     personal interest, taken for other reasons, taken for
     reasons not given by the respondent), Section F

.   In addition, in each section many variables have been
     added up across all 5 columns. The questions this
     applies to are:

     a)   nature of employer support (Q26a and Q47a);
     b)   who else paid/who paid (Q27, Q48, Q67, Q86 and
          Q103);
     c)   where training was taken (Q28, Q49, Q68, Q87 and
          Q104);
     d)   who gave training (Q29, Q50, Q69, Q90 and Q107);
     e)   how training was provided (Q30, Q51, Q70, Q91 and
          Q108);
     f)   whether training was taken by correspondence (Q31,
          Q52, Q71, Q92 and Q109);
     g)   main reason for taking training (Q32, Q53, Q72, Q88
          and Q105);
     h)   extent to which respondent is using the training
          (Q33, Q54, Q73, Q93 and Q110);
     i)   whether the training was taken full-time or part-
          time or both (Q34/Q37, Q55/Q57, Q74/Q77, Q94/Q96
          and Q111/Q113);
     j)   whether employer suggested training (Q40 and Q59);
     k)   other than employer who suggested the training
          (Q41, Q60, Q80, Q98 and Q115).

7.5   **Weighting**

The principle behind estimation in a probability sample such as the LFS is that each person in the sample "represents", besides himself or herself, several other people not in the sample. For example, in a simple random 2% sample of the population, each person in the sample represents 50 people in the population.

The weighting phase is a step which calculates, for each record, what this number is and places it on the microdata file for each record. This weight must be used to derive estimates from the microdata file. (For example, if the number of individuals enrolled in full-time programs at a university during the past 12 months is to be estimated, it is done by selecting the records referring to those individuals in the sample with that characteristic and summing the weights entered on those records.)

Details of the method used to calculate these weights are presented in Chapter 11.

7.6   **Suppression of Confidential Information**

It should be noted that the 'Public-Use' microdata file described above differs in a number of important respects from the survey 'master' file held by Statistics Canada. These differences are the result of actions taken to protect the anonymity of individual survey respondents. Users requiring access to information excluded from the microdata file may purchase custom tabulations. Estimates generated will be released to the user, subject to meeting the guidelines for analysis and release outlined in Chapter 9 of this document.

1) Province - Suppression of Geographic Identifiers

The AETS master data file includes explicit geographic identifiers for province, economic region and Census Metropolitan Area. It is also possible to obtain, where sample sizes permit, estimates by urban size class. The survey public-use microdata files do not contain any geographic identifiers below the provincial level.

2) F05Q7374 (Type of Industry)/**MF05Q75/OCCHEAD/OCCSPOUSE** (Type of Occupation)

Each record on the AETS master file has been assigned a three-digit 1980 Standard Industrial Code and a four-digit Standard Occupational Code. On the public-use microdata file each of these detailed codes has been collapsed into two-digit codes. There are 15 Typesof Industry codes and 51 Typesof Occupation codes.

For occupation of head and spouse there are only 24 two-digit codes. The finer level of detail does not exist on the master file.

3) MF03Q33/HDAGE/SPAGE - Age Groups

Actual age of the respondent on the AETS master file has been grouped into **9** ranges on the public-use microdata file. In the case of the variables age of head and age of spouse the first two ranges have been collapsed together. The master file does not contain the actual age of the head or spouse.

4) MFO3Q38/EDHEAD/EDSPOUSE - Educational Attainment

Detail on level of educational attainment has been grouped into six categories. The same grouping has been applied to the variables education of head and education of spouse. As with industry, occupation and age, the finer level of detail is avalaible only for the respondent.

The following variables are from the form FO6 - Adult Education and Training Survey Questionnaire.

5) Q24; Q46; Q65; Q85; Q102. These questions collect text information about the major field of study.

Each relevant record on the AETS master file has been assigned a three-digit major field of study code. There are approximately 500 codes in place. On the public-use microdata file these have been collapsed to about 100 3-digit codes. In the case of data about apprenticeship programs the information is only available at the 2-digit level.

6) Q128. This question collects information on the respondent's ethnic origin. The data are suppressed on the public microdata file.

7) Q129. This question collects information on whether the respondent has any long-term disability. The data are suppressed on the public microdata file.

8.   DATA QUALITY

8.1 Response Rates

The following table summarizes the response rates to the Labour Force Survey and to the Adult Education and Training Survey.

	Household response rate for full LFS (Jan. 94) (*1)	Household response rate for LFS rotations 2-6 (*1)	Number of respondents in AETS survey	Person response rate to AETS survey (*2)
Newfoundland	96.1%	96.7%	1,925	89.5%
Prince Edward Island	97.1%	97.7%	1,012	89.5%
Nova Scotia	94.4%	95.3%	2,863	90.3%
New Brunswick	94.6%	95.1%	2,437	87.6%
Québec	92.6%	93.5%	8,407	87.9%
Ontario	93.9%	94.8%	11,607	84.8%
Manitoba	91.9%	92.0%	2,764	88.6%
Saskatchewan	94.6%	95.1%	3,243	88.9%
Alberta	94.7%	95.2%	3,763	88.0%
British Columbia	93.7%	94.1%	3,624	85.7%
CANADA	93.9%	94.6%	41,465	87.2%

NOTE: (*1) Response rate is number of responding households as a percentage of number of eligible households.

(*2) Response rate is number of individuals responding to AETS as a percentage of number of "eligible" individuals who responded to LFS in rotations sampled, where eligible for AETS means one person aged 17+ selected at random from a responding household.

8.2 Survey Errors

Survey estimates are based on information collected from and about a sample of individuals. Somewhat different estimates might have been obtained if a complete census had been taken using the same questionnaire, interviewers, supervisors, processing methods, etc. as those actually used in the survey. The difference between the estimates obtained from the sample and those resulting from a complete count taken under similar conditions is called the <u>sampling error</u> of the estimate.

Errors which are not related to sampling may occur at almost every phase of a survey operation. Interviewers may misunderstand instructions, respondents may make errors in answering questions, the answers may be incorrectly entered on the questionnaire and errors may be introduced in the processing and tabulation of the data. These are all examples of <u>non-sampling errors</u>.

Over a large number of observations, randomly occurring errors will have little effect on estimates derived from the survey. However, errors occurring systematically will contribute to biases in the survey estimates. Considerable time and effort was made to reduce non-sampling errors in the survey. Quality assurance measures were implemented at each step of the data collection and processing cycle to monitor the quality of the data. These measures included the use of highly skilled interviewers, extensive training of interviewers with respect to the survey procedures and questionnaire, observation of interviewers to detect problems of questionnaire design or misunderstanding of instructions, procedures to ensure that data capture errors were minimized and coding and edit quality checks to verify the processing logic.

A major source of non-sampling errors in surveys is the effect of <u>non-response</u> on the survey results. The extent of non-response varies from partial non-response (failure to answer just one or some questions) to total non-response. Total non-response occured because the interviewer was either unable to contact the respondent, no member of the household was able to provide the information, or the respondent refused to participate in the survey. Total non-response was handled by adjusting the weight of households who responded to the survey to compensate for those who did not respond.

In most cases, partial non-response to the survey occured when the respondent did not understand or misinterpreted a question, refused to answer a question, or could not recall the requested information.

Since it is an unavoidable fact that estimates from a sample survey are subject to sampling error, sound statistical practice calls for researchers to provide users with some indication of the magnitude of this sampling error. This section of the documentation outlines the <u>measures of sampling error</u> which Statistics Canada commonly uses and which it urges users producing estimates from this microdata file to use also.

The basis for measuring the potential size of sampling errors is the standard error of the estimates derived from survey results.

However, because of the large variety of estimates that can be produced from a survey, the standard error of an estimate is usually expressed relative to the estimate to which it pertains. This resulting measure, known as the coefficient of variation (C.V) of an estimate, is obtained by dividing the standard error of the estimate by the estimate itself and is expressed as a percentage of the estimate.

For example, suppose that, based upon the survey results, one estimates that 15.0% of adults took employer-sponsored training and that this estimate is found to have a standard error of .0034. Then the coefficient of variation of the estimate is calculated as:

$$\left(\frac{.0034}{.150} \right) \; x \; 100\% \; = \; 2.26$$

9.   PUBLICATION AND RELEASE GUIDELINES

Guidelines for Analysis and Release

This chapter of the documentation outlines the guidelines to be adhered to by users publishing or otherwise releasing any data derived from the survey microdata tapes. With the aid of these guidelines, users of microdata should be able to produce the same figures as those produced by Statistics Canada and, at the same time, will be able to develop currently unpublished figures in a manner consistent with these established guidelines.

9.1 Rounding Guidelines

In order that estimates for publication or other release derived from these microdata tapes correspond to those produced by Statistics Canada, users are urged to adhere to the following guidelines regarding the rounding of such estimates:

a) Estimates in the main body of a statistical table are to be rounded to the nearest hundred units using the normal rounding technique. In normal rounding, if the first or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is raised by one. For example, in normal rounding to the nearest 100, if the last two digits are between 00 and 49, they are changed to 00 and the preceding digit (the hundreds digit) is left unchanged. If the last digits are between 50 and 99 they are changed to 00 and the preceding digit is incremented by 1.

b) Marginal sub-totals and totals in statistical tables are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest 100 units using normal rounding.

c) Averages, proportions, rates and percentages are to be computed from unrounded components (i.e. numerators and/or denominators) and then are to be rounded themselves to one decimal using normal rounding. In normal rounding to a single digit, if the final or only digit to be dropped is 0 to 4, the last digit to be retained is not changed. If the first or only digit to be dropped is 5 to 9, the last digit to be retained is increased by 1.

d) Sums and differences of aggregates (or ratios) are to be derived from their corresponding unrounded components and then are to be rounded themselves to the nearest 100 units (or the nearest one decimal) using normal rounding.

e) In instances where, due to technical or other limitations, a rounding technique other than normal rounding is used resulting in estimates to be published or otherwise released which differ from corresponding estimates published by Statistics Canada, users are urged to note the reason for such differences in the publication or release document(s).

f) Under no circumstances are unrounded estimates to be published or otherwise released by users. Unrounded estimates imply greater precision than actually exists.

9.2 Sample Weighting Guidelines for Tabulation

The sample design used for the AETS was not self-weighting. When producing simple estimates, including the production of ordinary statistical tables, users must apply the proper sampling weight.

If proper weights are not used, the estimates derived from the microdata tapes cannot be considered to be representative of the survey population, and will not correspond to those produced by Statistics Canada.

Users should also note that some software packages may not allow the generation of estimates that exactly match those available from Statistics Canada, because of their treatment of the weight field.

9.2.1 Definitions of Types of Estimates: Categorical vs. Quantitative

Before discussing how the AETS data can be tabulated and analysed, it is useful to describe the two main types of point estimates of population characteristics, which can be generated from the microdata files for the Adult Education and Training Survey.

(1) Categorical Estimates

Categorical estimates are estimates of the number, or percentage of the surveyed population possessing certain characteristics or falling into some defined category. The number of adults who received employer-sponsored training or the proportion of adults who received training who took that training full-time are examples of such estimates.

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Examples of Categorical Questions:

Other than the employer, who paid for this program?

     Self/family............................0
     Government.............................0
     Union or professional organization.....0
     Other.................................0
     No one else...........................0
     No fees...............................0
     Don't know............................0

At any time during 1993, did you take any of this program on a full-time basis?

     Yes.......0
     No........0

In this context, an estimate of the number of persons possessing a certain characteristic is referred to as an estimate of an aggregate.

(2) Quantitative Estimates

Quantitative estimates are estimates of totals or of means, medians and other measures of central tendency of quantities based upon some or all of the members of the surveyed population. They also specifically involve estimates of the form $\hat{X}/\hat{Y}$ where $\hat{X}$ is an estimate of surveyed population quantity total and $\hat{Y}$ is an estimate of the number of persons in the surveyed population contributing to that total quantity.

An example of a quantitative estimate is the mean number of courses taken by adults who received employer-supported training. Writing this mean in the form X/Y, the numerator (X) is an estimate of the total number of courses taken by adults who received employer-supported training, and the denominator (Y) is an estimate of the number of adults who received employer-supported training.

Examples of Quantitative Type Questions:

For how many days did you take this course?

|_|_|_| Days

For 1993, what was your total income from wages and salaries before taxes or deductions?

|_|_|_|_|_|_|.00

9.2.2 Tabulation of Categorical Estimates

Estimates of the number of people with a certain characteristic can be obtained from the microdata file by summing the final weights of all records possessing the characteristic(s) of interest. Proportions and ratios are obtained by (a) summing the final weights of records having the characteristic of interest in the numerator, (b) summing the final weights of records having the characteristic of interest for the denominator, then (c) dividing the numerator estimate by the denominator estimate.

9.2.3 Tabulation of Quantitative Estimates

Estimates of quantities can be obtained from the microdata file by multiplying the value of the variable of interest by the final weight for each record, then summing this quantity over all records of interest. For example, to obtain an estimate of the <u>total</u> number of courses taken by adults who received only employer-sponsored training, multiply the value reported in Q46ALL (total number of courses taken in Section C) by the final weight for the record, then sum this value over all records with TRNGSTAT=1 (respondent took only employer-sponsored training).

To obtain a weighted average of the form X/Y, the numerator (X) is calculated as for a quantitative estimate and the denominator (Y) is calculated as for a categorical estimate. For example, to estimate the <u>average</u> number of courses taken by adults who received only employer-sponsored training:

    (a) estimate the total number of courses taken by adults who received employer-sponsored training, as described above;
    (b) estimate the number of adults who received only employer-sponsored training by summing the final weights of all records with TRNGSTAT=1; then
    (c) divide estimate (a) by estimate (b).

9.3 Guidelines for Statistical Analysis

The Adult Education and Training survey is based upon a complex design, with stratification and multiple stages of selection, and unequal probabilities of selection of respondents. Using data from such complex surveys presents problems to analysts because the survey design and the selection probabilities affect the estimation and variance calculation procedures that should be used.

While many analysis procedures found in statistical packages allow weights to be used, the meaning or definition of the weight in these procedures differ from that which is appropriate in a sample survey framework, with the result that while in many cases the estimates produced by the packages are correct, the variances that are calculated are almost meaningless.

For many analysis techniques (for example linear regression, logistic regression, analysis of variance), a method exists which can make the application of standard packages more meaningful. If the weights on the records are rescaled so that the average weight is one (1), then the results produced by the standard packages will be more reasonable; they still will not take into account the stratification and clustering of the sample's design, but they will take into account the unequal probabilities of selection. The rescaling can be accomplished by dividing each weight by the overall average weight before the analysis is conducted.

In order to provide a means of assessing the quality of tabulated estimates, Statistics Canada has produced a set of Approximate Sampling Variability Tables for AETS. These tables can be used to obtain approximate coefficients of variation for categorical-type estimates and proportions. See chapter 10 for more details.

9.4 C.V. Release Guidelines

Before releasing and/or publishing any estimate from these microdata tapes, users should first determine the number of respondents who contribute to the calculation of the estimate. If this number is less than 30, the weighted estimate should not be released regardless of the value of the coefficient of variation for this estimate. For weighted estimates based on sample sizes of 30 or more, users should determine the coefficient of variation of the estimate and follow the guidelines below.

C. V. Release Guidelines

Type of Estimate	cv (in %)	Guidelines
1. Unqualified	0.0 – 16.5	Estimates can be considered for general unrestricted release. Requires no special notation.
2. Qualified	16.6 – 25.0	Estimates can be considered for general unrestricted release but should be accompanied by a warning cautioning subsequent users of the high sampling variability associated with the estimates. Such estimates should be identified by the letter Q (or in some other similar fashion).
3.Confidential	25.1 – 33.3	Estimates can be considered for general unrestricted release only when sampling variabilities are obtained using an exact variance calculation procedure. Unless exact variances are obtained, such estimates should be deleted and replaced by dashes (---) in statistical tables.
4. Not for Release	33.4 or greater	Estimates cannot be released in any form under any release OR circumstances. In statistical tables, such estimates should be deleted and replaced by dashes(--)

NOTE: These sampling variability guidelines should be applied to weighted rounded estimates.

10. APPROXIMATE SAMPLING VARIABILITY TABLES

First, in order to supply coefficients of variation which would be applicable to a wide variety of categorical estimates produced from this microdata tape and which could be readily accessed by the user, a set of 'look up' tables, referred to as Approximate Sampling Variability Tables, have been produced.

These coefficients of variation (C.V) are derived using the variance formula for simple random sampling and incorporating a factor which reflects the multi-stage, clustered nature of the sample design. This factor, known as the design effect, was determined by first calculating design effects for a wide range of characteristics and then choosing from among these a conservative value to be used in the look-up tables which would then apply to the entire set of characteristics.

The table of design effects, sample sizes and population counts by province used to produce the approximate sampling variability tables is shown below.

	Design Effect	Sample Size	Population
Newfoundland	2.11	1,925	425,529
Prince Edward Island	1.79	1,012	96,557
Nova Scotia	2.16	2,863	678,778
New Brunswick	2.20	2,437	545,397
Quebec	3.02	8,407	5,318,812
Ontario	3.06	11,607	7,833,383
Manitoba	3.16	2,764	785,056
Saskatchewan	2.29	3,243	689,476
Alberta	1.87	3,763	1,878,670
British Columbia	3.45	3,624	2,590,414
Atlantic Provinces	2.02	8,237	1,746,260
Prairie Provinces	2.38	9,770	3,353,201
CANADA	3.28	41,645	20,842,070

It should be noted that all coefficients of variation in the Approximate Sampling Variability Tables are <u>approximate</u> and, therefore, unofficial.

Estimates of actual variance for specific variables may be obtained from Statistics Canada on a cost-recovery basis. The use of actual variance estimates may allow users to release otherwise unreleaseable estimates, i.e. estimates with coefficients of variation in the 'restricted' range.

<u>Remember</u>: if the number of observations on which an estimate is based is less than 30, the weighted estimate should not be released regardless of the value of the coefficient of variation for this estimate.

10.1 <u>How to Use the C.V. Tables for Categorical Estimates</u>

The following rules should enable the user to determine the approximate coefficients of variation from the Sampling Variability Tables for estimates of the number, proportion or percentage of the surveyed population possessing a certain characteristic and for ratios and differences between such estimates.

Rule 1: **Estimates of Numbers Possessing a Characteristic (Aggregates)**

The coefficient of variation depends only on the size of the estimate itself. On the Sampling Variability Table for the appropriate geographic area, locate the estimated number in the left-most column of the table (headed "Numerator of Percentage") and follow the asterisks (if any) across to the first figure encountered. This figure is the approximate coefficient of variation.

Rule 2: **Estimates of Proportions or Percentages Possessing a Characteristic**

The coefficient of variation of an estimated proportion or percentage depends on both the size of the proportion or percentage and the size of the total upon which the proportion or percentage is based. Estimated proportions or percentages are relatively more reliable than the corresponding estimates of the numerator of the proportion or percentage, when the proportion or percentage is based upon a sub-group of the population. For example, the <u>proportion</u> of adults who received full-time employer-supported training out of all those who received any employer-supported training is more reliable than the estimated <u>total</u> number of adults who received full-time employer-supported training. (Note that in the tables the cv's decline in value reading from left to right).

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When the proportion or percentage is based upon the total population of the geographic area covered by the table, the cv of the proportion or percentage is the same as the cv of the numerator of the proportion or percentage. In this case, Rule 1 can be used.

When the proportion or percentage is based upon a subset of the total population (e.g. those in a particular age group), reference should be made both to the proportion or percentage (across the top of the table) and to the numerator of the proportion or percentage (down the left side of the table). The intersection of the appropriate row and column gives the coefficient of variation.

Rule 3:   Estimates of Differences Between Aggregates or Percentages

The standard error of a difference between two estimates is approximately equal to the square root of the sum of squares of each standard error considered separately. That is, the standard error of a difference ($\hat{d} = \hat{X}_1 - \hat{X}_2$) is:

$$\sigma_{\hat{d}} = \sqrt{(\hat{X}_1 \alpha_1)^2 + (\hat{X}_2 \alpha_2)^2}$$

where $\hat{X}_1$ is estimate 1, $\hat{X}_2$ is estimate 2, and α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively. The coefficient of variation of $\hat{d}$ is given by $\sigma_{\hat{d}}/\hat{d}$. This formula is accurate for the difference between separate and uncorrelated characteristics, but is only approximate otherwise.

Rule 4:   Estimates of Ratios

In the case where the numerator is a subset of the denominator, the ratio should be converted to a percentage and Rule 2 applied. This would apply, for example, to the case where the denominator is the number of "adults who received employer-supported training" and the numerator is the number of "adults who received full-time employer-supported training".

In the case where the numerator is not a subset of the denominator, as for example, the ratio of the number of "adults who received full-time employer-supported training" as compared to the number of "adults who received part-time employer-supported training", the standard deviation of the ratio of the estimates is approximately equal to the square root of the sum of squares of each coefficient of variation considered separately and then multiplied by R. That is, the standard error of a ratio of the form $\hat{R} = \hat{X}_1 / \hat{X}_2$ is:

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$$\sigma_{\hat{R}} = \hat{R}\sqrt{\alpha_1^2 + \alpha_2^2}$$

where α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively.

The coefficient of variation of $\hat{R}$ is given by $\sigma_{\hat{R}}/\hat{R}$. The formula will tend to overstate the error, if $\hat{X}_1$ and $\hat{X}_2$ are positively correlated and understate the error if $\hat{X}_1$ and $\hat{X}_2$ are negatively correlated.

Rule 5:   Estimates of Differences of Ratios

In this case, Rules 3 and 4 are combined. The cv's for the two ratios are first determined using Rule 4, and then the cv of their difference is found using Rule 3.

10.2 Examples of Using the C.V. Tables for Categorical Estimates

The following 'real life' examples are included to assist users in applying the foregoing rules.

Example 1:   Estimates of Numbers Possessing a Characteristic (Aggregates)

Suppose that a user estimates that 3,124,927 adults received employer-supported training in the reference period. How does the user determine the coefficient of variation of this estimate?

(1) Refer to the cv table for CANADA.

(2) The estimated aggregate (3,124,927) does not appear in the left-hand column (the 'Numerator of Percentage' column), so it is necessary to use the figure closest to it, namely 3,000,000.

(3) The coefficient of variation for an estimated aggregate is found by referring to the first non-asterisk entry on that row, namely, 2.2%.

(4) So the approximate coefficient of variation of the estimate is 2.2%.

The finding that there were 3,124,927 adults who received employer-supported training in the reference period is publishable with no qualifications.

Example 2:   Estimates of Proportions or Percentages Possessing a Characteristic

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Suppose that the user estimates that 525,883/3,124,927=16.8% of adults who received employer-supported training took 1 or more educational programs. How does the user determine the coefficient of variation of this estimate?

(1) Refer to the table for CANADA.

(2) Because the estimate is a percentage which is based on a a subset of the total population (i.e., adults who received employer-supported training), it is necessary to use both the percentage (16.8%) and the numerator portion of the percentage (525,883) in determining the coefficient of variation.

(3) The numerator 525,883 does not appear in the left-hand column (the 'Numerator of Percentage' column) so it is necessary to use the figure closet to it, namely 500,000. Similarly, the percentage estimate does not appear as any of the column headings, so it is necessary to use the figure closest to it, 15.0%.

(4) The figure at the intersection of the row and column used, namely 5.3%, is the coefficient of variation to be used.

(5) So the approximate coefficient of variation of the estimate is 5.3%.

The finding that 16.8% of adults who received employer-supported training took 1 or more educational programs can be published with no qualifications.

Example 3: Estimates of Differences Between Aggregates or Percentages

Suppose that a user estimates that 525,883/3,124,927=16.8% of adults who received employer-supported training took 1 or more educational programs, while 2,648,316/4,853,096=54.6% of adults who received non-employer-supported training took 1 or more educational programs. How does the user determine the coefficient of variation of the difference between these two estimates?

(1) Using the CANADA cv table for in the same manner as described in example 2 gives the cv of the estimate for people receiving employer-supported training as 5.3%, and the cv of the estimate for people receiving non-employer-supported training as 1.7%.

(2) Using rule 3, the standard error of a difference ($\hat{d} = \hat{X}_1 - \hat{X}_2$) is:

$$\sigma_{\hat{d}} = \sqrt{(\hat{X}_1\alpha_1)^2 + (\hat{X}_2\alpha_2)^2}$$

where $\hat{X}_1$ is estimate 1, $\hat{X}_2$ is estimate 2, and α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively.

That is, the standard error of the difference $\hat{d} = (.546-.168) = .378$ is:

$$\sigma_{\hat{d}} = \sqrt{[(.168)(.053)]^2 + [(.546)(.017)]^2}$$

$$= \sqrt{(.000079) + (.000086)}$$

$$= .013$$

(3) The coefficient of variation of $\hat{d}$ is given by $\sigma_{\hat{d}}/\hat{d} = .013/.378 = 0.034$.

(4) So the approximate coefficient of variation of the difference between the estimates is 3.4%. This estimate can be published with no qualifications.

Example 4: Estimates of Ratios

Suppose that the user estimates that 1,685,915 males took employer-supported training, while 1,439,012 females took employer-supported training. The user is interested in comparing the estimate of women versus that of men in the form of a ratio. How does the user determine the coefficient of variation of this estimate?

(1) First of all, this estimate is a ratio estimate, where the numerator of the estimate (= $\hat{X}_1$) is the number of females who took employer-supported training. The denominator of the estimate (= $\hat{X}_2$) is the number of males who took employer-supported training.

(2) Refer to the table for CANADA.

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(3) The numerator of this ratio estimate is 1,439,012. The figure closest to it is 1,500,000. The coefficient of variation for this estimate is found by referring to the first non-asterisk entry on that row, namely, 3.1%.

(4) The denominator of this ratio estimate is 1,685,915. The figure closest to it is 2,000,000. The coefficient of variation for this estimate is found by referring to the first non-asterisk entry on that row, namely, 2.7%.

(5) So the approximate coefficient of variation of the ratio estimate is given by rule 4, which is,

$$\alpha_{\hat{R}} = \sqrt{\alpha_1{}^2 + \alpha_2{}^2}$$

where α_1 and α_2 are the coefficients of variation of $\hat{X}_1$ and $\hat{X}_2$ respectively.

That is ,

$$\alpha_{\hat{R}} = \sqrt{(.031)^2 + (.027)^2}$$

$$= 0.041$$

The obtained ratio of women versus men who received employer-sponsored training is 1,439,012/1,685,915 which is 0.85 : 1. The coefficient of variation of this estimate is 4.1%, which is releasable with no qualifications.

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10.3 <u>How to Use the C.V. Tables to Obtain Confidence Limits</u>

Although coefficients of variation are widely used, a more intuitively meaningful measure of sampling error is the confidence interval of an estimate. A confidence interval constitutes a statement on the level of confidence that the true value for the population lies within a specified range of values. For example a 95% confidence interval can be described as follows:

If sampling of the population is repeated indefinitely, with each sample leading to a new confidence interval for an estimate, then in 95% of the samples the interval will cover the true population value.

Using the standard error of an estimate, confidence intervals for estimates may be obtained under the assumption that under repeated sampling of the population, the various estimates obtained for a population characteristic are normally distributed about the true population value. Under this assumption, the chances are about 68 out of 100 that the difference between a sample estimate and the true population value would be less than one standard error, about 95 out of 100 that the difference would be less than two standard errors, and about 99 out 100 that the differences would be less than three standard errors. These different degrees of confidence are referred to as the confidence levels.

Confidence intervals for an estimate, $\hat{X}$, are generally expressed as two numbers, one below the estimate and one above the estimate, as ($\hat{X}$-k, $\hat{X}$+k) where k is determined depending upon the level of confidence desired and the sampling error of the estimate.

Confidence intervals for an estimate can be calculated directly from the Approximate Sampling Variability Tables by first determining from the appropriate table the coefficient of variation of the estimate $\hat{X}$, and then using the following formula to convert to a confidence interval CI:

$$CI_X = \{\hat{X} - (t)(\hat{X})(\alpha_{\hat{X}}), \ \hat{X} + (t)(\hat{X})(\alpha_{\hat{X}})\}$$

where $\alpha_{\hat{X}}$ is the determined coefficient of variation of $\hat{X}$

t = 1 if a 68% confidence interval is desired
t = 1.6 if a 90% confidence interval is desired
t = 2 if a 95% confidence interval is desired
t = 3 if a 99% confidence interval is desired

NOTE: Release guidelines which apply to the estimate also apply to the confidence interval. For example, if the estimate is not

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releasable, then the confidence interval is not releasable
either.

10.4 __Example of Using the C.V. Tables to Obtain Confidence Limits__

A 95% confidence interval for the estimated proportion of
adults who took 1 or more educational program amongst those who
received employer-supported training (from Example 2, section
10.2) would be calculated as follows.

X = 16.8% (or expressed as a proportion = .168)

t = 2

α_X = 5.3% (.053 expressed as a proportion) is the coefficient
of variation of this estimate as determined from the tables.

CI_X = {.168 − (2) (.168) (.053), .168 + (2) (.168) (.053)}

CI_X = {.168 − .018, .168 + .018}

CI_X = {.150, .186}

With 95% confidence it can be said that between 15.0% and 18.6%
of adults who received employer-supported training, took 1 or
more educational programs.

10.5 __How to Use the C.V. Tables to do a t-test__

Standard errors may also be used to perform hypothesis testing,
a procedure for distinguishing between population parameters
using sample estimates. The sample estimates can be numbers,
averages, percentages, ratios, etc. Tests may be performed at
various levels of significance, where a level of significance
is the probability of concluding that the characteristics are
different when, in fact, they are identical.

Let X_1 and X_2 be sample estimates for 2 characteristics of
interest. Let the standard error on the difference $\hat{X}_1 - \hat{X}_2$ be
$\sigma_{\hat{d}}$. If

$$t = \frac{\hat{X}_1 - \hat{X}_2}{\sigma_{\hat{d}}}$$

is between −2 and 2, then no conclusion about the difference
between the characteristics is justified at the 5% level of
significance. If however, this ratio is smaller than −2 or
larger than +2, the observed difference is significant at the
0.05 level. That is to say, the characteristics are
significantly different.

10.6 __Example of Using the C.V. Tables to do a t-test__

Let us suppose we wish to test, at 5% level of significance, the hypothesis that there is no difference between the proportion of adults who took 1 or more educational program amongst those who received employer-supported training and amongst those who took non-employer-supported training. From example 3, section 10.2, the standard error of the difference between these two estimates was found to be = .013. Hence,

$$t = \frac{\hat{X}_1 - \hat{X}_2}{\sigma_{\hat{d}}} = \frac{.546 - .168}{.013} = \frac{.378}{.013} = 29.08$$

Since t = 29.08 is greater than 2, it must be concluded that there is a significant difference between the two estimates at the 0.05 level of significance. That is, a larger proportion of people who took non-employer-supported training took educational programs than did those who received employer-supported training.

10.7 __Coefficients of Variation for Quantitative Estimates__

For quantitative estimates, special tables would have to be produced to determine their sampling error. Since most of the variables for the Adult Education and Training Survey are primarily categorical in nature, this has not been done.

As a general rule, however, the coefficient of variation of a quantitative total will be larger than the coefficient of variation of the corresponding category estimate (i.e., the estimate of the number of persons contributing to the quantitative estimate). If the corresponding category estimate is not releasable, the quantitative estimate will not be either. For example, the coefficient of variation of the total number of weeks of training would be greater than the coefficient of variation of the corresponding proportion of adults who received training. Hence if the coefficient of variation of the proportion is not releasable, then the coefficient of variation of the corresponding quantitative estimate will also not be releasable.

Coefficients of variation of such estimates can be derived as required for a specific estimate using a technique known as pseudo replication. This involves dividing the records on the microdata files into subgroups (or replicates) and determining the variation in the estimate from replicate to replicate. Users wishing to derive coefficients of variation for quantitative estimates may contact Statistics Canada for advice on the allocation of records to appropriate replicates and the

formulae to be used in these calculations.

10.8 **Release Cut-offs for the AETS**

The minimum size of the estimate at the provincial, regional and Canada levels are specified in the table below.

Area	Publishable	Releasable With Qualification	Not Releasable
Newfoundland	16,500	7,500	4,000
Prince Edward Island	6,000	2,500	1,500
Nova Scotia	18,500	8,000	4,500
New Brunswick	17,500	8,000	4,500
Quebec	69,500	30,500	17,000
Ontario	75,000	33,000	18,500
Manitoba	31,500	14,000	8,000
Saskatchewan	17,500	7,500	4,500
Alberta	33,500	15,000	8,500
British Columbia	87,500	39,500	22,000
Atlantic Provinces	15,500	7,000	4,000
Prairie Provinces	29,500	13,000	7,500
CANADA	60,000	26,000	15,000

10.9 <u>**C.V. Tables**</u>

Approximate Sampling Variability Tables for NEWFOUNDLAND

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	67.8	67.5	66.4	64.6	62.8	60.9	59.0	57.0	54.9	52.8	48.2	37.3	21.5
2	********	47.9	47.7	47.0	45.7	44.4	43.1	41.7	40.3	38.8	37.3	34.1	26.4	15.2
3	********	39.1	38.9	38.3	37.3	36.3	35.2	34.1	32.9	31.7	30.5	27.8	21.5	12.4
4	********	33.9	33.7	33.2	32.3	31.4	30.5	29.5	28.5	27.5	26.4	24.1	18.7	10.8
5	****************		30.2	29.7	28.9	28.1	27.3	26.4	25.5	24.6	23.6	21.5	16.7	9.6
6	****************		27.5	27.1	26.4	25.6	24.9	24.1	23.3	22.4	21.5	19.7	15.2	8.8
7	****************		25.5	25.1	24.4	23.7	23.0	22.3	21.5	20.8	19.9	18.2	14.1	8.1
8	****************		23.8	23.5	22.9	22.2	21.5	20.9	20.2	19.4	18.7	17.0	13.2	7.6
9	************************			22.1	21.5	20.9	20.3	19.7	19.0	18.3	17.6	16.1	12.4	7.2
10	************************			21.0	20.4	19.9	19.3	18.7	18.0	17.4	16.7	15.2	11.8	6.8
11	************************			20.0	19.5	18.9	18.4	17.8	17.2	16.6	15.9	14.5	11.3	6.5
12	************************			19.2	18.7	18.1	17.6	17.0	16.5	15.9	15.2	13.9	10.8	6.2
13	************************			18.4	17.9	17.4	16.9	16.4	15.8	15.2	14.6	13.4	10.4	6.0
14	************************			17.8	17.3	16.8	16.3	15.8	15.2	14.7	14.1	12.9	10.0	5.8
15	************************			17.1	16.7	16.2	15.7	15.2	14.7	14.2	13.6	12.4	9.6	5.6
16	************************			16.6	16.2	15.7	15.2	14.8	14.3	13.7	13.2	12.0	9.3	5.4
17	************************			16.1	15.7	15.2	14.8	14.3	13.8	13.3	12.8	11.7	9.1	5.2
18	************************			15.7	15.2	14.8	14.4	13.9	13.4	12.9	12.4	11.4	8.8	5.1
19	************************			15.2	14.8	14.4	14.0	13.5	13.1	12.6	12.1	11.1	8.6	4.9
20	************************			14.9	14.5	14.0	13.6	13.2	12.7	12.3	11.8	10.8	8.3	4.8
21	************************			14.5	14.1	13.7	13.3	12.9	12.4	12.0	11.5	10.5	8.1	4.7
22	********************************				13.8	13.4	13.0	12.6	12.2	11.7	11.3	10.3	8.0	4.6
23	********************************				13.5	13.1	12.7	12.3	11.9	11.5	11.0	10.0	7.8	4.5
24	********************************				13.2	12.8	12.4	12.0	11.6	11.2	10.8	9.8	7.6	4.4
25	********************************				12.9	12.6	12.2	11.8	11.4	11.0	10.6	9.6	7.5	4.3
30	********************************				11.8	11.5	11.1	10.8	10.4	10.0	9.6	8.8	6.8	3.9
35	********************************				10.9	10.6	10.3	10.0	9.6	9.3	8.9	8.1	6.3	3.6
40	********************************				10.2	9.9	9.6	9.3	9.0	8.7	8.3	7.6	5.9	3.4
45	**					9.4	9.1	8.8	8.5	8.2	7.9	7.2	5.6	3.2
50	**					8.9	8.6	8.3	8.1	7.8	7.5	6.8	5.3	3.0
55	**					8.5	8.2	8.0	7.7	7.4	7.1	6.5	5.0	2.9
60	**					8.1	7.9	7.6	7.4	7.1	6.8	6.2		

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```
4.8    2.8
  65    ************************************************       7.6    7.3    7.1    6.8    6.5    6.0
4.6    2.7
  70    ***********************************************        7.3    7.1    6.8    6.6    6.3    5.8
4.5    2.6
  75    *********************************************          7.0    6.8    6.6    6.3    6.1    5.6
4.3    2.5
  80    *********************************************          6.8    6.6    6.4    6.1    5.9    5.4
4.2    2.4
  85    *********************************************          6.6    6.4    6.2    6.0    5.7    5.2
4.0    2.3
  90    ***************************************************            6.2    6.0    5.8    5.6    5.1
3.9    2.3
  95    ****************************************************           6.1    5.8    5.6    5.4    4.9
3.8    2.2
 100    *****************************************************          5.9    5.7    5.5    5.3    4.8
3.7    2.2
 125    ************************************************************          5.1    4.9    4.7    4.3
3.3    1.9
 150    ********************************************************************         4.3    3.9
3.0    1.8
 200    *****************************************************************************       3.4
2.6    1.5
 250    *********************************************************************************************
2.4    1.4
                                                      3         0         0
*************************************************************************************************
1.2
                                                      3         5         0
*************************************************************************************************
1.2


NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION
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Approximate Sampling Variability Tables for P. E. I.

ESTIMATED PERCENTAGE

Numerator of Percentage ('000)	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	*	*	40.7	40.1	39.0	37.9	36.8	35.6	34.4	33.1	31.8	29.1	22.5	13.0
2	*	*	*	28.3	27.6	26.8	26.0	25.2	24.3	23.4	22.5	20.6	15.9	9.2
3	*	*	*	23.1	22.5	21.9	21.2	20.6	19.9	19.1	18.4	16.8	13.0	7.5
4	*	*	*	20.0	19.5	19.0	18.4	17.8	17.2	16.6	15.9	14.5	11.3	6.5
5	*	*	*	*	17.4	16.9	16.4	15.9	15.4	14.8	14.2	13.0	10.1	5.8
6	*	*	*	*	15.9	15.5	15.0	14.5	14.0	13.5	13.0	11.9	9.2	5.3
7	*	*	*	*	14.7	14.3	13.9	13.5	13.0	12.5	12.0	11.0	8.5	4.9
8	*	*	*	*	13.8	13.4	13.0	12.6	12.2	11.7	11.3	10.3	8.0	4.6
9	*	*	*	*	13.0	12.6	12.3	11.9	11.5	11.0	10.6	9.7	7.5	4.3
10	*	*	*	*	*	12.0	11.6	11.3	10.9	10.5	10.1	9.2	7.1	4.1
11	*	*	*	*	*	11.4	11.1	10.7	10.4	10.0	9.6	8.8	6.8	3.9
12	*	*	*	*	*	10.9	10.6	10.3	9.9	9.6	9.2	8.4	6.5	3.8
13	*	*	*	*	*	10.5	10.2	9.9	9.5	9.2	8.8	8.1	6.2	3.6
14	*	*	*	*	*	10.1	9.8	9.5	9.2	8.9	8.5	7.8	6.0	3.5
15	*	*	*	*	*	*	9.5	9.2	8.9	8.6	8.2	7.5	5.8	3.4
16	*	*	*	*	*	*	9.2	8.9	8.6	8.3	8.0	7.3	5.6	3.2
17	*	*	*	*	*	*	8.9	8.6	8.3	8.0	7.7	7.1	5.5	3.2
18	*	*	*	*	*	*	8.7	8.4	8.1	7.8	7.5	6.9	5.3	3.1
19	*	*	*	*	*	*	8.4	8.2	7.9	7.6	7.3	6.7	5.2	3.0
20	*	*	*	*	*	*	*	8.0	7.7	7.4	7.1	6.5	5.0	2.9
21	*	*	*	*	*	*	*	7.8	7.5	7.2	6.9	6.3	4.9	2.8
22	*	*	*	*	*	*	*	7.6	7.3	7.1	6.8	6.2	4.8	2.8
23	*	*	*	*	*	*	*	7.4	7.2	6.9	6.6	6.1	4.7	2.7
24	*	*	*	*	*	*	*	7.3	7.0	6.8	6.5	5.9	4.6	2.7
25	*	*	*	*	*	*	*	*	6.9	6.6	6.4	5.8	4.5	2.6
30	*	*	*	*	*	*	*	*	*	6.1	5.8	5.3	4.1	2.4
35	*	*	*	*	*	*	*	*	*	*	5.4	4.9	3.8	2.2
40	*	*	*	*	*	*	*	*	*	*	*	4.6	3.6	2.1
45	*	*	*	*	*	*	*	*	*	*	*	4.3	3.4	1.9
50	*	*	*	*	*	*	*	*	*	*	*	*	3.2	1.8
55	*	*	*	*	*	*	*	*	*	*	*	*	3.0	1.8
60	*	*	*	*	*	*	*	*	*	*	*	*		

```
  2.9    1.7
    65     *****************************************************************************************************
  2.8    1.6
                                                                7          0
*****************************************************************************************************
1.6
                                                                7          5
*****************************************************************************************************
1.5
                                                                8          0
*****************************************************************************************************
1.5
                                                                8          5
*****************************************************************************************************
1.4
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

Approximate Sampling Variability Tables for NOVA SCOTIA

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	71.1	70.7	69.6	67.7	65.8	63.9	61.8	59.7	57.6	55.3	50.5	39.1	22.6
2	********	50.2	50.0	49.2	47.9	46.6	45.2	43.7	42.2	40.7	39.1	35.7	27.7	16.0
3	********	41.0	40.8	40.2	39.1	38.0	36.9	35.7	34.5	33.2	31.9	29.2	22.6	13.0
4	********	35.5	35.3	34.8	33.9	32.9	31.9	30.9	29.9	28.8	27.7	25.2	19.6	11.3
5	********	31.8	31.6	31.1	30.3	29.4	28.6	27.7	26.7	25.7	24.7	22.6	17.5	10.1
6	********	29.0	28.9	28.4	27.7	26.9	26.1	25.2	24.4	23.5	22.6	20.6	16.0	9.2
7	****************	26.7	26.3	25.6	24.9	24.1	23.4	22.6	21.8	20.9	19.1		14.8	8.5
8	****************	25.0	24.6	24.0	23.3	22.6	21.9	21.1	20.4	19.6	17.9		13.8	8.0
9	****************	23.6	23.2	22.6	21.9	21.3	20.6	19.9	19.2	18.4	16.8		13.0	7.5
10	****************	22.4	22.0	21.4	20.8	20.2	19.6	18.9	18.2	17.5	16.0		12.4	7.1
11	****************	21.3	21.0	20.4	19.9	19.3	18.6	18.0	17.4	16.7	15.2		11.8	6.8
12	****************	20.4	20.1	19.6	19.0	18.4	17.9	17.2	16.6	16.0	14.6		11.3	6.5
13	****************	19.6	19.3	18.8	18.3	17.7	17.2	16.6	16.0	15.3	14.0		10.8	6.3
14	************************	18.6	18.1	17.6	17.1	16.5	16.0	15.4	14.8	13.5			10.5	6.0
15	************************	18.0	17.5	17.0	16.5	16.0	15.4	14.9	14.3	13.0			10.1	5.8
16	************************	17.4	16.9	16.5	16.0	15.5	14.9	14.4	13.8	12.6			9.8	5.6
17	************************	16.9	16.4	16.0	15.5	15.0	14.5	14.0	13.4	12.2			9.5	5.5
18	************************	16.4	16.0	15.5	15.1	14.6	14.1	13.6	13.0	11.9			9.2	5.3
19	************************	16.0	15.5	15.1	14.7	14.2	13.7	13.2	12.7	11.6			9.0	5.2
20	************************	15.6	15.1	14.7	14.3	13.8	13.4	12.9	12.4	11.3			8.7	5.0
21	************************	15.2	14.8	14.4	13.9	13.5	13.0	12.6	12.1	11.0			8.5	4.9
22	************************	14.8	14.4	14.0	13.6	13.2	12.7	12.3	11.8	10.8			8.3	4.8
23	************************	14.5	14.1	13.7	13.3	12.9	12.5	12.0	11.5	10.5			8.2	4.7
24	************************	14.2	13.8	13.4	13.0	12.6	12.2	11.8	11.3	10.3			8.0	4.6
25	************************	13.9	13.5	13.2	12.8	12.4	11.9	11.5	11.1	10.1			7.8	4.5
30	************************	12.7	12.4	12.0	11.7	11.3	10.9	10.5	10.1	9.2			7.1	4.1
35	******************************	11.5	11.1	10.8	10.5	10.1	9.7	9.3	8.5				6.6	3.8
40	******************************	10.7	10.4	10.1	9.8	9.4	9.1	8.7	8.0				6.2	3.6
45	******************************	10.1	9.8	9.5	9.2	8.9	8.6	8.2	7.5				5.8	3.4
50	******************************	9.6	9.3	9.0	8.7	8.4	8.1	7.8	7.1				5.5	3.2
55	******************************	9.1	8.9	8.6	8.3	8.1	7.8	7.5	6.8				5.3	3.0
60	******************************	8.7	8.5	8.2	8.0	7.7	7.4	7.1	6.5					

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5.0      2.9
  65     ******************************   8.4   8.2   7.9   7.7   7.4   7.1   6.9   6.3
4.9      2.8
  70     *************************************   7.9   7.6   7.4   7.1   6.9   6.6   6.0
4.7      2.7
  75     ******************************************   7.6   7.4   7.1   6.9   6.6   6.4   5.8
4.5      2.6
  80     ******************************************   7.4   7.1   6.9   6.7   6.4   6.2   5.6
4.4      2.5
  85     ******************************************   7.1   6.9   6.7   6.5   6.2   6.0   5.5
4.2      2.4
  90     ************************************   6.9   6.7   6.5   6.3   6.1   5.8   5.3
4.1      2.4
  95     ************************************   6.8   6.6   6.3   6.1   5.9   5.7   5.2
4.0      2.3
 100     ************************************   6.6   6.4   6.2   6.0   5.8   5.5   5.0
3.9      2.3
 125     ****************************************************   5.7   5.5   5.3   5.1   4.9   4.5
3.5      2.0
 150     ************************************************************   5.0   4.9   4.7   4.5   4.1
3.2      1.8
 200     ****************************************************************************   4.2   4.1   3.9   3.6
2.8      1.6
 250     ****************************************************************************************   3.5   3.2
2.5      1.4
 300     ****************************************************************************************************   2.9
2.3      1.3
 350     ********************************************************************************************************************
2.1      1.2
 400     ********************************************************************************************************************
2.0      1.1
 450     ********************************************************************************************************************
1.8      1.1
                                                  5         0         0
*********************************************************************************************************************
1.0
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

Approximate Sampling Variability Tables for NEW BRUNSWICK

NUMERATOR OF PERCENTAGE ('000)		ESTIMATED PERCENTAGE												
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	69.7	69.3	68.2	66.4	64.5	62.6	60.6	58.6	56.4	54.2	49.5	38.3	22.1
2	********	49.3	49.0	48.3	47.0	45.6	44.3	42.9	41.4	39.9	38.3	35.0	27.1	15.7
3	********	40.2	40.0	39.4	38.3	37.3	36.2	35.0	33.8	32.6	31.3	28.6	22.1	12.8
4	********	34.8	34.7	34.1	33.2	32.3	31.3	30.3	29.3	28.2	27.1	24.8	19.2	11.1
5	********	31.2	31.0	30.5	29.7	28.9	28.0	27.1	26.2	25.2	24.3	22.1	17.1	9.9
6	****************		28.3	27.9	27.1	26.4	25.6	24.8	23.9	23.0	22.1	20.2	15.7	9.0
7	****************		26.2	25.8	25.1	24.4	23.7	22.9	22.1	21.3	20.5	18.7	14.5	8.4
8	****************		24.5	24.1	23.5	22.8	22.1	21.4	20.7	20.0	19.2	17.5	13.6	7.8
9	****************		23.1	22.7	22.1	21.5	20.9	20.2	19.5	18.8	18.1	16.5	12.8	7.4
10	****************		21.9	21.6	21.0	20.4	19.8	19.2	18.5	17.8	17.1	15.7	12.1	7.0
11	************************			20.6	20.0	19.5	18.9	18.3	17.7	17.0	16.4	14.9	11.6	6.7
12	************************			19.7	19.2	18.6	18.1	17.5	16.9	16.3	15.7	14.3	11.1	6.4
13	************************			18.9	18.4	17.9	17.4	16.8	16.2	15.7	15.0	13.7	10.6	6.1
14	************************			18.2	17.8	17.3	16.7	16.2	15.7	15.1	14.5	13.2	10.2	5.9
15	************************			17.6	17.1	16.7	16.2	15.7	15.1	14.6	14.0	12.8	9.9	5.7
16	************************			17.1	16.6	16.1	15.7	15.2	14.6	14.1	13.6	12.4	9.6	5.5
17	************************			16.6	16.1	15.7	15.2	14.7	14.2	13.7	13.2	12.0	9.3	5.4
18	************************			16.1	15.7	15.2	14.8	14.3	13.8	13.3	12.8	11.7	9.0	5.2
19	************************			15.7	15.2	14.8	14.4	13.9	13.4	12.9	12.4	11.4	8.8	5.1
20	************************			15.3	14.9	14.4	14.0	13.6	13.1	12.6	12.1	11.1	8.6	5.0
21	************************			14.9	14.5	14.1	13.7	13.2	12.8	12.3	11.8	10.8	8.4	4.8
22	************************			14.5	14.2	13.8	13.4	12.9	12.5	12.0	11.6	10.6	8.2	4.7
23	************************			14.2	13.8	13.5	13.1	12.6	12.2	11.8	11.3	10.3	8.0	4.6
24	************************			13.9	13.6	13.2	12.8	12.4	12.0	11.5	11.1	10.1	7.8	4.5
25	************************			13.6	13.3	12.9	12.5	12.1	11.7	11.3	10.8	9.9	7.7	4.4
30	********************************				12.1	11.8	11.4	11.1	10.7	10.3	9.9	9.0	7.0	4.0
35	********************************				11.2	10.9	10.6	10.2	9.9	9.5	9.2	8.4	6.5	3.7
40	********************************				10.5	10.2	9.9	9.6	9.3	8.9	8.6	7.8	6.1	3.5
45	********************************				9.9	9.6	9.3	9.0	8.7	8.4	8.1	7.4	5.7	3.3
50	********************************				9.4	9.1	8.9	8.6	8.3	8.0	7.7	7.0	5.4	3.1
55	**					8.7	8.4	8.2	7.9	7.6	7.3	6.7	5.2	3.0
60	***					8.3	8.1	7.8	7.6	7.3	7.0	6.4		

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 5.0     2.9
    65      ****************************************       8.0     7.8     7.5     7.3     7.0     6.7     6.1
 4.8     2.7
    70      ****************************************       7.7     7.5     7.2     7.0     6.7     6.5     5.9
 4.6     2.6
    75      ****************************************       7.5     7.2     7.0     6.8     6.5     6.3     5.7
 4.4     2.6
    80      ****************************************       7.2     7.0     6.8     6.5     6.3     6.1     5.5
 4.3     2.5
    85      ******************************************     6.8     6.6     6.4     6.1     5.9     5.4
 4.2     2.4
    90      ******************************************     6.6     6.4     6.2     5.9     5.7     5.2
 4.0     2.3
    95      *******************************************    6.4     6.2     6.0     5.8     5.6     5.1
 3.9     2.3
   100      *******************************************    6.3     6.1     5.9     5.6     5.4     5.0
 3.8     2.2
   125      ***********************************************  5.4     5.2     5.0     4.9     4.4
 3.4     2.0
   150      **************************************************  4.8     4.6     4.4     4.0
 3.1     1.8
   200      ***************************************************************  3.8     3.5
 2.7     1.6
   250      ***********************************************************************  3.1
 2.4     1.4
   300      ***********************************************************************************
 2.2     1.3
   350      ***********************************************************************************
 2.0     1.2
                                                        4       0       0
**********************************************************************************************
 1.1
                                                        4       5       0
**********************************************************************************************
 1.0


NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION
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ADULT EDUCATION AND TRAINING SURVEY - January 1994

Approximate Sampling Variability Tables for QUEBEC

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	138.0	137.4	136.7	134.6	131.0	127.3	123.5	119.6	115.6	111.4	107.0	97.7	75.6	43.7
2	97.6	97.2	96.7	95.2	92.7	90.0	87.4	84.6	81.7	78.7	75.6	69.1	53.5	30.9
3	79.7	79.3	78.9	77.7	75.6	73.5	71.3	69.1	66.7	64.3	61.8	56.4	43.7	25.2
4	69.0	68.7	68.4	67.3	65.5	63.7	61.8	59.8	57.8	55.7	53.5	48.8	37.8	21.8
5	61.7	61.5	61.1	60.2	58.6	56.9	55.2	53.5	51.7	49.8	47.8	43.7	33.8	19.5
6	********	56.1	55.8	55.0	53.5	52.0	50.4	48.8	47.2	45.5	43.7	39.9	30.9	17.8
7	********	51.9	51.7	50.9	49.5	48.1	46.7	45.2	43.7	42.1	40.4	36.9	28.6	16.5
8	********	48.6	48.3	47.6	46.3	45.0	43.7	42.3	40.9	39.4	37.8	34.5	26.7	15.4
9	********	45.8	45.6	44.9	43.7	42.4	41.2	39.9	38.5	37.1	35.7	32.6	25.2	14.6
10	********	43.5	43.2	42.6	41.4	40.3	39.1	37.8	36.5	35.2	33.8	30.9	23.9	13.8
11	********	41.4	41.2	40.6	39.5	38.4	37.2	36.1	34.8	33.6	32.3	29.4	22.8	13.2
12	********	39.7	39.5	38.9	37.8	36.8	35.7	34.5	33.4	32.1	30.9	28.2	21.8	12.6
13	********	38.1	37.9	37.3	36.3	35.3	34.3	33.2	32.0	30.9	29.7	27.1	21.0	12.1
14	********	36.7	36.5	36.0	35.0	34.0	33.0	32.0	30.9	29.8	28.6	26.1	20.2	11.7
15	********	35.5	35.3	34.8	33.8	32.9	31.9	30.9	29.8	28.8	27.6	25.2	19.5	11.3
16	********	34.4	34.2	33.7	32.8	31.8	30.9	29.9	28.9	27.8	26.7	24.4	18.9	10.9
17	********	33.3	33.2	32.7	31.8	30.9	30.0	29.0	28.0	27.0	25.9	23.7	18.3	10.6
18	********	32.4	32.2	31.7	30.9	30.0	29.1	28.2	27.2	26.2	25.2	23.0	17.8	10.3
19	********	31.5	31.4	30.9	30.1	29.2	28.3	27.4	26.5	25.5	24.5	22.4	17.4	10.0
20	********	30.7	30.6	30.1	29.3	28.5	27.6	26.7	25.8	24.9	23.9	21.8	16.9	9.8
21	********	30.0	29.8	29.4	28.6	27.8	27.0	26.1	25.2	24.3	23.3	21.3	16.5	9.5
22	********	29.3	29.2	28.7	27.9	27.1	26.3	25.5	24.6	23.7	22.8	20.8	16.1	9.3
23	********	28.7	28.5	28.1	27.3	26.6	25.8	24.9	24.1	23.2	22.3	20.4	15.8	9.1
24	********	28.1	27.9	27.5	26.7	26.0	25.2	24.4	23.6	22.7	21.8	19.9	15.4	8.9
25	********	27.5	27.3	26.9	26.2	25.5	24.7	23.9	23.1	22.3	21.4	19.5	15.1	8.7
30	********	25.1	25.0	24.6	23.9	23.2	22.6	21.8	21.1	20.3	19.5	17.8	13.8	8.0
35	********	23.2	23.1	22.8	22.1	21.5	20.9	20.2	19.5	18.8	18.1	16.5	12.8	7.4
40	********	21.7	21.6	21.3	20.7	20.1	19.5	18.9	18.3	17.6	16.9	15.4	12.0	6.9
45	********	20.5	20.4	20.1	19.5	19.0	18.4	17.8	17.2	16.6	15.9	14.6	11.3	6.5
50	********	19.4	19.3	19.0	18.5	18.0	17.5	16.9	16.3	15.7	15.1	13.8	10.7	6.2
55	****************		18.4	18.2	17.7	17.2	16.7	16.1	15.6	15.0	14.4	13.2	10.2	5.9
60	****************		17.7	17.4	16.9	16.4	15.9	15.4	14.9	14.4	13.8	12.6		

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9.8      5.6
  65     ****************         17.0   16.7   16.3   15.8   15.3   14.8   14.3   13.8   13.3   12.1
9.4      5.4
  70     ****************         16.3   16.1   15.7   15.2   14.8   14.3   13.8   13.3   12.8   11.7
9.0      5.2
  75     ****************         15.8   15.5   15.1   14.7   14.3   13.8   13.3   12.9   12.4   11.3
8.7      5.0
  80     ****************         15.3   15.1   14.6   14.2   13.8   13.4   12.9   12.4   12.0   10.9
8.5      4.9
  85     ****************         14.8   14.6   14.2   13.8   13.4   13.0   12.5   12.1   11.6   10.6
8.2      4.7
  90     ****************         14.4   14.2   13.8   13.4   13.0   12.6   12.2   11.7   11.3   10.3
8.0      4.6
  95     ****************         14.0   13.8   13.4   13.1   12.7   12.3   11.9   11.4   11.0   10.0
7.8      4.5
 100     ****************         13.7   13.5   13.1   12.7   12.4   12.0   11.6   11.1   10.7    9.8
7.6      4.4
 125     ************************         12.0   11.7   11.4   11.0   10.7   10.3   10.0    9.6    8.7
6.8      3.9
 150     ************************         11.0   10.7   10.4   10.1    9.8    9.4    9.1    8.7    8.0
6.2      3.6
 200     ***********************           9.5    9.3    9.0    8.7    8.5    8.2    7.9    7.6    6.9
5.3      3.1
 250     ***********************           8.5    8.3    8.1    7.8    7.6    7.3    7.0    6.8    6.2
4.8      2.8
 300     ******************************    7.6    7.4    7.1    6.9    6.7    6.4    6.2    5.6
4.4      2.5
 350     ********************************  7.0    6.8    6.6    6.4    6.2    6.0    5.7    5.2
4.0      2.3
 400     ********************************  6.6    6.4    6.2    6.0    5.8    5.6    5.3    4.9
3.8      2.2
 450     ********************************  6.2    6.0    5.8    5.6    5.4    5.2    5.0    4.6
3.6      2.1
 500     ********************************  5.9    5.7    5.5    5.3    5.2    5.0    4.8    4.4
3.4      2.0
 750     ***************************************    4.6    4.5    4.4    4.2    4.1    3.9    3.6
2.8      1.6
1000     ****************************************************    3.9    3.8    3.7    3.5    3.4    3.1
2.4      1.4
1500     ****************************************************************    3.0    2.9    2.8    2.5
2.0      1.1
2000     *****************************************************************************    2.4    2.2
1.7      1.0
3000     ***********************************************************************************************************
1.4      0.8
                              4       0       0       0
***********************************************************************************************************
0.7
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

ADULT EDUCATION AND TRAINING SURVEY - January 1994

Approximate Sampling Variability Tables for ONTARIO

NUMERATOR OF PERCENTAGE ('000)	ESTIMATED PERCENTAGE													
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	143.5	142.9	142.2	140.0	136.2	132.4	128.4	124.4	120.1	115.8	111.2	101.5	78.7	45.4
2	101.5	101.0	100.5	99.0	96.3	93.6	90.8	87.9	85.0	81.9	78.7	71.8	55.6	32.1
3	82.9	82.5	82.1	80.8	78.7	76.4	74.2	71.8	69.4	66.8	64.2	58.6	45.4	26.2
4	71.8	71.4	71.1	70.0	68.1	66.2	64.2	62.2	60.1	57.9	55.6	50.8	39.3	22.7
5	64.2	63.9	63.6	62.6	60.9	59.2	57.4	55.6	53.7	51.8	49.7	45.4	35.2	20.3
6	58.6	58.3	58.0	57.1	55.6	54.0	52.4	50.8	49.0	47.3	45.4	41.5	32.1	18.5
7	54.2	54.0	53.7	52.9	51.5	50.0	48.5	47.0	45.4	43.8	42.0	38.4	29.7	17.2
8	********	50.5	50.3	49.5	48.2	46.8	45.4	44.0	42.5	40.9	39.3	35.9	27.8	16.1
9	********	47.6	47.4	46.7	45.4	44.1	42.8	41.5	40.0	38.6	37.1	33.8	26.2	15.1
10	********	45.2	45.0	44.3	43.1	41.9	40.6	39.3	38.0	36.6	35.2	32.1	24.9	14.4
11	********	43.1	42.9	42.2	41.1	39.9	38.7	37.5	36.2	34.9	33.5	30.6	23.7	13.7
12	********	41.2	41.0	40.4	39.3	38.2	37.1	35.9	34.7	33.4	32.1	29.3	22.7	13.1
13	********	39.6	39.4	38.8	37.8	36.7	35.6	34.5	33.3	32.1	30.9	28.2	21.8	12.6
14	********	38.2	38.0	37.4	36.4	35.4	34.3	33.2	32.1	30.9	29.7	27.1	21.0	12.1
15	********	36.9	36.7	36.1	35.2	34.2	33.2	32.1	31.0	29.9	28.7	26.2	20.3	11.7
16	********	35.7	35.5	35.0	34.1	33.1	32.1	31.1	30.0	28.9	27.8	25.4	19.7	11.4
17	********	34.7	34.5	33.9	33.0	32.1	31.2	30.2	29.1	28.1	27.0	24.6	19.1	11.0
18	********	33.7	33.5	33.0	32.1	31.2	30.3	29.3	28.3	27.3	26.2	23.9	18.5	10.7
19	********	32.8	32.6	32.1	31.3	30.4	29.5	28.5	27.6	26.6	25.5	23.3	18.0	10.4
20	********	31.9	31.8	31.3	30.5	29.6	28.7	27.8	26.9	25.9	24.9	22.7	17.6	10.2
21	********	31.2	31.0	30.5	29.7	28.9	28.0	27.1	26.2	25.3	24.3	22.2	17.2	9.9
22	********	30.5	30.3	29.8	29.0	28.2	27.4	26.5	25.6	24.7	23.7	21.6	16.8	9.7
23	********	29.8	29.6	29.2	28.4	27.6	26.8	25.9	25.1	24.1	23.2	21.2	16.4	9.5
24	********	29.2	29.0	28.6	27.8	27.0	26.2	25.4	24.5	23.6	22.7	20.7	16.1	9.3
25	********	28.6	28.4	28.0	27.2	26.5	25.7	24.9	24.0	23.2	22.2	20.3	15.7	9.1
30	********	26.1	26.0	25.6	24.9	24.2	23.4	22.7	21.9	21.1	20.3	18.5	14.4	8.3
35	********	24.2	24.0	23.7	23.0	22.4	21.7	21.0	20.3	19.6	18.8	17.2	13.3	7.7
40	********	22.6	22.5	22.1	21.5	20.9	20.3	19.7	19.0	18.3	17.6	16.1	12.4	7.2
45	********	21.3	21.2	20.9	20.3	19.7	19.1	18.5	17.9	17.3	16.6	15.1	11.7	6.8
50	********	20.2	20.1	19.8	19.3	18.7	18.2	17.6	17.0	16.4	15.7	14.4	11.1	6.4
55	********	19.3	19.2	18.9	18.4	17.9	17.3	16.8	16.2	15.6	15.0	13.7	10.6	6.1
60	********	18.4	18.4	18.1	17.6	17.1	16.6	16.1	15.5	14.9	14.4	13.1		

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10.2     5.9
  65     ********      17.7   17.6   17.4   16.9   16.4   15.9   15.4   14.9   14.4   13.8   12.6
 9.8     5.6
  70     ********      17.1   17.0   16.7   16.3   15.8   15.4   14.9   14.4   13.8   13.3   12.1
 9.4     5.4
  75     ********      16.5   16.4   16.2   15.7   15.3   14.8   14.4   13.9   13.4   12.8   11.7
 9.1     5.2
  80     ****************     15.9   15.6   15.2   14.8   14.4   13.9   13.4   12.9   12.4   11.4
 8.8     5.1
  85     ****************     15.4   15.2   14.8   14.4   13.9   13.5   13.0   12.6   12.1   11.0
 8.5     4.9
  90     ****************     15.0   14.8   14.4   14.0   13.5   13.1   12.7   12.2   11.7   10.7
 8.3     4.8
  95     ****************     14.6   14.4   14.0   13.6   13.2   12.8   12.3   11.9   11.4   10.4
 8.1     4.7
 100     ****************     14.2   14.0   13.6   13.2   12.8   12.4   12.0   11.6   11.1   10.2
 7.9     4.5
 125     ****************     12.7   12.5   12.2   11.8   11.5   11.1   10.7   10.4    9.9    9.1
 7.0     4.1
 150     ****************     11.6   11.4   11.1   10.8   10.5   10.2    9.8    9.5    9.1    8.3
 6.4     3.7
 200     ************************     9.9    9.6    9.4    9.1    8.8    8.5    8.2    7.9    7.2
 5.6     3.2
 250     ************************     8.9    8.6    8.4    8.1    7.9    7.6    7.3    7.0    6.4
 5.0     2.9
 300     ************************     8.1    7.9    7.6    7.4    7.2    6.9    6.7    6.4    5.9
 4.5     2.6
 350     ************************     7.5    7.3    7.1    6.9    6.6    6.4    6.2    5.9    5.4
 4.2     2.4
 400     ******************************     6.8    6.6    6.4    6.2    6.0    5.8    5.6    5.1
 3.9     2.3
 450     ******************************     6.4    6.2    6.1    5.9    5.7    5.5    5.2    4.8
 3.7     2.1
 500     ******************************     6.1    5.9    5.7    5.6    5.4    5.2    5.0    4.5
 3.5     2.0
 750     ******************************     5.0    4.8    4.7    4.5    4.4    4.2    4.1    3.7
 2.9     1.7
1000     ****************************************     4.2    4.1    3.9    3.8    3.7    3.5    3.2
 2.5     1.4
1500     **************************************************     3.3    3.2    3.1    3.0    2.9    2.6
 2.0     1.2
2000     ******************************************************************     2.7    2.6    2.5    2.3
 1.8     1.0
3000     ****************************************************************************************     2.0    1.9
 1.4     0.8
4000     *********************************************************************************************************************
 1.2     0.7
5000     *********************************************************************************************************************
 1.1     0.6
                                  6      0      0      0
*******************************************************************************************************
 0.6
                                  7      0      0      0
*******************************************************************************************************
 0.5
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

ADULT EDUCATION AND TRAINING SURVEY – January 1994

Approximate Sampling Variability Tables for MANITOBA

| | | | | | ESTIMATED PERCENTAGE | | | | | | | | | |
NUMERATOR OF PERCENTAGE ('000)	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	94.1	93.6	92.2	89.7	87.2	84.6	81.9	79.1	76.2	73.3	66.9	51.8	29.9
2	********	66.5	66.2	65.2	63.4	61.7	59.8	57.9	55.9	53.9	51.8	47.3	36.6	21.1
3	********	54.3	54.1	53.2	51.8	50.3	48.8	47.3	45.7	44.0	42.3	38.6	29.9	17.3
4	********	47.0	46.8	46.1	44.9	43.6	42.3	41.0	39.6	38.1	36.6	33.4	25.9	15.0
5	********	42.1	41.9	41.2	40.1	39.0	37.8	36.6	35.4	34.1	32.8	29.9	23.2	13.4
6	********	38.4	38.2	37.6	36.6	35.6	34.5	33.4	32.3	31.1	29.9	27.3	21.1	12.2
7	********	35.6	35.4	34.8	33.9	33.0	32.0	31.0	29.9	28.8	27.7	25.3	19.6	11.3
8	****************		33.1	32.6	31.7	30.8	29.9	29.0	28.0	27.0	25.9	23.6	18.3	10.6
9	****************		31.2	30.7	29.9	29.1	28.2	27.3	26.4	25.4	24.4	22.3	17.3	10.0
10	****************		29.6	29.1	28.4	27.6	26.7	25.9	25.0	24.1	23.2	21.1	16.4	9.5
11	****************		28.2	27.8	27.1	26.3	25.5	24.7	23.9	23.0	22.1	20.2	15.6	9.0
12	****************		27.0	26.6	25.9	25.2	24.4	23.6	22.8	22.0	21.1	19.3	15.0	8.6
13	****************		26.0	25.6	24.9	24.2	23.5	22.7	21.9	21.1	20.3	18.5	14.4	8.3
14	****************		25.0	24.6	24.0	23.3	22.6	21.9	21.1	20.4	19.6	17.9	13.8	8.0
15	****************		24.2	23.8	23.2	22.5	21.8	21.1	20.4	19.7	18.9	17.3	13.4	7.7
16	************************			23.0	22.4	21.8	21.1	20.5	19.8	19.1	18.3	16.7	12.9	7.5
17	************************			22.4	21.8	21.1	20.5	19.9	19.2	18.5	17.8	16.2	12.6	7.3
18	************************			21.7	21.1	20.6	19.9	19.3	18.6	18.0	17.3	15.8	12.2	7.0
19	************************			21.1	20.6	20.0	19.4	18.8	18.2	17.5	16.8	15.3	11.9	6.9
20	************************			20.6	20.1	19.5	18.9	18.3	17.7	17.0	16.4	15.0	11.6	6.7
21	************************			20.1	19.6	19.0	18.5	17.9	17.3	16.6	16.0	14.6	11.3	6.5
22	************************			19.7	19.1	18.6	18.0	17.5	16.9	16.3	15.6	14.3	11.0	6.4
23	************************			19.2	18.7	18.2	17.6	17.1	16.5	15.9	15.3	13.9	10.8	6.2
24	************************			18.8	18.3	17.8	17.3	16.7	16.2	15.6	15.0	13.7	10.6	6.1
25	************************			18.4	17.9	17.4	16.9	16.4	15.8	15.2	14.7	13.4	10.4	6.0
30	************************			16.8	16.4	15.9	15.4	15.0	14.4	13.9	13.4	12.2	9.5	5.5
35	************************			15.6	15.2	14.7	14.3	13.8	13.4	12.9	12.4	11.3	8.8	5.1
40	********************************				14.2	13.8	13.4	12.9	12.5	12.1	11.6	10.6	8.2	4.7
45	********************************				13.4	13.0	12.6	12.2	11.8	11.4	10.9	10.0	7.7	4.5
50	********************************				12.7	12.3	12.0	11.6	11.2	10.8	10.4	9.5	7.3	4.2
55	********************************				12.1	11.8	11.4	11.0	10.7	10.3	9.9	9.0	7.0	4.0
60	********************************				11.6	11.3	10.9	10.6	10.2	9.8	9.5	8.6		

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6.7    3.9
  65   ******************************     11.1   10.8   10.5   10.2    9.8    9.5    9.1    8.3
6.4    3.7
  70   ******************************     10.7   10.4   10.1    9.8    9.5    9.1    8.8    8.0
6.2    3.6
  75   ******************************     10.4   10.1    9.8    9.5    9.1    8.8    8.5    7.7
6.0    3.5
  80   ****************************************    9.7    9.5    9.2    8.8    8.5    8.2    7.5
5.8    3.3
  85   *****************************************   9.5    9.2    8.9    8.6    8.3    7.9    7.3
5.6    3.2
  90   *****************************************   9.2    8.9    8.6    8.3    8.0    7.7    7.0
5.5    3.2
  95   ******************************************  8.9    8.7    8.4    8.1    7.8    7.5    6.9
5.3    3.1
 100   ******************************************  8.7    8.5    8.2    7.9    7.6    7.3    6.7
5.2    3.0
 125   *************************************************    7.6    7.3    7.1    6.8    6.6    6.0
4.6    2.7
 150   **************************************************   6.9    6.7    6.5    6.2    6.0    5.5
4.2    2.4
 200   *********************************************************************    5.6    5.4    5.2    4.7
3.7    2.1
 250   ***************************************************************************   4.8    4.6    4.2
3.3    1.9
 300   ***********************************************************************************    4.2    3.9
3.0    1.7
 350   ******************************************************************************************    3.6
2.8    1.6
 400   *********************************************************************************************************
2.6    1.5
 450   *********************************************************************************************************
2.4    1.4
 500   *********************************************************************************************************
2.3    1.3
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

ADULT EDUCATION AND TRAINING SURVEY – January 1994

Approximate Sampling Variability Tables for SASKATCHEWAN

NUMERATOR OF PERCENTAGE ('000)	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	********	69.3	68.9	67.8	66.0	64.2	62.3	60.3	58.2	56.1	53.9	49.2	38.1	22.0
2	********	49.0	48.7	48.0	46.7	45.4	44.0	42.6	41.2	39.7	38.1	34.8	27.0	15.6
3	********	40.0	39.8	39.2	38.1	37.1	35.9	34.8	33.6	32.4	31.1	28.4	22.0	12.7
4	********	34.6	34.5	33.9	33.0	32.1	31.1	30.1	29.1	28.1	27.0	24.6	19.1	11.0
5	********	31.0	30.8	30.3	29.5	28.7	27.8	27.0	26.0	25.1	24.1	22.0	17.1	9.8
6	********	28.3	28.1	27.7	27.0	26.2	25.4	24.6	23.8	22.9	22.0	20.1	15.6	9.0
7	****************	26.0	25.6	25.0	24.3	23.5	22.8	22.0	21.2	20.4	18.6	14.4	8.3
8	****************	24.4	24.0	23.3	22.7	22.0	21.3	20.6	19.8	19.1	17.4	13.5	7.8
9	****************	23.0	22.6	22.0	21.4	20.8	20.1	19.4	18.7	18.0	16.4	12.7	7.3
10	****************	21.8	21.5	20.9	20.3	19.7	19.1	18.4	17.7	17.1	15.6	12.1	7.0
11	****************	20.8	20.5	19.9	19.4	18.8	18.2	17.6	16.9	16.3	14.8	11.5	6.6
12	****************	19.9	19.6	19.1	18.5	18.0	17.4	16.8	16.2	15.6	14.2	11.0	6.4
13	****************	19.1	18.8	18.3	17.8	17.3	16.7	16.2	15.6	15.0	13.7	10.6	6.1
14	************************	18.1	17.6	17.2	16.6	16.1	15.6	15.0	14.4	13.2	10.2	5.9
15	************************	17.5	17.1	16.6	16.1	15.6	15.0	14.5	13.9	12.7	9.8	5.7
16	************************	17.0	16.5	16.0	15.6	15.1	14.6	14.0	13.5	12.3	9.5	5.5
17	************************	16.5	16.0	15.6	15.1	14.6	14.1	13.6	13.1	11.9	9.2	5.3
18	************************	16.0	15.6	15.1	14.7	14.2	13.7	13.2	12.7	11.6	9.0	5.2
19	************************	15.6	15.2	14.7	14.3	13.8	13.4	12.9	12.4	11.3	8.7	5.1
20	************************	15.2	14.8	14.4	13.9	13.5	13.0	12.5	12.1	11.0	8.5	4.9
21	************************	14.8	14.4	14.0	13.6	13.2	12.7	12.2	11.8	10.7	8.3	4.8
22	************************	14.5	14.1	13.7	13.3	12.9	12.4	12.0	11.5	10.5	8.1	4.7
23	************************	14.1	13.8	13.4	13.0	12.6	12.1	11.7	11.2	10.3	8.0	4.6
24	************************	13.8	13.5	13.1	12.7	12.3	11.9	11.5	11.0	10.0	7.8	4.5
25	************************	13.6	13.2	12.8	12.5	12.1	11.6	11.2	10.8	9.8	7.6	4.4
30	************************	12.4	12.1	11.7	11.4	11.0	10.6	10.2	9.8	9.0	7.0	4.0
35	********************************	11.2	10.8	10.5	10.2	9.8	9.5	9.1	8.3	6.4	3.7
40	********************************	10.4	10.1	9.8	9.5	9.2	8.9	8.5	7.8	6.0	3.5
45	********************************	9.8	9.6	9.3	9.0	8.7	8.4	8.0	7.3	5.7	3.3
50	********************************	9.3	9.1	8.8	8.5	8.2	7.9	7.6	7.0	5.4	3.1
55	********************************	8.9	8.7	8.4	8.1	7.9	7.6	7.3	6.6	5.1	3.0
60	********************************	8.5	8.3	8.0	7.8	7.5	7.2	7.0	6.4

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 4.9    2.8
   65   ****************************     8.2    8.0    7.7    7.5    7.2    7.0    6.7    6.1
 4.7    2.7
   70   ***************************************    7.7    7.4    7.2    7.0    6.7    6.4    5.9
 4.6    2.6
   75   ****************************************    7.4    7.2    7.0    6.7    6.5    6.2    5.7
 4.4    2.5
   80   *****************************************    7.2    7.0    6.7    6.5    6.3    6.0    5.5
 4.3    2.5
   85   ******************************************    7.0    6.8    6.5    6.3    6.1    5.8    5.3
 4.1    2.4
   90   *******************************************    6.8    6.6    6.4    6.1    5.9    5.7    5.2
 4.0    2.3
   95   ********************************************    6.6    6.4    6.2    6.0    5.8    5.5    5.1
 3.9    2.3
  100   *********************************************    6.4    6.2    6.0    5.8    5.6    5.4    4.9
 3.8    2.2
  125   **************************************************    5.6    5.4    5.2    5.0    4.8    4.4
 3.4    2.0
  150   **********************************************************    4.9    4.8    4.6    4.4    4.0
 3.1    1.8
  200   *******************************************************************    4.1    4.0    3.8    3.5
 2.7    1.6
  250   ******************************************************************************    3.4    3.1
 2.4    1.4
  300   ****************************************************************************************    2.8
 2.2    1.3
  350   ***********************************************************************************************
 2.0    1.2
  400   ***********************************************************************************************
 1.9    1.1
  450   ***********************************************************************************************
 1.8    1.0
                                          5        0        0
******************************************************************************************************
 1.0
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

ADULT EDUCATION AND TRAINING SURVEY - January 1994

Approximate Sampling Variability Tables for ALBERTA

ESTIMATED PERCENTAGE

NUMERATOR OF PERCENTAGE ('000)	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	96.5	96.0	95.6	94.1	91.6	89.0	86.3	83.6	80.8	77.8	74.8	68.3	52.9	30.5
2	********	67.9	67.6	66.5	64.8	62.9	61.0	59.1	57.1	55.0	52.9	48.3	37.4	21.6
3	********	55.4	55.2	54.3	52.9	51.4	49.8	48.3	46.6	44.9	43.2	39.4	30.5	17.6
4	********	48.0	47.8	47.0	45.8	44.5	43.2	41.8	40.4	38.9	37.4	34.1	26.4	15.3
5	********	43.0	42.7	42.1	41.0	39.8	38.6	37.4	36.1	34.8	33.4	30.5	23.6	13.7
6	********	39.2	39.0	38.4	37.4	36.3	35.2	34.1	33.0	31.8	30.5	27.9	21.6	12.5
7	********	36.3	36.1	35.6	34.6	33.6	32.6	31.6	30.5	29.4	28.3	25.8	20.0	11.5
8	********	34.0	33.8	33.3	32.4	31.5	30.5	29.6	28.6	27.5	26.4	24.1	18.7	10.8
9	********	32.0	31.9	31.4	30.5	29.7	28.8	27.9	26.9	25.9	24.9	22.8	17.6	10.2
10	********	30.4	30.2	29.8	29.0	28.1	27.3	26.4	25.5	24.6	23.6	21.6	16.7	9.7
11	********	29.0	28.8	28.4	27.6	26.8	26.0	25.2	24.3	23.5	22.5	20.6	15.9	9.2
12	********	27.7	27.6	27.2	26.4	25.7	24.9	24.1	23.3	22.5	21.6	19.7	15.3	8.8
13	********	26.6	26.5	26.1	25.4	24.7	23.9	23.2	22.4	21.6	20.7	18.9	14.7	8.5
14	********	25.7	25.5	25.1	24.5	23.8	23.1	22.3	21.6	20.8	20.0	18.2	14.1	8.2
15	********	24.8	24.7	24.3	23.6	23.0	22.3	21.6	20.9	20.1	19.3	17.6	13.7	7.9
16	********	24.0	23.9	23.5	22.9	22.2	21.6	20.9	20.2	19.5	18.7	17.1	13.2	7.6
17	********	23.3	23.2	22.8	22.2	21.6	20.9	20.3	19.6	18.9	18.1	16.6	12.8	7.4
18	********	22.6	22.5	22.2	21.6	21.0	20.3	19.7	19.0	18.3	17.6	16.1	12.5	7.2
19	****************	21.9	21.6	21.0	20.4	19.8	19.2	18.5	17.9	17.2	15.7		12.1	7.0
20	****************	21.4	21.0	20.5	19.9	19.3	18.7	18.1	17.4	16.7	15.3		11.8	6.8
21	****************	20.9	20.5	20.0	19.4	18.8	18.2	17.6	17.0	16.3	14.9		11.5	6.7
22	****************	20.4	20.1	19.5	19.0	18.4	17.8	17.2	16.6	15.9	14.6		11.3	6.5
23	****************	19.9	19.6	19.1	18.6	18.0	17.4	16.8	16.2	15.6	14.2		11.0	6.4
24	****************	19.5	19.2	18.7	18.2	17.6	17.1	16.5	15.9	15.3	13.9		10.8	6.2
25	****************	19.1	18.8	18.3	17.8	17.3	16.7	16.2	15.6	15.0	13.7		10.6	6.1
30	****************	17.4	17.2	16.7	16.2	15.8	15.3	14.7	14.2	13.7	12.5		9.7	5.6
35	****************	16.2	15.9	15.5	15.0	14.6	14.1	13.7	13.2	12.6	11.5		8.9	5.2
40	***********************		14.9	14.5	14.1	13.7	13.2	12.8	12.3	11.8	10.8		8.4	4.8
45	***********************		14.0	13.7	13.3	12.9	12.5	12.0	11.6	11.1	10.2		7.9	4.6
50	***********************		13.3	13.0	12.6	12.2	11.8	11.4	11.0	10.6	9.7		7.5	4.3
55	***********************		12.7	12.3	12.0	11.6	11.3	10.9	10.5	10.1	9.2		7.1	4.1
60	***********************		12.1	11.8	11.5	11.1	10.8	10.4	10.0	9.7	8.8			

70

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  6.8      3.9
   65      **********************   11.7  11.4  11.0  10.7  10.4  10.0   9.7   9.3   8.5
  6.6      3.8
   70      **********************   11.2  10.9  10.6  10.3  10.0   9.7   9.3   8.9   8.2
  6.3      3.6
   75      **********************   10.9  10.6  10.3  10.0   9.7   9.3   9.0   8.6   7.9
  6.1      3.5
   80      **********************   10.5  10.2   9.9   9.7   9.3   9.0   8.7   8.4   7.6
  5.9      3.4
   85      **********************   10.2   9.9   9.7   9.4   9.1   8.8   8.4   8.1   7.4
  5.7      3.3
   90      **********************    9.9   9.7   9.4   9.1   8.8   8.5   8.2   7.9   7.2
  5.6      3.2
   95      ****************************    9.4   9.1   8.9   8.6   8.3   8.0   7.7   7.0
  5.4      3.1
  100      ****************************    9.2   8.9   8.6   8.4   8.1   7.8   7.5   6.8
  5.3      3.1
  125      ****************************    8.2   8.0   7.7   7.5   7.2   7.0   6.7   6.1
  4.7      2.7
  150      ****************************    7.5   7.3   7.0   6.8   6.6   6.4   6.1   5.6
  4.3      2.5
  200      ******************************************    6.3   6.1   5.9   5.7   5.5   5.3   4.8
  3.7      2.2
  250      ******************************************    5.6   5.5   5.3   5.1   4.9   4.7   4.3
  3.3      1.9
  300      **************************************************    5.0   4.8   4.7   4.5   4.3   3.9
  3.1      1.8
  350      ****************************************************    4.6   4.5   4.3   4.2   4.0   3.6
  2.8      1.6
  400      ************************************************************    4.2   4.0   3.9   3.7   3.4
  2.6      1.5
  450      ************************************************************    3.9   3.8   3.7   3.5   3.2
  2.5      1.4
  500      ******************************************************************    3.6   3.5   3.3   3.1
  2.4      1.4
  750      *********************************************************************************    2.7   2.5
  1.9      1.1
 1000      ******************************************************************************************************
  1.7      1.0
                                   1      5      0      0
*********************************************************************************************************
  0.8
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

Approximate Sampling Variability Tables for B. C.

ESTIMATED PERCENTAGE

NUMERATOR OF PERCENTAGE ('000)	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	156.8	156.1	155.3	153.0	148.9	144.7	140.4	135.9	131.3	126.5	121.6	111.0	86.0	49.6
2	110.9	110.4	109.8	108.2	105.3	102.3	99.2	96.1	92.8	89.5	86.0	78.5	60.8	35.1
3	********	90.1	89.7	88.3	86.0	83.5	81.0	78.5	75.8	73.0	70.2	64.1	49.6	28.7
4	********	78.1	77.7	76.5	74.4	72.3	70.2	68.0	65.6	63.3	60.8	55.5	43.0	24.8
5	********	69.8	69.5	68.4	66.6	64.7	62.8	60.8	58.7	56.6	54.4	49.6	38.4	22.2
6	********	63.7	63.4	62.4	60.8	59.1	57.3	55.5	53.6	51.7	49.6	45.3	35.1	20.3
7	********	59.0	58.7	57.8	56.3	54.7	53.1	51.4	49.6	47.8	45.9	41.9	32.5	18.8
8	********	55.2	54.9	54.1	52.6	51.2	49.6	48.0	46.4	44.7	43.0	39.2	30.4	17.5
9	********	52.0	51.8	51.0	49.6	48.2	46.8	45.3	43.8	42.2	40.5	37.0	28.7	16.5
10	********	49.4	49.1	48.4	47.1	45.8	44.4	43.0	41.5	40.0	38.4	35.1	27.2	15.7
11	********	47.1	46.8	46.1	44.9	43.6	42.3	41.0	39.6	38.1	36.7	33.5	25.9	15.0
12	********	45.1	44.8	44.2	43.0	41.8	40.5	39.2	37.9	36.5	35.1	32.0	24.8	14.3
13	********	43.3	43.1	42.4	41.3	40.1	38.9	37.7	36.4	35.1	33.7	30.8	23.8	13.8
14	********	41.7	41.5	40.9	39.8	38.7	37.5	36.3	35.1	33.8	32.5	29.7	23.0	13.3
15	********	40.3	40.1	39.5	38.4	37.4	36.2	35.1	33.9	32.7	31.4	28.7	22.2	12.8
16	********	39.0	38.8	38.2	37.2	36.2	35.1	34.0	32.8	31.6	30.4	27.7	21.5	12.4
17	********	37.9	37.7	37.1	36.1	35.1	34.0	33.0	31.8	30.7	29.5	26.9	20.8	12.0
18	********	36.8	36.6	36.1	35.1	34.1	33.1	32.0	30.9	29.8	28.7	26.2	20.3	11.7
19	********	35.8	35.6	35.1	34.2	33.2	32.2	31.2	30.1	29.0	27.9	25.5	19.7	11.4
20	********	34.9	34.7	34.2	33.3	32.4	31.4	30.4	29.4	28.3	27.2	24.8	19.2	11.1
21	********	34.1	33.9	33.4	32.5	31.6	30.6	29.7	28.7	27.6	26.5	24.2	18.8	10.8
22	********	33.3	33.1	32.6	31.7	30.8	29.9	29.0	28.0	27.0	25.9	23.7	18.3	10.6
23	********	32.6	32.4	31.9	31.0	30.2	29.3	28.3	27.4	26.4	25.3	23.1	17.9	10.3
24	********	31.9	31.7	31.2	30.4	29.5	28.7	27.7	26.8	25.8	24.8	22.7	17.5	10.1
25	********	31.2	31.1	30.6	29.8	28.9	28.1	27.2	26.3	25.3	24.3	22.2	17.2	9.9
30	****************		28.4	27.9	27.2	26.4	25.6	24.8	24.0	23.1	22.2	20.3	15.7	9.1
35	****************		26.3	25.9	25.2	24.5	23.7	23.0	22.2	21.4	20.5	18.8	14.5	8.4
40	****************		24.6	24.2	23.5	22.9	22.2	21.5	20.8	20.0	19.2	17.5	13.6	7.8
45	****************		23.2	22.8	22.2	21.6	20.9	20.3	19.6	18.9	18.1	16.5	12.8	7.4
50	****************		22.0	21.6	21.1	20.5	19.8	19.2	18.6	17.9	17.2	15.7	12.2	7.0
55	************************			20.6	20.1	19.5	18.9	18.3	17.7	17.1	16.4	15.0	11.6	6.7
60	************************			19.7	19.2	18.7	18.1	17.5	16.9	16.3	15.7	14.3		

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11.1     6.4
  65     *********************** 19.0 18.5 17.9 17.4 16.9 16.3 15.7 15.1 13.8
10.7     6.2
  70     *********************** 18.3 17.8 17.3 16.8 16.2 15.7 15.1 14.5 13.3
10.3     5.9
  75     *********************** 17.7 17.2 16.7 16.2 15.7 15.2 14.6 14.0 12.8
 9.9     5.7
  80     *********************** 17.1 16.6 16.2 15.7 15.2 14.7 14.1 13.6 12.4
 9.6     5.5
  85     *********************** 16.6 16.1 15.7 15.2 14.7 14.2 13.7 13.2 12.0
 9.3     5.4
  90     *********************** 16.1 15.7 15.3 14.8 14.3 13.8 13.3 12.8 11.7
 9.1     5.2
  95     *********************** 15.7 15.3 14.8 14.4 13.9 13.5 13.0 12.5 11.4
 8.8     5.1
 100     *********************** 15.3 14.9 14.5 14.0 13.6 13.1 12.7 12.2 11.1
 8.6     5.0
 125     *********************** 13.7 13.3 12.9 12.6 12.2 11.7 11.3 10.9  9.9
 7.7     4.4
 150     ******************************* 12.2 11.8 11.5 11.1 10.7 10.3  9.9  9.1
 7.0     4.1
 200     ******************************* 10.5 10.2  9.9  9.6  9.3  8.9  8.6  7.8
 6.1     3.5
 250     ******************************* 9.4  9.2  8.9  8.6  8.3  8.0  7.7  7.0
 5.4     3.1
 300     **************************************** 8.4  8.1  7.8  7.6  7.3  7.0  6.4
 5.0     2.9
 350     ***************************************** 7.7  7.5  7.3  7.0  6.8  6.5  5.9
 4.6     2.7
 400     ************************************************** 7.0  6.8  6.6  6.3  6.1  5.5
 4.3     2.5
 450     ************************************************** 6.6  6.4  6.2  6.0  5.7  5.2
 4.1     2.3
 500     ************************************************** 6.3  6.1  5.9  5.7  5.4  5.0
 3.8     2.2
 750     *********************************************************************** 4.8  4.6  4.4  4.1
 3.1     1.8
1000     *********************************************************************************** 3.8  3.5
 2.7     1.6
1500     ***************************************************************************************************
 2.2     1.3
                         2         0         0         0
*******************************************************************************************************
 1.1
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NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

ADULT EDUCATION AND TRAINING SURVEY – January 1994

Approximate Sampling Variability Tables for ATLANTIC

ESTIMATED PERCENTAGE

NUMERATOR OF PERCENTAGE ('000)	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	65.3	65.0	64.6	63.6	61.9	60.2	58.4	56.5	54.6	52.6	50.6	46.2	35.8	20.6
2	********	45.9	45.7	45.0	43.8	42.6	41.3	40.0	38.6	37.2	35.8	32.6	25.3	14.6
3	********	37.5	37.3	36.7	35.8	34.8	33.7	32.6	31.5	30.4	29.2	26.7	20.6	11.9
4	********	32.5	32.3	31.8	31.0	30.1	29.2	28.3	27.3	26.3	25.3	23.1	17.9	10.3
5	********	29.1	28.9	28.5	27.7	26.9	26.1	25.3	24.4	23.5	22.6	20.6	16.0	9.2
6	********	26.5	26.4	26.0	25.3	24.6	23.8	23.1	22.3	21.5	20.6	18.8	14.6	8.4
7	********	24.6	24.4	24.1	23.4	22.7	22.1	21.4	20.6	19.9	19.1	17.4	13.5	7.8
8	********	23.0	22.9	22.5	21.9	21.3	20.6	20.0	19.3	18.6	17.9	16.3	12.6	7.3
9	********	21.7	21.5	21.2	20.6	20.1	19.5	18.8	18.2	17.5	16.9	15.4	11.9	6.9
10	********	20.5	20.4	20.1	19.6	19.0	18.5	17.9	17.3	16.6	16.0	14.6	11.3	6.5
11	********	19.6	19.5	19.2	18.7	18.1	17.6	17.0	16.5	15.9	15.2	13.9	10.8	6.2
12	********	18.8	18.7	18.4	17.9	17.4	16.9	16.3	15.8	15.2	14.6	13.3	10.3	6.0
13	********	18.0	17.9	17.6	17.2	16.7	16.2	15.7	15.1	14.6	14.0	12.8	9.9	5.7
14	********	17.4	17.3	17.0	16.6	16.1	15.6	15.1	14.6	14.1	13.5	12.3	9.6	5.5
15	********	16.8	16.7	16.4	16.0	15.5	15.1	14.6	14.1	13.6	13.1	11.9	9.2	5.3
16	********	16.2	16.2	15.9	15.5	15.0	14.6	14.1	13.7	13.2	12.6	11.5	8.9	5.2
17	********	15.8	15.7	15.4	15.0	14.6	14.2	13.7	13.2	12.8	12.3	11.2	8.7	5.0
18	****************		15.2	15.0	14.6	14.2	13.8	13.3	12.9	12.4	11.9	10.9	8.4	4.9
19	****************		14.8	14.6	14.2	13.8	13.4	13.0	12.5	12.1	11.6	10.6	8.2	4.7
20	****************		14.5	14.2	13.8	13.5	13.1	12.6	12.2	11.8	11.3	10.3	8.0	4.6
21	****************		14.1	13.9	13.5	13.1	12.7	12.3	11.9	11.5	11.0	10.1	7.8	4.5
22	****************		13.8	13.6	13.2	12.8	12.4	12.1	11.6	11.2	10.8	9.8	7.6	4.4
23	****************		13.5	13.3	12.9	12.6	12.2	11.8	11.4	11.0	10.5	9.6	7.5	4.3
24	****************		13.2	13.0	12.6	12.3	11.9	11.5	11.1	10.7	10.3	9.4	7.3	4.2
25	****************		12.9	12.7	12.4	12.0	11.7	11.3	10.9	10.5	10.1	9.2	7.2	4.1
30	****************		11.8	11.6	11.3	11.0	10.7	10.3	10.0	9.6	9.2	8.4	6.5	3.8
35	***********************			10.8	10.5	10.2	9.9	9.6	9.2	8.9	8.5	7.8	6.0	3.5
40	***********************			10.1	9.8	9.5	9.2	8.9	8.6	8.3	8.0	7.3	5.7	3.3
45	***********************			9.5	9.2	9.0	8.7	8.4	8.1	7.8	7.5	6.9	5.3	3.1
50	***********************			9.0	8.8	8.5	8.3	8.0	7.7	7.4	7.2	6.5	5.1	2.9
55	***********************			8.6	8.4	8.1	7.9	7.6	7.4	7.1	6.8	6.2	4.8	2.8
60	***********************			8.2	8.0	7.8	7.5	7.3	7.1	6.8	6.5	6.0		

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4.6    2.7
  65   **********************   7.9   7.7   7.5   7.2   7.0   6.8   6.5   6.3   5.7
4.4    2.6
  70   **********************   7.6   7.4   7.2   7.0   6.8   6.5   6.3   6.0   5.5
4.3    2.5
  75   **********************   7.3   7.2   7.0   6.7   6.5   6.3   6.1   5.8   5.3
4.1    2.4
  80   **********************   7.1   6.9   6.7   6.5   6.3   6.1   5.9   5.7   5.2
4.0    2.3
  85   **********************   6.9   6.7   6.5   6.3   6.1   5.9   5.7   5.5   5.0
3.9    2.2
  90   ******************************   6.5   6.3   6.2   6.0   5.8   5.5   5.3   4.9
3.8    2.2
  95   ******************************   6.4   6.2   6.0   5.8   5.6   5.4   5.2   4.7
3.7    2.1
 100   ******************************   6.2   6.0   5.8   5.7   5.5   5.3   5.1   4.6
3.6    2.1
 125   ******************************   5.5   5.4   5.2   5.1   4.9   4.7   4.5   4.1
3.2    1.8
 150   ******************************   5.1   4.9   4.8   4.6   4.5   4.3   4.1   3.8
2.9    1.7
 200   ****************************************   4.3   4.1   4.0   3.9   3.7   3.6   3.3
2.5    1.5
 250   ****************************************   3.8   3.7   3.6   3.5   3.3   3.2   2.9
2.3    1.3
 300   ************************************************   3.4   3.3   3.2   3.0   2.9   2.7
2.1    1.2
 350   ********************************************************   3.0   2.9   2.8   2.7   2.5
1.9    1.1
 400   ********************************************************   2.8   2.7   2.6   2.5   2.3
1.8    1.0
 450   ****************************************************************   2.6   2.5   2.4   2.2
1.7    1.0
 500   ****************************************************************   2.4   2.4   2.3   2.1
1.6    0.9
 750   ********************************************************************************************   1.7
1.3    0.8
1000   **********************************************************************************************************
1.1    0.7
                          1       5       0       0
*********************************************************************************************************************
0.5


NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION
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ADULT EDUCATION AND TRAINING SURVEY - January 1994

Approximate Sampling Variability Tables for PRAIRIES

NUMERATOR OF PERCENTAGE ('000)		ESTIMATED PERCENTAGE												
	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	90.2	89.8	89.3	88.0	85.6	83.2	80.7	78.2	75.5	72.8	69.9	63.8	49.4	28.5
2	63.8	63.5	63.2	62.2	60.5	58.8	57.1	55.3	53.4	51.4	49.4	45.1	35.0	20.2
3	52.1	51.8	51.6	50.8	49.4	48.0	46.6	45.1	43.6	42.0	40.4	36.8	28.5	16.5
4	********	44.9	44.7	44.0	42.8	41.6	40.4	39.1	37.8	36.4	35.0	31.9	24.7	14.3
5	********	40.2	40.0	39.3	38.3	37.2	36.1	35.0	33.8	32.5	31.3	28.5	22.1	12.8
6	********	36.7	36.5	35.9	35.0	34.0	33.0	31.9	30.8	29.7	28.5	26.1	20.2	11.7
7	********	33.9	33.8	33.2	32.4	31.4	30.5	29.5	28.5	27.5	26.4	24.1	18.7	10.8
8	********	31.7	31.6	31.1	30.3	29.4	28.5	27.6	26.7	25.7	24.7	22.6	17.5	10.1
9	********	29.9	29.8	29.3	28.5	27.7	26.9	26.1	25.2	24.3	23.3	21.3	16.5	9.5
10	********	28.4	28.3	27.8	27.1	26.3	25.5	24.7	23.9	23.0	22.1	20.2	15.6	9.0
11	********	27.1	26.9	26.5	25.8	25.1	24.3	23.6	22.8	21.9	21.1	19.2	14.9	8.6
12	********	25.9	25.8	25.4	24.7	24.0	23.3	22.6	21.8	21.0	20.2	18.4	14.3	8.2
13	********	24.9	24.8	24.4	23.7	23.1	22.4	21.7	20.9	20.2	19.4	17.7	13.7	7.9
14	********	24.0	23.9	23.5	22.9	22.2	21.6	20.9	20.2	19.4	18.7	17.1	13.2	7.6
15	********	23.2	23.1	22.7	22.1	21.5	20.8	20.2	19.5	18.8	18.0	16.5	12.8	7.4
16	********	22.4	22.3	22.0	21.4	20.8	20.2	19.5	18.9	18.2	17.5	16.0	12.4	7.1
17	********	21.8	21.7	21.3	20.8	20.2	19.6	19.0	18.3	17.6	17.0	15.5	12.0	6.9
18	********	21.2	21.1	20.7	20.2	19.6	19.0	18.4	17.8	17.1	16.5	15.0	11.7	6.7
19	********	20.6	20.5	20.2	19.6	19.1	18.5	17.9	17.3	16.7	16.0	14.6	11.3	6.5
20	********	20.1	20.0	19.7	19.1	18.6	18.0	17.5	16.9	16.3	15.6	14.3	11.1	6.4
21	********	19.6	19.5	19.2	18.7	18.2	17.6	17.1	16.5	15.9	15.3	13.9	10.8	6.2
22	********	19.1	19.0	18.8	18.3	17.7	17.2	16.7	16.1	15.5	14.9	13.6	10.5	6.1
23	********	18.7	18.6	18.3	17.9	17.3	16.8	16.3	15.7	15.2	14.6	13.3	10.3	6.0
24	********	18.3	18.2	18.0	17.5	17.0	16.5	16.0	15.4	14.9	14.3	13.0	10.1	5.8
25	********	18.0	17.9	17.6	17.1	16.6	16.1	15.6	15.1	14.6	14.0	12.8	9.9	5.7
30	********	16.4	16.3	16.1	15.6	15.2	14.7	14.3	13.8	13.3	12.8	11.7	9.0	5.2
35	****************	15.1	14.9	14.5	14.1	13.6	13.2	12.8	12.3	11.8	10.8		8.4	4.8
40	****************	14.1	13.9	13.5	13.2	12.8	12.4	11.9	11.5	11.1	10.1		7.8	4.5
45	****************	13.3	13.1	12.8	12.4	12.0	11.7	11.3	10.8	10.4	9.5		7.4	4.3
50	****************	12.6	12.4	12.1	11.8	11.4	11.1	10.7	10.3	9.9	9.0		7.0	4.0
55	****************	12.0	11.9	11.5	11.2	10.9	10.5	10.2	9.8	9.4	8.6		6.7	3.8
60	****************	11.5	11.4	11.1	10.7	10.4	10.1	9.7	9.4	9.0	8.2			

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```
 6.4      3.7
   65     ****************   11.1   10.9   10.6   10.3   10.0    9.7    9.4    9.0    8.7    7.9
 6.1      3.5
   70     ***********************   10.5   10.2    9.9    9.6    9.3    9.0    8.7    8.4    7.6
 5.9      3.4
   75     ***********************   10.2    9.9    9.6    9.3    9.0    8.7    8.4    8.1    7.4
 5.7      3.3
   80     ***********************    9.8    9.6    9.3    9.0    8.7    8.4    8.1    7.8    7.1
 5.5      3.2
   85     ***********************    9.5    9.3    9.0    8.8    8.5    8.2    7.9    7.6    6.9
 5.4      3.1
   90     ***********************    9.3    9.0    8.8    8.5    8.2    8.0    7.7    7.4    6.7
 5.2      3.0
   95     ***********************    9.0    8.8    8.5    8.3    8.0    7.7    7.5    7.2    6.5
 5.1      2.9
  100     ***********************    8.8    8.6    8.3    8.1    7.8    7.6    7.3    7.0    6.4
 4.9      2.9
  125     ***********************    7.9    7.7    7.4    7.2    7.0    6.8    6.5    6.3    5.7
 4.4      2.6
  150     ***********************    7.2    7.0    6.8    6.6    6.4    6.2    5.9    5.7    5.2
 4.0      2.3
  200     *******************************    6.1    5.9    5.7    5.5    5.3    5.1    4.9    4.5
 3.5      2.0
  250     *******************************    5.4    5.3    5.1    4.9    4.8    4.6    4.4    4.0
 3.1      1.8
  300     *******************************    4.9    4.8    4.7    4.5    4.4    4.2    4.0    3.7
 2.9      1.6
  350     ******************************************    4.4    4.3    4.2    4.0    3.9    3.7    3.4
 2.6      1.5
  400     *******************************************    4.2    4.0    3.9    3.8    3.6    3.5    3.2
 2.5      1.4
  450     ***************************************************    3.9    3.8    3.7    3.6    3.4    3.3    3.0
 2.3      1.3
  500     ***************************************************    3.7    3.6    3.5    3.4    3.3    3.1    2.9
 2.2      1.3
  750     *************************************************************    2.9    2.8    2.7    2.6    2.3
 1.8      1.0
 1000     *****************************************************************    2.4    2.3    2.2    2.0
 1.6      0.9
 1500     ***********************************************************************************************    1.6
 1.3      0.7
 2000     ***********************************************************************************************************
 1.1      0.6
                             3         0         0         0
*****************************************************************************************************************
 0.5
```

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

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Approximate Sampling Variability Tables for CANADA

NUMERATOR OF PERCENTAGE ('000)	0.1%	1.0%	2.0%	5.0%	10.0%	15.0%	20.0%	25.0%	30.0%	35.0%	40.0%	50.0%	70.0%	90.0%
1	127.9	127.4	126.7	124.8	121.4	118.0	114.5	110.8	107.1	103.2	99.1	90.5	70.1	40.5
2	90.5	90.1	89.6	88.2	85.9	83.4	81.0	78.4	75.7	73.0	70.1	64.0	49.6	28.6
3	73.9	73.5	73.2	72.0	70.1	68.1	66.1	64.0	61.8	59.6	57.2	52.3	40.5	23.4
4	64.0	63.7	63.4	62.4	60.7	59.0	57.2	55.4	53.5	51.6	49.6	45.3	35.1	20.2
5	57.2	57.0	56.7	55.8	54.3	52.8	51.2	49.6	47.9	46.1	44.3	40.5	31.4	18.1
6	52.2	52.0	51.7	50.9	49.6	48.2	46.7	45.3	43.7	42.1	40.5	36.9	28.6	16.5
7	48.4	48.1	47.9	47.2	45.9	44.6	43.3	41.9	40.5	39.0	37.5	34.2	26.5	15.3
8	45.2	45.0	44.8	44.1	42.9	41.7	40.5	39.2	37.9	36.5	35.1	32.0	24.8	14.3
9	42.6	42.5	42.2	41.6	40.5	39.3	38.2	36.9	35.7	34.4	33.0	30.2	23.4	13.5
10	40.5	40.3	40.1	39.5	38.4	37.3	36.2	35.1	33.9	32.6	31.4	28.6	22.2	12.8
11	38.6	38.4	38.2	37.6	36.6	35.6	34.5	33.4	32.3	31.1	29.9	27.3	21.1	12.2
12	36.9	36.8	36.6	36.0	35.1	34.1	33.0	32.0	30.9	29.8	28.6	26.1	20.2	11.7
13	35.5	35.3	35.1	34.6	33.7	32.7	31.8	30.7	29.7	28.6	27.5	25.1	19.4	11.2
14	34.2	34.0	33.9	33.3	32.5	31.5	30.6	29.6	28.6	27.6	26.5	24.2	18.7	10.8
15	33.0	32.9	32.7	32.2	31.4	30.5	29.6	28.6	27.6	26.6	25.6	23.4	18.1	10.5
16	32.0	31.8	31.7	31.2	30.4	29.5	28.6	27.7	26.8	25.8	24.8	22.6	17.5	10.1
17	31.0	30.9	30.7	30.3	29.5	28.6	27.8	26.9	26.0	25.0	24.0	22.0	17.0	9.8
18	30.2	30.0	29.9	29.4	28.6	27.8	27.0	26.1	25.2	24.3	23.4	21.3	16.5	9.5
19	29.3	29.2	29.1	28.6	27.9	27.1	26.3	25.4	24.6	23.7	22.7	20.8	16.1	9.3
20	28.6	28.5	28.3	27.9	27.2	26.4	25.6	24.8	23.9	23.1	22.2	20.2	15.7	9.1
21	********	27.8	27.6	27.2	26.5	25.8	25.0	24.2	23.4	22.5	21.6	19.7	15.3	8.8
22	********	27.2	27.0	26.6	25.9	25.2	24.4	23.6	22.8	22.0	21.1	19.3	14.9	8.6
23	********	26.6	26.4	26.0	25.3	24.6	23.9	23.1	22.3	21.5	20.7	18.9	14.6	8.4
24	********	26.0	25.9	25.5	24.8	24.1	23.4	22.6	21.9	21.1	20.2	18.5	14.3	8.3
25	********	25.5	25.3	25.0	24.3	23.6	22.9	22.2	21.4	20.6	19.8	18.1	14.0	8.1
30	********	23.3	23.1	22.8	22.2	21.5	20.9	20.2	19.6	18.8	18.1	16.5	12.8	7.4
35	********	21.5	21.4	21.1	20.5	19.9	19.4	18.7	18.1	17.4	16.8	15.3	11.8	6.8
40	********	20.1	20.0	19.7	19.2	18.7	18.1	17.5	16.9	16.3	15.7	14.3	11.1	6.4
45	********	19.0	18.9	18.6	18.1	17.6	17.1	16.5	16.0	15.4	14.8	13.5	10.5	6.0
50	********	18.0	17.9	17.6	17.2	16.7	16.2	15.7	15.1	14.6	14.0	12.8	9.9	5.7
55	********	17.2	17.1	16.8	16.4	15.9	15.4	14.9	14.4	13.9	13.4	12.2	9.5	5.5
60	********	16.4	16.4	16.1	15.7	15.2	14.8	14.3	13.8	13.3	12.8	11.7	9.1	5.2
65	********	15.8	15.7	15.5	15.1	14.6	14.2	13.7	13.3	12.8	12.3	11.2	8.7	5.0

70	********	15.2	15.1	14.9	14.5	14.1	13.7	13.2	12.8	12.3	11.8	10.8	8.4 4.8
75	********	14.7	14.6	14.4	14.0	13.6	13.2	12.8	12.4	11.9	11.4	10.5	8.1 4.7
80	********	14.2	14.2	13.9	13.6	13.2	12.8	12.4	12.0	11.5	11.1	10.1	7.8 4.5
85	********	13.8	13.7	13.5	13.2	12.8	12.4	12.0	11.6	11.2	10.8	9.8	7.6 4.4
90	********	13.4	13.4	13.2	12.8	12.4	12.1	11.7	11.3	10.9	10.5	9.5	7.4 4.3
95	********	13.1	13.0	12.8	12.5	12.1	11.7	11.4	11.0	10.6	10.2	9.3	7.2 4.2
100	********	12.7	12.7	12.5	12.1	11.8	11.4	11.1	10.7	10.3	9.9	9.1	7.0 4.0
125	********	11.4	11.3	11.2	10.9	10.6	10.2	9.9	9.6	9.2	8.9	8.1	6.3 3.6
150	********	10.4	10.3	10.2	9.9	9.6	9.3	9.1	8.7	8.4	8.1	7.4	5.7 3.3
200	********	9.0	9.0	8.8	8.6	8.3	8.1	7.8	7.6	7.3	7.0	6.4	5.0 2.9
250	****************		8.0	7.9	7.7	7.5	7.2	7.0	6.8	6.5	6.3	5.7	4.4 2.6
300	****************		7.3	7.2	7.0	6.8	6.6	6.4	6.2	6.0	5.7	5.2	4.0 2.3
350	****************		6.8	6.7	6.5	6.3	6.1	5.9	5.7	5.5	5.3	4.8	3.7 2.2
400	****************		6.3	6.2	6.1	5.9	5.7	5.5	5.4	5.2	5.0	4.5	3.5 2.0
450	************************			5.9	5.7	5.6	5.4	5.2	5.0	4.9	4.7	4.3	3.3 1.9
500	************************			5.6	5.4	5.3	5.1	5.0	4.8	4.6	4.4	4.0	3.1 1.8
750	************************			4.6	4.4	4.3	4.2	4.0	3.9	3.8	3.6	3.3	2.6 1.5
1000	************************			3.9	3.8	3.7	3.6	3.5	3.4	3.3	3.1	2.9	2.2 1.3
1500	********************************				3.1	3.0	3.0	2.9	2.8	2.7	2.6	2.3	1.8 1.0
2000	********************************				2.7	2.6	2.6	2.5	2.4	2.3	2.2	2.0	1.6 0.9
3000	***					2.2	2.1	2.0	2.0	1.9	1.8	1.7	1.3 0.7
4000	**						1.8	1.8	1.7	1.6	1.6	1.4	1.1 0.6
5000	***							1.6	1.5	1.5	1.4	1.3	1.0 0.6
6000	**								1.4	1.3	1.3	1.2	0.9 0.5
7000	**									1.2	1.2	1.1	0.8 0.5
8000	**										1.1	1.0	0.8 0.5
9000	***											1.0	0.7 0.4
10000	***											0.9	0.7 0.4
12500	**												0.6 0.4
		1	5	0	0	0							
	***												0.3

NOTE: FOR CORRECT USAGE OF THESE TABLES PLEASE REFER TO MICRODATA DOCUMENTATION

11. WEIGHTING PROCEDURES

Weighting Procedures for the Adult Education and Training Survey

Since the Adult Education and Training Survey used a subsample of the LFS sample, the derivation of weights for the survey records for the year is clearly tied to the weighting procedure used for the LFS. The LFS weighting procedure is briefly described below.

11.1 LFS Weighting

In the LFS, the final weight attached to each record is the product of the following factors: the basic weight, the cluster sub-weight, the balancing factor for non-response, the rural-urban factor and the province-age-sex ratio adjustment factor. Each is described below.

Basic Weight

In a probability sample, the sample design itself determines weights which must be used to produce unbiased estimates of the population. Each record must be weighted by the inverse of the probability of selecting the person to whom the record refers. In the example of a 2% simple random sample, this probability would be .02 for each person and the records must be weighted by 1/.02=50.

Cluster Sub-weight

The cluster delineation is such that the number of dwellings in the sample increases very slightly with moderate growth in the housing stock. Substantial growth can be tolerated in an isolated cluster before the additional sample represents a field collection problem. However, if growth takes place in more than one cluster in an interviewer assignment, the cumulative effect of all increases may create a workload problem. In clusters where substantial growth has taken place, sub-sampling is used as a means of keeping interviewer assignments manageable. The cluster sub-weight represents the inverse of this sub-sampling ratio in clusters where sub-sampling has occurred.

Non-response

Notwithstanding the strict controls of the LFS, some non-response is inevitable, despite all the attempts made by the interviewers. The LFS non-response rate is approximately 5%. For certain types of non-response (household temporarily absent, refusal), data from a previous month's interview with the household if any, is brought forward and used as the current month's data for the household.

In other cases, non-response is compensated for by proportionally increasing the weights of responding households. The weight of each responding record is increased by the ratio of the number of households that should have been interviewed, divided by the number that were actually interviewed. This adjustment is done separately for geographic areas called balancing units. It is based on the assumption that the households that have been interviewed represent the characteristics of those that should have been interviewed. To the extent that this assumption is not true, the estimates will be somewhat biased.

Rural-urban Factor

In NSRUs without sufficient rural and urban population for explicit urban and rural strata to be formed, each primary sampling unit (PSU) is composed of both urban and rural parts. Information concerning the total population in rural and urban areas is available from the 1981 Census for each PSU as well as for each economic region (ER) in which explicit urban/rural stratification is not done. Comparison by ER with the actual 1981 rural or urban census counts indicates whether the selected PSUs over- or under-represent the respective areas. The ratio of actual rural-urban counts is divided by the corresponding estimates. These two factors are computed for each relevant ER at the time of selection of the PSUs and are entered on each sample record according to the appropriate area (rural or urban) of the NSRU. Changes in these factors are incorporated at the time of PSU rotations.

Subprovincial and Province-Age-Sex Adjustments

The product of the previously described weighting factors is called the LFS sub-weight. All members of the same sampled dwelling have the same sub-weight. The sub-weight can be used to derive a valid estimate of any characteristic for which information is collected by the LFS. In particular, estimates are produced of the total number of persons 15+ in provincial economic regions and the 24 large metropolitan areas as well as of designated age-sex groups in each of the ten provinces.

Independent estimates are available monthly for various age and sex groups by province. These are population projections based on the most recent Census data, records of births and deaths, and estimates of migration. In the final step, this auxiliary information is used to transform the sub-weight into the final weight. This is done using a linear regression model. The regression is set up to ensure that the final weights it produces sum to the census projections for the auxiliary variables, namely various age-sex groups, economic regions and census metropolitan areas.

This weighting procedure ensures consistency with external Census counts, and also ensures that every member of the economic family is assigned the same weight.

11.2   <u>**Weighting for the Adult Education and Training Survey**</u>

The principles behind the calculation of the weights for the Adult Education and Training survey are identical to those for the LFS. However, five adjustments were made to the LFS weights in order to derive a final weight for the individual records on the Adult Education and Training survey microdata file.

(1)   An adjustment to account for the use of a five-sixth sub-sample, instead of the full LFS sample.

(2)   An adjustment to account for the additional non-response to the Adult Education and Training Survey i.e., non-response to the AETS for individuals that did respond to the LFS, or for which previous month's LFS data was brought forward.

(3)   An adjustment to account for selecting one person per household.

(4)   A readjustment to account for independent province-sex-age group projections, after the above adjustments were made.

(5)   A readjustment to account for independent economic region -
      census metropolitan area projections, after the above
      adjustments were made.

      Adjustments (1) and (2) are calculated at the household level.
      For each responding AETS household, the LFS sub-weight (i.e.,
      the weight resulting from the first four LFS weighting
      factors) is multiplied by:

$$\frac{sum\ of\ LFS\ subweights\ from\ each\ household\ responding\ to\ LFS}{sum\ of\ LFS\ subweights\ from\ each\ household\ responding\ to\ AETS}$$

      to obtain a non-response adjusted AETS sub-weight (WEIGHT1).

      Adjustment (3) is calculated by multiplying WEIGHT1 for each
      AETS respondent by the number of eligible people in the
      respondent's household to give WEIGHT2.

      Adjustment (4) is calculated by multiplying WEIGHT2 by:

$$\frac{population\ total\ for\ province\text{-}sex\text{-}agegroup\ i}{sum\ of\ WEIGHT2\ for\ AETS\ respondents\ in\ province\text{-}sex\text{-}agegroup\ i}$$

      The resulting weight (WEIGHT3) is then used in adjustment (5)
      by multiplying by another factor:

$$\frac{population\ total\ for\ ER\text{-}CMA\ j}{sum\ of\ WEIGHT3\ for\ AETS\ respondents\ in\ ER\text{-}CMA\ j}$$

      to give WEIGHT4. Steps (4) and (5) were repeated iteratively
      until the adjustment factors converged to 1. This process is
      called raking ratio weighting. The resulting weight (WEIGHT)
      is the final weight which appears on the Adult Education and
      Training Survey microdata file.

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12. QUESTIONNAIRES AND CODE SHEETS

1) Household Record Docket (Form 03) and Code Sheet

2) The Labour Force Survey Questionnaire (Form 05) and Code Sheet

3) Supplementary Questionnaire (Form 06)

The Household Record Docket (Form 03)

The Household Record Docket (Form 03) is used to list all household members whose usual place of residence is the selected dwelling. It is both a survey operations/control document and a record of socio-demographic information on household members.

Household Record Docket (Form 03) - Code Sheet

HOUSEHOLD RECORD DOCKET

CONFIDENTIAL when completed

1 FORM NO. **03**

Docket no. **2** [ ]

Survey date **3** [ ]

Assignment no. **4** [ ]

Designated interviewer no. **5** [ ] No ◯¹ or [ ] change

Your interviewer no.

P.S.U. **6** [ ]

Group [ ] **Cluster** [ ]

Rot. no. [ ]

Listing **7** [ ]

Mult. [ ]

Type of dwelling **8** [ ] Enter code

9 Record time of every call on this household.

1	Mon.	:	:	:	:	:
2	Tues.	:	:	:	:	:
3	Wed.	:	:	:	:	:
4	Thur.	:	:	:	:	:
5	Fri.	:	:	:	:	:
6	Sat.	:	:	:	:	:

10 Listing address
[ ]

11 **INTERVIEWER CHECK ITEM:**
• Is this the first interview at this dwelling or a new household since last interview?
Yes ◯¹ Go to 12   No ◯² Go to 20

12 IS (read listing address in item 10) **YOUR CORRECT MAILING ADDRESS?**
Yes ◯¹ Go to 13   No ◯² Enter correct mailing address on Form 23 and go to 13

FIRST INTERVIEW WITH THIS HOUSEHOLD

13 WOULD YOU PREFER TO BE INTERVIEWED IN ENGLISH OR IN FRENCH?
English ◯¹   French ◯²   Either ◯³   Neither ◯⁴

14 **INTERVIEWER CHECK ITEM:** Language of interview:
English ◯¹   French ◯²   Other ◯³   Go to 15

15 WHAT ARE THE NAMES OF ALL PERSONS NOW LIVING OR STAYING HERE WHO HAVE NO USUAL PLACE OF RESIDENCE ELSEWHERE?
Enter names in 32.

16 ARE THERE ANY PERSONS AWAY FROM THIS HOUSEHOLD ATTENDING SCHOOL, VISITING, TRAVELLING OR IN HOSPITAL WHO USUALLY LIVE HERE?
Yes ◯¹ Enter names in 32 and go to 22   No ◯² Go to 22

SUBSEQUENT INTERVIEW

20 • If Personal interview ◯¹ Go to 21
• Otherwise ask:
ARE YOU STILL LIVING IN THE SAME DWELLING AS LAST MONTH?
• where possible, state listing address
Yes ◯² Go to 21   No ◯³ Personal visit required

21 DO THE FOLLOWING PERSONS STILL LIVE OR STAY AT THIS DWELLING?
• Read all names in 32.
• Enter appropriate code in 40.

22 DOES ANYONE ELSE LIVE AT THIS DWELLING SUCH AS OTHER RELATIVES, ROOMERS, BOARDERS OR EMPLOYEES?
Yes ◯¹ Enter names in 32, COMPLETE 33 through 40 and go to 42
No ◯² • For a first interview, COMPLETE 33 through 40 and go to 42
• For a subsequent interview, go to 42

31 HRD Pg Ln	32 Names of household members	33 Age	34 Sex	35 M S	36 Fam Id.	37 R to H	38 Educ. 1 2	40 Membership	50 L.	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Given name / Surname								1													
2	Given name / Surname								2													
3	Given name / Surname								3													
4	Given name / Surname								4													
5	Given name / Surname								5													
6	Given name / Surname								6													
7	Given name / Surname								7													
8	Given name / Surname								8													

(Answers to supplementary questions)

42 IS THIS DWELLING OWNED BY A MEMBER OF THIS HOUSEHOLD?
Yes ◯¹ Go directly to FORMS 05 & 06   No ◯² Complete FORM 04

COMPLETE AT END OF INTERVIEW

43 FOR ALL HOUSEHOLDS
Telephone no.
[ ] — [ ] →
Permission to interview by phone:
Granted ◯³ } Go to 44
Denied ◯⁴
No telephone ◯¹   or [ ]   Telephone no. ◯² refused
Go to 44

44 Determine and record the best time to call on this household.
[ ]

45 RESPONSE CODE
Month	
Code	
IF CODE "B" EXPLAIN IN NOTES

46 Was this interview conducted by telephone?
Yes ◯¹   No ◯²

47 Forms Control
	Form	04	05	06
	Printed			
	Completed			

48
Ln	Retain	Item no.
1	◯¹	
2	◯²	
3	◯³	
4	◯⁴	

NOTES
See over for additional NOTES. ◯

CODE SHEET
Household Record Docket (Form 03)

8
1 Single Detached
2 Double
3 Row or Terrace
4 Duplex
5 Apartment, Flat
6 Institution
7 Hotel, Rooming or Lodging House
8 Camp – Logging, Construction, etc.
9 Mobile Home
0 **Other** – *Specify in* NOTES

34
M Male
F Female

35
WHAT IS.....MARITAL STATUS?
(Read categories to respondent)
1 Now married or living common-law
2 Single (never married)
3 Widow or widower
4 Separated or divorced

36
Assign one letter to all household members related to the head of a family by one of the relationships listed in Item 37.
("A" for each member of the first family, "B" for each member of the second family, etc.)

37
Each different letter used in Item 36 requires a different 'Head of Family' in Item 37.
1 Head of Family
2 Spouse
3 Son or daughter (natural, adopted or step)
4 Grandchild
5 Son-in-law or daughter-in-law
6 Foster child (less than 18)
7 Parent
8 Parent-in-law
9 Brother or sister
0 **Other relative** – *Specify in* NOTES
Unrelated roomers, boarders and friends require a separate family identifier in Item 36.

40
0 Not a household member this month
1 Civilian household member this month
2 Full-time member of Canadian Armed Forces this month
3 Household member 70 years of age and over (non-birth interview only)

FIRST CODE: Entered by interviewer
NOTE: *for any code other than X, explain situation on appropriate form(s)* **FORMS**

45

		FORMS
X	LFS questionnaire completed for all eligible household members	22
E	LFS questionnaire completed for some (not all) eligible household members	15/22
N	No one at home (after several calls)	15/22
R	Household refusal	15/22
K	Interview prevented by death, sickness, language problem or other unusual circumstances related to the household	15/22
L	Interview prevented by weather conditions	15/22
T	Household temporarily absent	15/22
V	Vacant dwelling (or trailer stall and vacant seasonal dwelling)	22
C	Dwelling under construction	22
B	Dwelling occupied by persons not to be interviewed	15/22
D	Dwelling demolished, converted to business premises, moved, abandoned (unfit for habitation), listed in error	12/22
A	Interview cancelled for lack of an interviewer (Regional Office use only)	

SECOND CODE: Regional Office use only

Blank Interview or attempt to interview again
3 Do not interview unless there is a complete change in household membership
4 Attempt to interview again, a letter was sent
5 Attempt to interview again, personal contact made by Regional Office staff

38
Column 1: WHAT IS THE HIGHEST GRADE OF ELEMENTARY OR HIGH SCHOOL (SECONDARY SCHOOL) .... EVER COMPLETED?

0 Grade 8 or lower *Quebec: Secondary II or lower*

1 Grade 9 – 10 *Quebec: Secondary III or IV Newfoundland: 1st year of secondary*

Grade 11 – 13 *Quebec: Secondary V Newfoundland: 2nd to 4th year of secondary*

DID.....GRADUATE FROM HIGH SCHOOL (SECONDARY SCHOOL)?

2 **No**

3 **Yes**

Column 2: HAS.....RECEIVED ANY OTHER EDUCATION?

0 **No**
   Yes

COULD THIS EDUCATION BE COUNTED TOWARDS A DEGREE, CERTIFICATE OR DIPLOMA FROM AN EDUCATIONAL INSTITUTION?

0 **No**
   Yes

WHAT IS THE HIGHEST DEGREE, CERTIFICATE OR DIPLOMA...HAS OBTAINED?

1 No postsecondary degree, certificate or diploma
2 Trades certificate or diploma from a vocational school or apprenticeship training
3 Non-university certificate or diploma from a community college, CEGEP, school of nursing, etc.
4 University certificate below bachelor's level
5 Bachelor's degree
6 University degree or certificate above bachelor's level

USING TEMPORARY DOCKET NUMBERS

T					A

Always start with "T" for Temporary | Use the last 4 digits of your Assign. No. | "A" for the first additional dwelling, "B" for the second, "C" for the third, etc.

Canada

The Labour Force Survey Questionnaire (Form 05)

The Labour Force Survey Questionnaire (Form 05) is used to collect information on the current and most recent labour market activity of all household members 15 years of age or older. The Form 05 includes questions on hours of work, job tenure, type of work, reason for hours lost or absent, job search undertaken, availability for work, and school attendance.

The Labour Force Survey Questionnaire (From 05) - Code Sheet

LABOUR FORCE SURVEY QUESTIONNAIRE

CONFIDENTIAL when completed
FRANÇAIS AU VERSO

Docket No. **2** | Survey date **3** Mo. Yr. | Assignment No. **4**

HRD page - line No. | Given name | Surname | **1** FORM NO. **05**

5 | **6** | **7**

---

l0 LAST WEEK, DID ... WORK AT A JOB OR BUSINESS? *(Regardless of the number of hours.)*
Yes ¹◯ No ²◯ Go to 30
PERMANENTLY unable to work ³◯ Go to 50

l1 DID ... HAVE MORE THAN ONE JOB OR BUSINESS LAST WEEK?
Yes ¹◯ No ²◯ Go to 13

l2 WAS THIS A RESULT OF CHANGING EMPLOYERS LAST WEEK?
Yes ¹◯ No ²◯

l3 HOW MANY HOURS PER WEEK DOES ... USUALLY WORK AT HIS/HER:
(Main) JOB? ▢ *if total 30 or more go to 15*
Other jobs? ▢

l4 WHAT IS THE REASON ... USUALLY WORKS LESS THAN 30 HOURS PER WEEK?
▢ *Enter Code*

l5 LAST WEEK, HOW MANY HOURS OF OVERTIME OR EXTRA HOURS DID ... WORK?
(include paid and unpaid time at all jobs) ▢ *if none enter 00*

l6 LAST WEEK, HOW MANY HOURS WAS ... AWAY FROM WORK FOR ANY REASON? *(Holiday, vacation, illness, labour dispute, etc.)*
(From all jobs) ▢ *if none enter 00 and go to 18*

l7 WHAT WAS THE MAIN REASON FOR BEING AWAY FROM WORK?
▢ *Enter code*

l8 HOW MANY HOURS DID ... ACTUALLY WORK LAST WEEK AT HIS/HER:
(Main) JOB? ▢
Other jobs? ▢

l9 IN THE PAST 4 WEEKS, HAS ... LOOKED FOR ANOTHER JOB?
Yes ¹◯ No ²◯
Go to 72

---

30 LAST WEEK, DID ... HAVE A JOB OR BUSINESS AT WHICH HE/SHE DID NOT WORK?
Yes ¹◯ Go to 33 No ²◯

31 LAST WEEK, DID ... HAVE A JOB TO START AT A DEFINITE DATE IN THE FUTURE?
Yes ¹◯ No ²◯ Go to 50

32 COUNTING FROM THE END OF LAST WEEK, IN HOW MANY WEEKS WILL ... START TO WORK AT HIS/HER NEW JOB?
▢ Go to 50

33 WHY WAS ... ABSENT FROM WORK LAST WEEK?
▢ *Enter code and if code 6 go to 32*

34 DID ... HAVE MORE THAN ONE JOB OR BUSINESS LAST WEEK?
Yes ¹◯ No ²◯

35 HOW MANY HOURS PER WEEK DOES ... USUALLY WORK AT HIS/HER:
(Main) JOB? ▢ *if total 30 or more go to 37*
Other jobs? ▢

36 WHAT IS THE REASON ... USUALLY WORKS LESS THAN 30 HOURS PER WEEK?
▢ *Enter code*

37 UP TO THE END OF LAST WEEK, HOW MANY WEEKS HAS ... BEEN CONTINUOUSLY ABSENT FROM WORK?
▢

38 IS ... GETTING ANY WAGES OR SALARY FROM HIS/HER EMPLOYER FOR ANY TIME OFF LAST WEEK?
Yes ¹◯ No ²◯

39 INTERVIEWER CHECK ITEM:
• if code 5 (layoff) in 33 ¹◯ go to 56
• Otherwise ²◯ go to 40

40 IN THE PAST 4 WEEKS, HAS ... LOOKED FOR ANOTHER JOB?
Yes ¹◯ No ²◯
Go to 72

DESCRIPTION OF MAIN JOB OR BUSINESS

l2 FOR WHOM DID ... WORK? *(Name of business, government dept. or agency, or person)*
◯₁▶
change
or ▶

l3 WHEN DID ... START WORKING FOR THIS EMPLOYER?
Mo. Yr.
◯₁▶ ▢ or ▶ ▢ *if month unknown enter -- in month*
change
Mo. Yr.

l4 WHAT KIND OF BUSINESS, INDUSTRY OR SERVICE WAS THIS? *(Give full description: e.g., federal government, canning industry, forestry services.)*
◯₁▶
change
or ▶

l5A WHAT KIND OF WORK WAS ... DOING? *(Give full description: e.g., office clerk, factory worker, forestry technician.)*
◯₁▶
change
or ▶

l5B IN THIS WORK, WHAT WERE ...'S MOST IMPORTANT ACTIVITIES OR DUTIES? *(Give full description; e.g., filing documents, drying vegetables, forest examiner.)*
◯₁▶
change
or ▶

l6 Class of worker:
Main job .... No ◯₁▶ ▢ or ▶ ▢ *Enter Code*
change

l7 Other job .... No ◯₁▶ ▢ or ▶ ▢ *Enter Code* go to 80
change

NOTES

Item no.

---

50 HAS ... EVER WORKED AT A JOB OR BUSINESS?
Yes ¹◯ No ²◯ Go to 55

51 WHEN DID ... LAST WORK AT A JOB OR BUSINESS?
or ▶
No ◯₁▶ ▢ Mo. Yr. ▢ Mo. Yr. *if month unknown, enter -- in month*
change

52 INTERVIEWER CHECK ITEM:
(1) if 51 is before ....
(2) if 51 is equal to or later than ....
▢ Mo. Yr.
¹◯ go to 55
²◯ go to 53

53 DID ... USUALLY WORK 30 OR MORE HOURS PER WEEK?
Full-time ¹◯ *(30 or more hours per week)* Part-time ²◯ *(Less than 30 hours per week)*

54 WHAT WAS THE MAIN REASON WHY ... LEFT THAT JOB?
▢ *Enter code*

55 INTERVIEWER CHECK ITEM:
• if "perm. unable to work" in 10 ¹◯ go to 80
• Otherwise ²◯ go to 56

56 IN THE PAST 6 MONTHS, HAS ... LOOKED FOR WORK?
Yes ¹◯ No ²◯ Go to 64

57 • IN THE PAST 4 WEEKS, WHAT HAS ... DONE TO FIND WORK? *(Mark all methods reported.)*
Nothing ◯₁ Go to 62

• IN THE PAST 4 WEEKS, HAS ... DONE ANYTHING ELSE TO FIND WORK? Mark all other methods reported.
For each method given, ask:
• WHEN DID ... LAST _____ ? *(Repeat method)*

Checked with:	Method used	No. of weeks ago (excl. svy. week)
PUBLIC employment AGENCY	²◯	▢
PRIVATE employment AGENCY	³◯	▢
UNION	⁴◯	▢
EMPLOYERS directly	⁵◯	▢
FRIENDS or relatives	⁶◯	▢
Placed or answered ADS	⁷◯	▢
LOOKED at job ADS	⁸◯	▢
OTHER, Specify in NOTES	⁹◯	▢

58 UP TO THE END OF LAST WEEK, HOW MANY WEEKS HAS ... BEEN LOOKING FOR WORK? *(Not counting weeks worked.)*
▢

59 WHAT WAS ...'s MAIN ACTIVITY BEFORE HE/SHE STARTED TO LOOK FOR WORK?
▢ *Enter Code*

60 IS ... LOOKING FOR A JOB TO LAST MORE THAN 6 MONTHS?
Yes ¹◯ *(More than 6 months)* No ²◯ *(6 months or less)*

61 IS ... LOOKING FOR A FULL-TIME OR PART-TIME JOB?
Full-time ¹◯ *(30 or more hours per week)* Part-time ²◯ *(Less than 30 hours per week)*
Go to 63

62 WHAT WAS THE MAIN REASON WHY ... DID NOT LOOK FOR WORK LAST WEEK?
▢ *Enter code*

63 WAS THERE ANY REASON WHY ... COULD NOT TAKE A JOB LAST WEEK?
▢ *Enter code*

64 INTERVIEWER CHECK ITEM:
• if "No" (never worked) in 50 ²◯ go to 80
• if upper circle in 52 is marked ³◯ go to 80
• Otherwise ⁴◯ go to 72

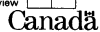## EDUCATIONAL ACTIVITIES (if age 65 or over, go to 90)

80 LAST WEEK, WAS ... ATTENDING A SCHOOL, COLLEGE OR UNIVERSITY?
Yes ¹◯ No ²◯ Go to 90

81 WAS ... ENROLLED AS A FULL-TIME OR PART-TIME STUDENT?
Full ¹◯ time Part ²◯ time

82 WHAT KIND OF SCHOOL WAS THIS?
▢ *Enter code*

INFORMATION SOURCE

90 HRD page-line No. of person providing the above information
Last interview ▢ This interview ▢

Canadä

CODE SHEET

Labour Force Survey Questionnaire (Form 05)

14
36
1 Own illness or disability
2 Personal or family responsibilities
3 Going to school
4 Could only find part-time work
5 Did not want full-time work
6 Full-time work under 30 hours per week
0 **Other** – Specify in NOTES

59
1 Working
2 Keeping house
3 Going to school
0 **Other** – *DO NOT specify in NOTES*

17
1 Own illness or disability
2 Personal or family responsibilities
3 Weather
4 Labour dispute (strike or lockout)
5 Layoff, expects to return **(Paid Workers Only)**
6 New job started during week, or job terminated (does not expect to return)
7 Vacation
8 Holiday (legal or religious)
9 Working short-time (because of material shortages, plant maintenance or repair, etc.)
0 **Other** – Specify in NOTES

62
1 Own illness or disability
2 Personal or family responsibilities
3 Going to school
4 No longer interested in finding work
5 Waiting for recall (to former job)
6 Has found new job
7 Waiting for replies from employers
8 Believes no work available (in area, or suited to skills)
9 No reason given
0 **Other** – *Specify in NOTES*

33
1 Own illness or disability
2 Personal or family responsibilities (Include maternity leave)
3 Weather
4 Labour dispute (strike or lockout)
5 Temporary layoff, expects to return **(Paid Workers Only)**
6 New job to start in the future
7 Vacation
8 Seasonal Business **(Excl. Paid Workers)**
0 **Other** – Specify in NOTES

63
Yes, because of:

1 Own illness or disability
2 Personal or family responsibilities
3 Going to school
4 Already has a job
0 **Other** – *Specify in NOTES*
5 **No** (Was available for work)

54
1 Own illness or disability
2 Personal or family responsibilities
   Include: Marriage, pregnancy, trip, vacation, family illness, etc.
3 Going to school
4 Quit job for no specific reason
5 Lost job or laid off job **(Paid Workers Only)**
   Include: Seasonal job, on-call arrangement, temporary job, dismissal (fired), company moved or went out of business, economic conditions, etc.
6 Changed residence
7 Dissatisfied with job
   Include: Low pay, poor hours, transportation problems, working conditions, conflict with employer or co-workers, no opportunity for advancement, etc.
8 Retired
0 **Other** – *Specify in NOTES*

76
77
"IN…'S JOB, WAS HE/SHE A PAID WORKER, SELF-EMPLOYED OR AN UNPAID FAMILY WORKER?"

"IN…'S OTHER JOB, WAS HE/SHE A PAID WORKER, SELF-EMPLOYED OR AN UNPAID FAMILY WORKER?"

Worked for Others

1 Paid Worker
2 Unpaid family worker

Self-employed

3 Incorporated business – **With** paid help
4 Incorporated business – **No** paid help
5 Not incorporated business – **With** paid help
6 Not incorporated business *(Include self-employed without a business)* – **No** paid help

82
1 Primary or secondary school
2 Community college, junior college, or CEGEP
3 University
0 **Other** – *Specify in NOTES*

7-5030-440.1: 29-1-90

91

The Supplementary Survey Questionnaire (Form 06)

Content:

The 1994 Adult Education and Training Survey contains a total of 130 questions organized into seven sections (A-G). The first section comprises a series of screening questions to ensure that respondents answered the appropriate blocks of questions thereafter. The next two sections (B-C) ask questions about employer-related training, while the following three sections (D-F) ask questions about non-employer related training. The final section asks questions of a more general nature.
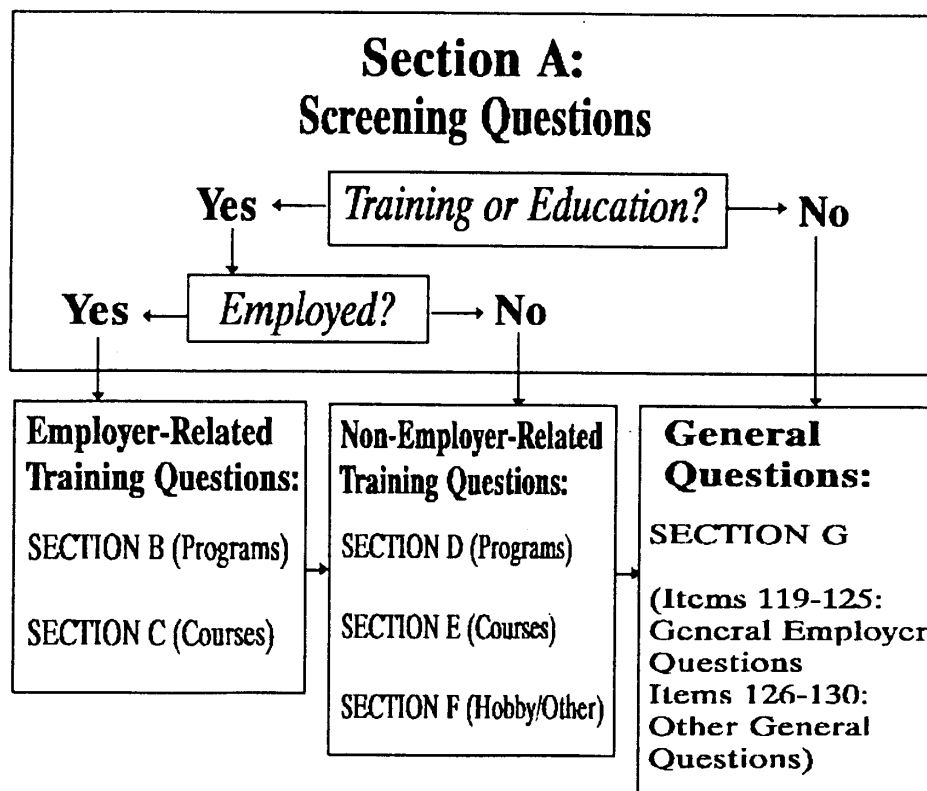
Fig. 1. 1994 AETS Questionnaire Structure

The structure of the questionnaire is such that respondents should only be asked the sets of questions relevant to their particular circumstances. The employer-related sections on programs (B) and courses (C) are virtually identical to the non-employer related sections on programs (D) and courses (E and F); and it is unlikely that a respondent taking an employer-related program would also be

taking a non-employer related program. Therefore, no respondent should have been asked all 130 questions. For example, respondents who have received no training will be asked no more than 15 questions.

The following are short summaries of the contents of each of the seven sections.

Section A: Screening Questions

The questions in this section are designed to determine whether a respondent received any education or training; if the respondent is over 70 years of age; whether the respondent was employed, and if so did the employer support the training or education. Contingent upon the answers to the questions in this section the respondent is sent to the appropriate section of the questionnaire. It should be noted that two of the screening questions are completed through reference to the LFS forms 03 and 05.

Section B: Employer-related Training Programs

This section includes respondents who took programs towards an elementary or high school diploma, an apprenticeship certificate, a trade-vocational diploma/certificate, and/or a university degree/diploma/certificate, and were supported by their employer. Questions in this section ask about financial support, method of training, duration of training, use of learned skills at work, and program completion. It should be noted that respondents who indicated that they took an elementary or high school program are not asked for the major field of study.

Section C: Employer-related Training Courses

This section includes respondents who took courses, workshops seminars or tutorials that were supported by their employer. The questions in this section are almost identical to the ones in Section B, though there are some differences in wording.

Section D: Non-employer Training Programs

This section is similar to section B, except that it refers to education or training that was not supported by the employer. Consequently, a few questions are different and the wording of some questions is slightly changed. It should be noted that respondents who indicated that they took an elementary or high school program are not asked for the major field of study.

Section E: Non-employer Courses

This section is similar to section C, except that it refers to courses that were not supported by the employer. The overall nature of the questions is similar to that of section C, however a few questions are different and the wording of some questions is slightly changed.

Section F: Non-employer - Any Other Courses

This section is intended to collect information on hobby, recreational or interest courses, personal development courses, or any residual courses not collected in section E. The follow the same pattern as in section E.

Section G: General Questions

These questions are concerned with collecting information about the size of the firm, union membership, adequacy of training, barriers to training, and income.

13. FILE DESCRIPTION/FREQUENCY COUNTS

The record layout describes in detail the information found on the AETS microdata file. The information that is used to create the microdata file comes from three forms:

- The **F03** is a household record docket and is used to describe the various members of the household;

- The **F05** is the Labour Force Survey form and is used to collect information on household members' labour force activity;

- The **F06** is the form used to collect information about the education and training received by adults in Canada.

The information from these forms is brought together to create the microdata file. In instances where the information is from the F03 form or the F05 form the variable "acronym" will normally encompass either "F03" or "F05".

The record layout provides a description of each variable on the AETS microdata file. The user is provided with the field number, field length, field position, acronym used to describe the variable, and where necessary brief notes about the variable. The record layout also provides weighted and unweighted control counts for each variable.

Users should be aware that for certain variables which give total numbers of courses or programs (i.e. TOTPGM, Q46ALL, DV47A_1, etc.) the counts shown are for the number of respondents who took at least one course or program. On the file itself however, the variable will indicate the total number of programs or courses taken by a given respondent.

Users also should be aware that the counts will vary depending on how respondents flow through the questionnaire. To the extent possible, the skip patterns have been identified in the record layout. However, there are instances where the user should consult the questionnaire to determine the exact flow pattern.

In addition, some cells have very small unweighted counts. The user should be sure to read "Publication and Release Guidelines", Chapter 9 before releasing any data.

The user will note that some variables have been collapsed to maintain the respondent's confidentiality. In some instances it is possible for Statistics Canada to create a custom tabulation should a user require a particular variable that has been suppressed on the microdata file. Requests for custom tabulations are conducted on a cost-recoverable basis. Users interested in custom tabulations should contact Mike Sivyer at (613) 951-4598.

It should also be noted that the record layout is the same for both the Adult Education and Training Survey master file (for use within Statistics Canada only) and the public microdata file. Therefore, it may appear to the user that there is apparent duplication of variables and also an excessive amount of collapsing or regrouping of variables. For a number of the variables shown on the record layout no data are available on the microdata file. When fields have been suppressed, the actual data have been overwritten with 8's.

Education Codes

The education codes found on this file are based on the Major Field of Study codes used by the Census, and some additional codes developed to reflect the unique character of the Adult Education and Training Survey (AETS). The collapsing of codes reduces the problems of small cell sizes and allows for comparisons with the 1992 Adult Education and Training Survey. User's interested in the classification structure of the Major Field of Study codes should refer to Statistics Canada publication 99-130 "User's Guide To 1986 Census Data On Major Field of Study".

Major Groupings for AETS Coding Structure

The major groupings refers to the broad areas within which more detailed codes are identified in the three-digit codes. The major groupings have been used exclusively for apprenticeship coding due to small sample sizes. Some special derived variables have been created based on the major groupings. These variables are self-evident on the file.

```
01   Educational, Recreational and Counselling Services
02   Fine and Applied Arts
03   Humanities and Related Fields
04   Social Sciences and Related Fields
05   Commerce, Management and Business Administration
06   Agricultural and Biological Sciences/Technologies
07   Engineering and Applied Sciences
08   Engineering and Applied Science Technologies and Trades
09   Health Professions, Sciences and Technologies
10   Mathematics and Physical Sciences
11   Other (i.e. high school, not known, etc.)
12   Upgrading (Academic)
13   Personal Development
14   Recreational Activity
97   Uncodable
```

Three-digit Coding Structure

EDUCATIONAL, RECREATIONAL AND COUNSELLING SERVICES

001   **Education - General**
        - Education - General

        NOTE: Includes co-operative learning (all levels);
        tutoring (level unknown).

002   **Elementary - Primary Education**
        - Elementary School Teaching - General
        - Elementary School Teaching - Specialized
        - Pre-school, Kindergarten and Early Childhood Education

003   **Secondary Education**
        - Secondary School Teaching
        - English Language Teaching
        - French Language Teaching
        - Other Language Teaching
        - Mathematics - Science Teaching
        - Mathematics - Computer Science Teaching
        - Social Studies Teaching
        - Secondary Basic Curriculum - Other
        - Adult/Continuing Education
        - Art and Fine Art Education
        - Commercial/Business Education
        - Family/Life Education
        - Industrial/Vocational Education
        - Music Education
        - Religious Education
        - Secondary Specialties - Other

004   **Special Education**
        - Special Education Teaching
        - Highly Gifted or Exceptional Children
        - Multicultural Education - Native
        - Multicultural Education - Other
        - Remedial Reading
        - Special Education - Other

005   **Non-teaching Educational Fields/Counselling Services and
        Personal Development**
        - Audio-visual Educational Media
        - Educational Administration and Organization
        - Educational Psychology
        - Educational Statistics and Sociology
        - History, Philosophy and Theory of Education
        - Paraprofessional Teacher Aide/Educational Support
        - Counselling Services - General

- Counselling Psychology
- Marriage/Family/Life Skills Counselling
- Vocational Guidance and Counselling
- Counselling Services and Personal Development - Other

006   **Physical Education, Health and Recreation**
- Physical Education and Health
- Kinesiology and Kinanthropology
- Recreology, Recreation and Leisure Services
- Parks/Forest/Wildlife Recreation
- Travel and Tourism
- Sports Technology
- Physical Education, Health and Recreation - Other

007   **Other Education**
- Education, n.e.c. - Other
- Postsecondary Teacher Training

        NOTE: Includes distance education, global education, home
        schooling, training for instructors and training officers.

FINE AND APPLIED ARTS

008   **Fine Arts**
- Fine Arts - General
- Aesthetics and Art Appreciation, Art Studies
- Art History
- Painting and Drawing
- Pottery and Ceramics
- Sculpture

009   **Music**
- Music, Musicology
- Composition and Conducting
- Musical Instruments
- Music History and Music Theory
- Vocal Music, Singing, Opera

010   **Other Performing Arts**
- Performing Arts - General
- Dance
- Drama
- Theatre

011   **Commercial and Promotional Arts/Graphic and Audio-visual
        Arts**
- Commercial Art/Promotional Art - General
- Advertising Art
- Modelling
- Graphic Art and Design
- Lithography and Print Making
- Photography

- Recorded Music Arts
- Printing and Publishing
- Audio-Visual Arts

NOTE: Includes learning such software as Ventura, GEM Draw, Pagemaker, etc.

012   **Creative and Design Arts**
- Creative and Design Arts - General
- Handicrafts (Arts and Crafts)
- Interior Design and Decorating

NOTE: Includes quilting, tatting, rug hooking; wood carving and stained glass.

013   **Other Applied Arts**
- Applied Arts - General
- Barbering
- Beauty Culture and Cosmetology
- Hairdressing
- Upholstery and Furniture
- Applied Arts - Repair and Renovation

HUMANITIES AND RELATED FIELDS

014   **Classics, Classical and Dead Languages**
- Classics, Classical Studies
- Ancient Greek, Latin and Roman
- Classical Languages - Other

015   **History**
- History - General
- Canadian History
- Medieval and Ancient History
- Modern History
- History - Other

016   **Library and Records Science**
- Library/Documentation Science
- Museology, Museum Technology

017   **Mass Media Studies**
- Mass Media Studies - General
- Cinematography, Film Studies
- Radio-television
- Journalism, News Reporting

018   **English, French and Other Languages and Literature**
- English Language and Literature - General
- American Literature
- British Literature
- Canadian (English) Literature

- English Language and Literature - Other
- French Language and Literature - General
- French Canadian Literature
- European French Literature
- French Language and Literature - Other
- Comparative Literature
- Asian Languages and Literature
- Germanic Language and Literature
- Italian Language and Literature
- Slavic or East European Languages and Literature
- Linguistics
- Languages and Literature - Other

019   **Philosophy**
- Philosophy - General
- Ethical Philosophy
- Modern Philosophy
- Political Philosophy
- Philosophy - Other

020   **Religious Studies**
- Religion, Religious Studies
- Comparative Religion
- Divinity
- Theology
- Religious Studies - Other

NOTE: Includes training in the lay ministry and bishop's training.

021   **Other Humanities and Related Fields**

- Humanities - General (General Arts)
- Second Language Training
- Translation and Interpretation
- Creative Writing
- Humanities and Related Fields, n.e.c. - Other

SOCIAL SCIENCES AND RELATED FIELDS

022   **Anthropology and Archaeology**
- Anthropology - General
- Ethnology and Related Fields
- Physical Anthropology, Anthropometry
- Social and Cultural Anthropology
- Anthropology - Other
- Archaeology

024   **Area Studies (Non Languages or Literature)**
- Asian Studies
- Canadian Studies
- Germanic Studies

- Latin American and Caribbean Studies
- Near and Middle Eastern Studies
- Slavic or East European Studies
- Area Studies - Other

025 **Economics**
- Economics - General
- Agricultural Economics
- Econometrics
- International Economics
- Labour/Human Resources Economics
- Economics - Other

026 **Geography**
- Geography - General
- Cartography
- Economic Geography
- Historical and Political Geography
- Human Geography
- Natural Resources Geography
- Physical Geography
- Urban/Rural Geography
- Geography - Other

027 **Law and Jurisprudence**
- Law and Jurisprudence - General
- Civil, Criminal, Family, Common Law
- Commercial/Business, Company Law
- Constitutional/International Law
- Law - Other

028 **Man/Environment Studies**
- Man/Environment Studies - General
- Human Ecology
- Resource Planning and Management
- Urban, Rural, Regional Planning and Development

029 **Political Science**
- Political Science - General
- Canadian Politics
- Comparative Politics
- International Relations, Foreign Policy
- Political Science - Other

030 **Psychology**
- Psychology - General
- Child, Adolescent, Developmental Psychology
- Clinical Psychology
- Social Psychology
- Psychology - Other

NOTE: Includes human relations.

031   **Sociology**
          - Sociology - General
          - Criminology, Penology, Deviance
          - Demography, Population Studies
          - Ethnic Sociology
          - Family Sociology
          - Sociology - Other

          NOTE: Includes the study of multiculturalism and
          minorities.

032   **Social Work and Social Services**
          - Social Work/Welfare - General
          - Child Care Services, Youth Services
          - Correctional Technologies
          - Gerontology, Applied
          - Police and Para-legal Technologies
          - Protection Services
          - Social Services and Welfare Technologies - Other

          NOTE: Includes search and rescue training, ski patrol
          training, avalanche safety training, etc.

034   **War and Military Studies and Other Social Sciences and
          Related Fields**
          - War and Military Studies
          - Social Sciences - General
          - Social Sciences and Related Fields, n.e.c. - Other

          NOTE: Includes gender studies.

COMMERCE, MANAGEMENT AND BUSINESS ADMINISTRATION

035   **Business and Commerce**
          - Business and Commerce - General
          - Business Administration
          - International Business and Commerce
          - Business and Commerce - Other

036   **Financial Management**
          - Financial Management - General
          - Accounting and Auditing
          - Assessment and Appraisal
          - Financial Management - Other

037   **Industrial Management and Administration**
          - Industrial Management and Relations
          - Labour Management and Relations
          - Public Administration
          - Personnel/Human Resources Management
          - Industrial Management and Administration - Other

NOTE: Includes shop steward training; conflict management; training in interviewing skills; payroll training; Workmans Compensation training for managers; project management; performance management; time management; risk management; human relations.

038   **Institutional Management and Administration**
        - Health Care and Services Management
        - Hotel and Food Administration
        - Funeral Directing and Embalming
        - Tourism and Resort Management
        - Institutional Management - Other

039   **Marketing, Merchandising, Retailing and Sales**
        - Customer/Public Relations
        - Marketing
        - Merchandising
        - Retailing and Sales
        - Marketing and Sales - Other

        NOTE: Includes customer service; shoplifting prevention training.

040   **Secretarial Science - General Fields**
        - Secretarial Science - General
        - Bank and Financial Clerk
        - Business Machine Operations
        - Court Reporting and Recording
        - Health/Medical Records Technology
        - Legal Secretary
        - Medical Secretary
        - Office Accounting/Bookkeeping
        - Word Processing
        - Secretarial/Clerical - Other

        NOTE: Includes keyboarding; dispatcher training; training in the use of answering machines; software packages such as ACCPAC, Bedford, Peachtree, etc.; training in Wordperfect, Wordstar, MacWord Pro, etc.; Postmaster training.

AGRICULTURAL AND BIOLOGICAL SCIENCES/TECHNOLOGIES

041   **Agricultural Science and Technology**
        - Agricultural Science
        - Animal Science - General
        - Crop Science, Crops, Crop Farming
        - Food Science
        - Horticulture
        - Plant Science - General
        - Poultry Science
        - Soil Science

- Agricultural Science - Other
- Agricultural Technology
- Agricultural Business
- General Farming Technology
- Agricultural Technology - Other

042   **Animal Science Technologies**
- Animal Science/Health Technology
- Cattle/Swine Technology
- Equine Studies/Horse Husbandry
- Veterinary Technologies/Animal Health and Care
- Animal Science Technologies - Other

NOTE: Includes horseback riding lessons.

043   **Biochemistry, Biology and Biophysics**
- Biochemistry
- Biology - General
- Genetic and Developmental Biology
- Microbiology
- Molecular Biology
- Biology - Other
- Biophysics

044   **Botany**
- Botany - General
- Botany - Other
- Plant Sciences - Specialized

045   **Household Science and Related Fields**
- Household and Domestic Science
- Consumer Studies
- Clothing and Textiles
- Food Nutrition, Dietetics and Dietary Technology
- Food Services and Preparation
- Home Economics

NOTE: Includes smocking, serging and knitting; wine tasting and wine appreciation courses.

047   **Veterinary Medicine/Science and Zoology**
- Veterinary Medicine
- Veterinary Science
- Zoology - General
- Animal Anatomy, Ecology, Genetics or Histology
- Entomology
- Fisheries Biology
- Marine/Ocean Biology
- Zoology - Other

048   Other Agricultural and Biological Sciences/Technologies
- Fish Farming, Fish Technologies and Processing
- Food Processing Technologies - General
- Hunting and Trapping
- Agricultural and Biological Sciences/Technologies -
  Other

ENGINEERING AND APPLIED SCIENCES

049   Architecture and Architectural Engineering
- Architecture - General
- Architectural Engineering Design
- Architecture - Other

051   Biological and Chemical Engineering
- Biological Engineering, Bioengineering
- Biomedical or Clinical Engineering
- Chemical Engineering

052   Civil Engineering
- Civil Engineering

054   Electrical/Electronic Engineering
- Computer Engineering
- Electrical/Electronic Engineering
- Music and Recording Engineering

**056   Aeronautical and Aerospace Engineering, Industrial
Engineering, and Mechanical Engineering**
- Aeronautical and Aerospace Engineering
- Industrial/Manufacturing Engineering
- Mechanical Engineering - General
- Instrumentation Engineering
- Power Engineering

057   Mining, Metallurgical and Petroleum Engineering
- Geological Engineering
- Metallurgical Engineering
- Mining Engineering
- Petroleum Engineering

058   Resources and Environmental Engineering
- Agricultural Engineering
- Environmental/Resource Engineering
- Fisheries, Marine, Ocean Engineering
- Water Resources and Watershed Engineering

059   **Design/Systems Engineering, Engineering Science and Engineering n.e.c.**
- Design/Systems Engineering
- Engineering Science
- Engineering Physics
- Engineering, n.e.c.

060   **Forestry**
- Forestry
- Forest Harvesting, Management, Protection
- Forest Wildlife Management
- Silviculture
- Forestry - Other

061   **Landscape Architecture**
- Landscape Architecture
- Garden Design
- Landscape Technology

ENGINEERING AND APPLIED SCIENCE TECHNOLOGIES AND TRADES

062   **Architectural Technology**
- Architectural Technology
- Architectural Drafting

063   **Chemical Technology**
- Chemical Technology
- Biochemical Technology
- Plastics, Fibreglass and Rubber Technology
- Textile Processing Technology (Dyes)

064   **Building Technologies**
- Boat, Shipbuilding and Naval Architecture
- Building Technology
- Construction Electrician
- Drywall, Plastering, Lathing
- Heat and Insulation
- Interior Finishing
- Masonry (Brick, Stone, Concrete)
- Plumbing and Pipe Trades
- Welding Technology
- Woodworking, Carpentry

NOTE: Includes woodturning, wood engraving, etc.

065   **Data Processing and Computer Science Technologies**
- Data Processing - General
- Computer Science Technology
- Computer Programming and Software
- Microcomputer and Information Systems

NOTE: Includes learning softwares such as DOS, UNIX, Basic, PL1, Rapid, Natural, Lotus, Excel, Paradox, Foxpro, Harvard Graphics, Windows, E-mail, SAS, Internet, etc. It also includes training as a LAN technician.

066   Electronic and Electrical Technologies
- Electronic Technology
- Electrical Technology
- Microwave and Radar Technology
- Radio and Television
- Telecommunications Technology
- Electronic and Electrical Technologies - Other

067   Environmental and Conservation Technologies
- Environmental Technology - General
- Earth Resources Technology
- Forest Conservation Technology
- Renewable Resources Technology
- Wildlife and Fisheries Conservation

NOTE: Includes learning about composting and recycling.

068   General and Civil Engineering Technologies
- Civil Engineering Technologies - General
- Construction Technologies
- Drafting - General
- Drafting - Specialized
- Engineering Design and Instrumentation Technology
- Piping Technologies (Non-Plumbing)
- Surveying and Photogrammetric Technology

069   Industrial Engineering Technologies
- Industrial Engineering Technology - General
- Air Conditioning and Refrigeration
- Clothing/Fabric Product Manufacturing
- Machinist/Machine Shop
- Pattern Making
- Power Sewing
- Sheet Metal
- Tool and Die
- Industrial Technologies - Other

070   Mechanical Engineering Technologies
- Mechanical Engineering Technology - General
- Aeronautical Engineering Technology
- Agricultural Equipment Mechanics
- Aircraft and Flight Mechanics Technology
- Automobile Mechanics Technology

- Heavy Equipment Mechanics
- Marine Mechanics Engineering
- Office/Business Machine Technology
- Small Engine Repairs
- Power/Stationary Engineering Technology

071 **Primary Industries/Resource Processing Technology**
- Forest Products Technology
- Mining and Metal Processing
- Petroleum Technologies
- Primary Industries/Resource Processing Technologies - Other

072 **Transportation Technologies**
- Transportation Technology - General
- Air Transportation Technology
- Marine Transportation Technology
- Motor - Commercial/Public Vehicle Transportation
- Motor - Other Motor Transportation
- Rail Transportation Technology

NOTE: Includes courses in the shipping of dangerous goods; power squadron training; boat safety; yatching; coast guard training (if it is related to operation of a ship).

073 **Other Engineering/Applied Science Technologies n.e.c.**
- Engineering/Applied Science Technologies - Other

NOTE: Includes training in snow and ice control, snow making, propane dispensing, bicycle repair, gas station attending, scaffold erection, etc.

HEALTH PROFESSIONS, SCIENCES AND TECHNOLOGIES

074 **Dentistry**
- Dentistry or Dental Medicine
- Dental Sciences
- Orthodontics
- Paedodontics
- Dentistry Specialties - Other

075 **Medicine - General and Basic Medical Science**
- General Practice Medicine
- Medical Anatomy
- Medical Biochemistry
- Medical Biophysics
- Medical Embryology/Genetics
- Medical Neurophysiology

- Medical Pharmacology
- Medical Physiology
- Basic Medical Sciences - Other

NOTE: Includes medical 'updating'.

076   Medical Specializations (Non-surgical)
- Neurology
- Paediatrics
- Psychiatry
- Radiology
- Medical Specializations (Non-surgical) - Other

NOTE: Includes oncology; ear, nose and throat; travel medicine; allergist, etc.

077   Paraclinical Sciences
- Paraclinical Medical Science
- Medical Immunology
- Medical Microbiology
- Medical Pathology
- Medical Parasitology, Virology and Bacteriology

NOTE: Includes AIDS (Acquired Immune Deficiency Sydrome).

078   Surgery and Surgical Specializations
- Surgery - General
- Obstetrics and Gynaecology
- Orthopaedic Surgery
- Plastic Surgery
- Surgical Specialties - Other

079   Nursing and Nursing Assistance
- Nursing - General
- Critical Care Nursing
- Geriatric Nursing
- Medical, Surgical, Hospital Nursing
- Obstetric Nursing
- Psychiatric Nursing and Mental Health Care
- Public Health and Community Nursing
- Nursing - Other
- Nursing Assistant, Assistant Nursing
- Health Care Aide/Support
- Long Term Care Aide
- Nursing Aide, Orderly

NOTE: Includes intensive care, coronary care and emergency care nursing; orthopaedic nursing; nursing the disabled; paliative care training; trauma and triage training.

080   **Optometry**
       - Optometry

081   **Pharmacy and Pharmaceutical Sciences**
       - Pharmacy
       - Pharmaceutical Sciences/Technology

082   **Public Health**
       - Public Health - General
       - Community Medicine and Health
       - Dental Public Health and Hygiene
       - Epidemiology and Biostatistics
       - Industrial Health, Medicine and Hygiene
       - Preventive Medicine
       - Veterinary Public Health

       NOTE: Includes WHIMS training; water safety; marine
       emergency measures; handling dangerous or hazardous goods
       training.

083   **Rehabilitation Medicine**
       - Rehabilitation Medicine - General
       - Audiology and Speech Pathology and Therapy
       - Occupational and Physical Therapy
       - Physiotherapy

084   **Medical Laboratory and Diagnostic Technology and Medical
       Treatment Technologies**
       - Medical Laboratory Technology
       - Biological Laboratory Technology
       - Biomedical Electronic Technology
       - Dental Laboratory Technology
       - Radiological Technology
       - Cardio-pulmonary Resuscitation
       - Chiropractic Technology
       - Dental Assistant
       - Emergency Paramedical Technology
       - Mental Health and Retardation Technology
       - Respiratory Technology
       - Ultrasound and Ultrasonography
       - X-ray - Medical Technology/Radiography
       - X-ray - Radiotherapy/Nuclear Medicine Technology
       - Medical Treatment Technologies - Other

       NOTE: Includes St. John's Ambulance courses, First Aid
       training and life saving courses; CPR for both medical and
       non-medical   personnel;   courses   in   dialysis,
       cathederization, IV, EKG, ECG, etc.

086   **Medical Equipment and Prosthetics and Other Health Professions, Sciences and Technologies n.e.c.**
- Medical Equipment and Prosthetics
- Health Professions, Sciences and Technologies, n.e.c.
 Other

NOTE: Includes   paliative   care   for   non   health professionals; self-breast examination.

MATHEMATICS AND PHYSICAL SCIENCES

088   **Applied Mathematics**
- Applied Mathematics - General
- Computer Science - General
- Computer Science - Systems Design and Analysis
- Operations Research
- Applied Mathematics - Other

089   **Chemistry**
- Chemistry - General
- Analytical Chemistry
- Inorganic Chemistry
- Organic Chemistry
- Physical Chemistry
- Spectroscopy
- Chemistry Specialties - Other

090   **Geology and Related Fields**
- Geology, Geological and Earth Sciences
- Geochemistry and Geochronology
- Geophysics and Geomorphology
- Hydrogeology/Hydrology
- Mineral Geology
- Petrology and Petrography
- Stratigraphy and Sedimentology
- Geology and Related Fields, n.e.c. - Other

091   **Actuarial Science and Mathematical Statistics and Mathematics**
- Actuarial Science
- Mathematical Statistics
- Mathematics

094   **Oceanography and Marine Sciences**
- Oceanography
- Biological Oceanography
- Fisheries Oceanography
- Marine Sciences, n.e.c. - Other

095   **Physics**
         - Physics - General
         - Astrophysics and Astronomy
         - Atomic and Nuclear Physics
         - Chemical Physics
         - High Energy and Particle Physics
         - Solid State Physics
         - Theoretical Physics
         - Physics, n.e.c. - Other

096   **Metallurgy and Material Science, Meteorology and General Science**
         - Metallurgy and Materials Science
         - Meteorology
         - General Science
         - Science Lab Technology

ALL OTHER, N.E.C./NO SPECIALIZATION

097   **All Other N.E.C./No Specialization**
         - All Other n.e.c.
         - No specialization
         - High School (Secondary) Credit (Grades 9-13)

ADDITIONAL EDUCATION CODES

098   **Upgrading**
         - Upgrading - General
         - Basic Education (Grades 1-8)
         - General Education Development (G.E.D.)
         - Postsecondary Upgrading
         - Pre-vocational Upgrading
         - Basic Training for Skill Development (B.T.S.D.)
         - Basic Job Readiness Training (B.J.R.T.)
         - Orientation
         - Career Alternatives
         - University Transfer

         NOTE: Includes job re-entry, job search skills, interview skills, training provided by job finders clubs, etc.

099   **Personal Development**
         - Personal Development - General
         - Home and Family
         - Consumer/Financial
         - Coping Skills
         - Communication Skills
         - Religion and Morals
         - Public Affairs, Community/Current Events
         - Driver Instruction

NOTE: Includes training in lifeskills, self-awareness, stopping smoking; prenatal classes, marriage preparation, coping with abuse in the family; dealing with life and death, AIDS, Alzheimers, etc.

100 **Recreational Activity**
- Sports and Outdoor Recreation
- Physical Fitness
- Games

NOTE: Includes birdwatching lessons, wilderness training; self defense, martial arts; aerobics, dancersize; bridge, chess, calligraphy, etc.

OTHER CODES

888 **Valid skip**

997 **Uncodable**

999 **Not Stated**