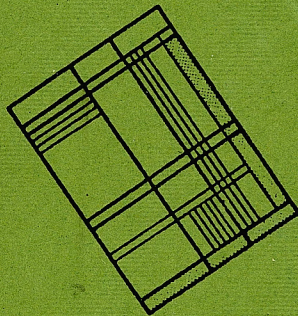
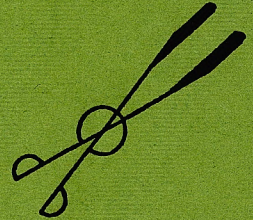
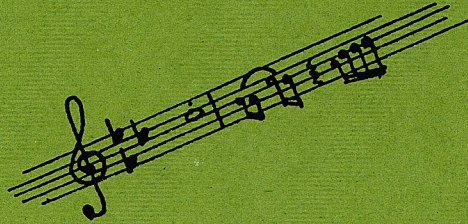
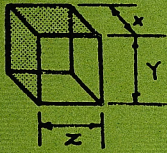
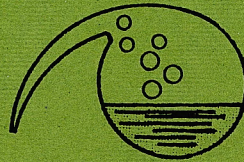
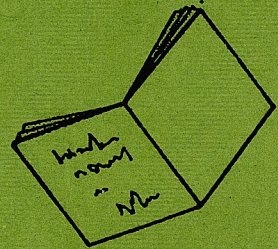


RELIABILITY STUDY OF ENROLMENT DATA BANK: 1970-71 TO 1974-75

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PROGRAM STATISTICS DIVISION
INDIAN AND ESKIMO AFFAIRS PROGRAM

(La version Française disponible sur demande)



RELIABILITY STUDY OF ENROLMENT
DATA BANK
1970-71 TO 1974-75

D.G. Saigaonkar
Senior Statistician (Education)

The views expressed in this report are those of the author and do not necessarily reflect the official views of the Department of Indian Affairs and Northern Development.

PROGRAM STATISTICS DIVISION
INDIAN AND ESKIMO AFFAIRS PROGRAM

29 OCTOBER, 1976

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Lastly but not the least, the author wishes to express his gratitude to the innumerable field staff and other respondents, without whose help this study could not have achieved its present status.

Ottawa, Ontario
October 29, 1976

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FOREWORD

A feasibility study in Kingston Education District was conducted in 1976 to develop a suitable statistical methodology for evaluating the Data Bank on enrolment of registered Indian students. That study also developed corrective measures to resolve different field problems.

The present report, presented in three parts, is primarily based upon techniques and measures developed by that study and covers a sample of 1,599 Indian children selected from another nine districts across the country.

Part A covers specific particulars like sample selection, sources and items of information, statistical techniques, time schedule, manpower and cost, assessment of objectives, recommendations and general observations.

Part B deals with the evaluation of the Data Bank based on all samples covered in the study using three different approaches. An error analysis and relevant tables and charts are supplied in this part.

Part C gives a detailed evaluation of the Data Bank based upon individual samples from each of the nine Education Districts, supplemented by district level tables.

Any suggestions and enquiries regarding this report may be directed to Mr. D.G. Saigaonkar, Senior Statistician (Education), Statistics Section, Program Statistics Division.

W. Zayachkowski,
Chief,
Program Statistics Division.

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PART A

1. Introduction

The Department of Indian Affairs and Northern Development maintains statistical records for all registered Indian students under its responsibility. An Education Data Bank has been developed to store the annual records of nearly 72,000 students beginning with the school year 1969-70.

The volume of data collected over the past six years and the diverse background of individuals associated with the collection, compilation, editing and processing of the data may affect the homogeneity and objectivity of the data bank. Realizing this, the Management Information Systems Working Group recommended in 1974 that a study of the Data Bank be undertaken to determine its reliability and to suggest corrective measures for its improvement. Consequently, in 1975, a feasibility study was carried out in Kingston Education District to develop suitable methodology and to identify and resolve probable field problems arising in this type of study.

In accordance with the recommendations of the feasibility study, reference years and statistical techniques for the sample selection were revised and a nation-wide study was conducted in early 1976. This report documents the revised sample selection and the methodology, analysis and recommendations of the main study.

2. Sample Selection

Since the Departmental responsibility to registered Indians residing on reserves is different from that to those who are off reserves, separate sampling techniques were necessary for the two types of Indian population. In the case of on-reserve population, ideally speaking, every Indian child of school-going age will be in school

and its educational responsibility will be borne by the Department. On the other hand, Departmental responsibility for the off-reserve Indian population is limited to counselling, provision of books and school supplies, and, in rare cases, the paying of tuition fees.

Nine Education Districts were selected in the sampling scheme, one from each of the administrative regions except in British Columbia where three districts were chosen because of interesting educational achievements of Indian community in that region. The choice of these districts was made in consultation with the district offices and was mainly based upon the diversity of field problems likely to be encountered in the study.

In order to ensure consistent coverage of school-going children for the entire reference period from 1970-71 to 1974-75 inclusive, it was decided to consider the registered Indian population born between 1960 and 1964 inclusive. Individuals from selected districts and ages were listed by residence of their parents; those of the same age were further arranged alphabetically.

Every twentieth person was selected for study from the lists of individuals with parents residing off reserve; this constituted Sample A. Since Departmental responsibility is greater in the case of Indians residing on reserve, every sixth person from the corresponding list was included in the study; this constituted Sample B.

3. Sources of Information

Most of the individuals selected in the samples were identified in the data bank and their particulars as retrieved from the data bank were

recorded in codes on compilation sheets specially developed for this purpose. (See Annexures A and B on pages 45, 46, 47 for details).

Attempts were made to obtain correct records of as many sample units as possible from the Education District Offices, respective schools, counsellors, teachers and liaison officers. In the absence of any records, information was collected from the informant as a last resort and identified separately for assessing its magnitude and impact on the overall findings of the study.

Any variation from field records was treated as a data bank error. Some bias may have been introduced in the final analysis by the use of personal knowledge in lieu of field records and by not being able to identify an individual by his registered name in the field.

4. Items of Information

The statistical information retrieved from the Education Data Bank is used for budgetary planning, program forecasts, feed-back to Education Districts, projections and other research requirements. Based upon their importance to these requirements, items of information were classified in three groups as follows:

- (a) Essential - Home district, band code, family number, child position, year of birth, parents' residence, school number, school type (management), and grade;
- (b) Acceptable - Day of birth, month of birth, type of course, student's accommodation, allowance and other facilities, and language(s) spoken by the student at first entry to school;
- (c) Negligible - Spelling of student's surname and given name(s).

Any error in reporting an item from the essential group was considered serious enough to affect adversely the reliability of the student record. Comparatively speaking, an error in reporting an item from the acceptable group was not considered that serious while any spelling error in the student's surname or given name(s) was presumed to be negligible, thus having a minimal effect on the reliability of the student record.

Information on school attendance and use of native language in school is being collected beginning with the 1973-74 school year. Information on the sex of the student, though available in the Data Bank, was not considered to be pertinent for any policy planning. These items were not included in the study.

5. Methodology Employed

The data were analysed separately for Samples A and B and for each of the five school years under study using three different approaches, described in this section of the report.

- (a) Criterion Grouping: If a student record, also referred to as a sample unit, had identical information in the data bank and field records with respect to at least five of the nine items of information from the essential group, it was assumed to have satisfied the essential criterion and was allotted to group E. A sample unit satisfying at most four items from the essential group was allotted to group e. In the case of the acceptable group, a student record was assumed to have satisfied the acceptable criterion only if it had identical information in the data bank and field records for at least four of the six items of information. Such a record was allotted to group A. All other records were allotted to group a.

Similarly, for allotment to group N, a student record was required to have identical information in the data bank and field records with respect to both items of information from the negligible group. Otherwise, the student record was allotted to group n.

The three criteria E, A and N and their absences, indicated by e, a and n, generated eight mutually exclusive classes, namely EAN, EAn, EaN, Ean, eAN, eAn, eaN, and ean. Each of the student records thus belonged to one of these eight classes depending upon the number of items of information observed as identical in the data bank and field records in each of the three criteria groups.

The distribution of student records in these eight classes was then studied for an Education District to obtain an aggregate picture of reliability for that Education District. Finally, the distribution of all student records from the nine Education Districts was studied to arrive at an aggregate indication of reliability for all of Canada, for a given school year and sample type.

- (b) Record Reliability: Each of the nine items of information from the essential group was assigned a weight of 0.08. In other words, this meant that its contribution to the reliability of a student record was 8%. The entire group of nine essential items thus carried a total weight of 0.72 or accounted for 72% of the reliability of a student record.

Each of the six items of information from the acceptable group was assigned a weight of 0.04, the whole group thus accounting for 24% of the reliability of a student record. The two items from the negligible group were each given a weight of only 0.02

and contributed the remaining 4% of the reliability of a student record.

Mathematically speaking, this could be summarized by the following model:

$$R_{xy} = 0.08E + 0.04A + 0.02N \quad \text{where}$$

R_{xy} is the reliability of a record x for the school year y ;
and E , A and N are the number of items of information reported identically in the data bank and field records from the essential, acceptable, and negligible groups, respectively.

In an ideal situation, all nine items from the essential group, six items from the acceptable group, and both items from the negligible group would be identically reported in the data bank and field records. According to our model, the reliability index for such a student record would be:

$$\begin{aligned} R_{(\text{ideal})} \text{ or } R_{(\text{max.})} &= \frac{0.08 (9)}{1} + \frac{0.04 (6)}{1} + \frac{0.02 (2)}{1} \\ &= 0.72 + 0.24 + 0.04 = 1.00 \end{aligned}$$

On the other hand, if none of the items were identically reported in the two sources of information,

$$R_{(\text{min.})} = \frac{0.08 (0)}{1} + \frac{0.04 (0)}{1} + \frac{0.02 (0)}{1} = \text{zero.}$$

The reliability index thus assumes values between zero and one. The maximum contribution to the reliability index from the acceptable and negligible groups cannot exceed 0.28. Consequently, if an arbitrary lower limit of 0.85 is set for the reliability index for acceptance of a student record, a significant portion of 0.57 of the reliability index would have to come from the essential

group. This means that at least eight of the nine items from this group would have to be identically reported in the data bank and field records.

Depending upon the desired quality of records, this arbitrary lower limit could be changed. The record reliability indices for sample records could conveniently be averaged over samples in an Education District and over all samples to obtain aggregate record reliability indices for these areas.

- (c) Item Reliability: All items of information were further studied individually for their own reliability. If a certain item of information was reported correctly in the data bank, in agreement with field records, for all sample units in an Education District, for a particular sample type and in a given school year, its item reliability would be one hundred. On the other hand, if it was not reported correctly in the data bank for any one of the sample units, its item reliability would be zero.

Mathematically, this could be described as

$$R_{ay} = \left(1 - \frac{n}{N}\right) 100 \text{ where}$$

R_{ay} is the item reliability of an item a for the year y, n is the number of student records in which item a has been reported in the data bank in a manner different from that reported in field records, and N is the total number of student records being considered from an area.

An aggregate of item reliabilities over all eighteen items could obviously be worked out over a certain area for a given school year. This would be identical with the corresponding aggregate record reliability index for that area and school year obtained in the manner discussed in paragraph (b) above.

6. Time Schedule

The band membership lists as of December 31, 1970 to December 31, 1974 were used for selecting and identifying the sample units.

The data retrieved from the enrolment data bank and collected from the field records had a reference date of September 30 for each of the school years from 1970 to 1974 inclusive. The current data used for reference and identification of a sample unit in the field was as of October 31, 1975 and was taken from the Nominal Roll recently received from the field.

The study was initiated in November of 1975 when selection of the Education Districts and sample units and the formulation of the frame design were completed. Retrieval of records from the enrolment data bank was carried out in December, 1975. Field visits were completed during February to April of 1976. The compilation and tabulation of the data was carried out in July-August, 1976 while the analysis and report writing was done in September, 1976.

7. Manpower and Cost

The entire study was designed, developed and executed by the Senior Statistician (Education) in about sixty days. He was assisted by a statistician and a statistical support officer both of whom together put in approximately thirty days of field work. The compilation, carried out by statistical clerks, required about fifty man-days.

The travel costs incurred in field visits amounted roughly to \$4,700; the cost of retrieval of data from the enrolment data bank was \$200; and the cost of printing forms and the report was approximately \$100.

8. Responsibility

The Education Operations Branch of the Indian and Eskimo Affairs Program was administratively responsible for the study and provided funds for field visits by members of the study team to obtain records from the nine Education Districts covered in the project.

The former Departmental Statistics Division and the present Program Statistics Division developed and organized the project, and supplied the required manpower for the study.

The Computer Information Systems Division provided initial band membership lists and student lists, and retrieved information for the selected sample units for the school years under reference.

The Education District Offices in Fredericton, Montreal, Sioux Lookout, Winnipeg, Brandon, Yorkton, Lethbridge, Nanaimo, Prince Rupert and Vancouver provided available information on sample units from their respective areas, and arranged for visits to certain schools and for discussions with counsellors, band officials and teachers having the necessary field records.

9. Assessment of Objectives

A suitable technique to evaluate the enrolment data bank was achieved by this study. Various problem areas contributing to discrepancies in the data bank were identified and corrective measures could now be taken to resolve such problems.

Major observations and recommendations on the study are discussed briefly in the next two paragraphs. A detailed evaluation for all samples combined and for the samples by Education District is given in Parts B and C, respectively.

10. Major Observations

1. From Table 1 on page 34, it can be seen that the population of registered Indians in the age group 10 to 14 inclusive was 12,120 as of December 31, 1974. Of these, 8,593 were reported as residing on reserve, and 3,527 were reported as being off reserve.

As many as 169 children from the off-reserve population constituted Sample A and 1,430 children of on-reserve status comprised Sample B.

The number of sample units for which field records were available ranged between 38% and 45% of the total sample size for off-reserve children. Since their education responsibility does not rest with the Department, these low percentages are not surprising.

In the case of on-reserve children, field records were available in the range of 81% to 88% of the sample units over the period under review.

2. Table 2 on page 35 analyzes various reasons for which information on some sample units was missing from field records. Frequent migration to and from reserves, different ways of maintaining student records, and isolation of certain areas are some of the important reasons. In case the enrolment data bank also had no information on some sample units, it would totally agree with the field records for these sample units and eventually yield a perfect reliability index for such sample units. The number of such cases ranged between 72 and 96 for Sample A and between 130 and 208 for Sample B over the five-year period.

3. Table 3 on page 37 gives the distribution of sample units by mutually exclusive criterion groups which are explained earlier in paragraph 5(a). A broad idea about the quality of data is obtained from this table.

Out of 169 sample units in Sample A, as many as 131 to 154 units satisfied the essential criterion, since these units had at least five essential items of information in agreement in the data bank and field records. Of these, sample units ranging between 100 and 144 had at least four items from the acceptable group and both items from the negligible group in agreement and consequently, satisfied all the three criteria.

In the case of Sample B comprising of 1,430 sample units, the range of student records satisfying the essential criterion was between 1,203 and 1,272. From these sample units, as many as 1,038 to 1,137 further satisfied the acceptable criterion. The sample units satisfying all three criteria were in the range of 1,033 to 1,134.

4. Table 4 on page 38 gives a further breakdown of the sample units satisfying the essential criterion by Education Districts. It also indicates that most of the records satisfying the essential criterion also succeed in satisfying the remaining acceptable and negligible criteria.

It was observed that nearly 78% to 91% of the sample units from Sample A and 84% to 89% of the sample units from Sample B satisfied the essential criterion.

The corresponding ranges for sample units satisfying all three criteria were 59% to 85% for Sample A and 72% to 79% for Sample B.

5. Table 5 on page 39 supplies aggregate record reliability indices by Education District, school year and sample type. Contributions from the three mutually exclusive criterion groups are also given in this table.

The aggregate (total) reliability indices for all sample A units for off-reserve individuals ranged from 0.71 to 0.88. For sample B units, these indices were between 0.74 and 0.84. Contribution from the essential items of information ranged from 0.51 to 0.63 for the sample A units and from 0.54 to 0.61 for the sample B units. Consequently, we could conclude that the records for on-reserve persons were more homogeneous than those for off-reserve persons over the five school years under study.

6. The aggregate record reliability indices discussed earlier are grouped in twenty equal class intervals of 0.05 each, in table 6 on page 40 for studying their frequency distributions for both sample types and over the five school years.

As many as 8% to 18% of the sample A units had a record reliability index of minimal value. For sample B units, 6% to 11% of the records exhibited the minimum record reliability index. On the other hand, 54% to 77% of the sample A units had a perfect reliability index while only 10% to 42% of the records from sample B achieved this level.

A statistical analysis of the distribution of sample records in these classes further confirmed that the grouped averages of record reliability indices were in close agreement with those obtained in table 5 earlier. The variation of individual record reliability indices from these averages was also studied at this stage. The average variation, statistically known as the standard deviation, ranged from 0.28 for the school year 1974-75 to 0.38 for the school year 1973-74 for Sample A records. For sample B

records, the least standard deviation of 0.27 was observed for the school year 1974-75 while the largest standard deviation of 0.31 was recorded for the school year 1970-71. This once again confirmed the homogeneity of sample B records. Some charts indicating the frequency distribution of the sample records by record reliability index are given on page 43 of this report.

7. As discussed in paragraph 5(c) above, item reliability indices were calculated for seventeen items of information for both types of sample units over the five school years under study. The results are given in table 7 on page 41 of this report. It was observed that the reliability of information on home district, band code, family number, child position and year of birth was identical for a given school year in sample A. For sample B units, slight variations were recorded amongst reliability indices for these items of information. The arithmetical average over the five-year period for these items in sample A was 83%, somewhat lower than the corresponding average item reliability index of 87% observed for these items in sample B records.

The information on reporting students' names was the most reliable, 94%-95% in sample A and 93% in sample B, while that on allowance was the least reliable, 70% in sample A and 55% in sample B.

8. A comparison among the three approaches to judge the reliability of records was obviously necessary. This was carried out and the results are given in table 8 on page 42. The proportion of records satisfying the essential criterion, the aggregate record reliability index and the average item reliability index for items from the essential group were used for this comparison.

It was observed that the proportion of records satisfying the essential criterion was, on the whole, greater than either of the other two reliability indices for a given Education District and school year for both sample types. This proportion ranged from 0.75 to 0.91 for sample A records and from 0.84 to 0.89 for sample B records. An interesting thing to note was that the record reliability indices more or less synchronized with the average item reliability indices for the essential items for almost all Education Districts and school years.

The similarity of the two indices establishes some validity of the statistical models developed for this study and discussed above in paragraphs 5(b) and 5(c).

9. A relationship between the number of student records available in the data bank and field records for Sample B (see table 2A on page 35) was established using a statistical technique known as regression. Chart II on page 44 indicates this relationship and enables us to estimate the number of student records that could be available in one source, given the number of records from the other source of information.
10. The differences among the proportions of units from Sample B satisfying the EAN criteria over the five school years under study could be attributed mainly to chance fluctuations. This was established by employing another statistical technique known as the Kruskal-Wallis one-way analysis of variance. See Annexure C on page 48 for details.
11. The record reliability indices for Sample B units obtained for the five school years under reference could also be treated to be similar to each other. The differences observed among these

indices were proved to be insignificant and attributable to chance by using a Chi-square test for k independent samples. See Annexure D on page 50 for details.

The same data were tested for variation among the nine Education Districts for all the school years by using another technique known as the two-way analysis of variance. The results are given in Annexure E on page 52 of this report.

12. The item reliability indices in sample B were also tested for their homogeneity over the school years 1970-71 to 1974-75 inclusive by using a statistical technique developed by Friedman. See Annexure F on page 54 for the details. The test established that any differences among the item reliability indices for this group are incidental and could be attributed to sampling fluctuations.

11. Recommendations

1. Assuming the validity of our statistical model, a record reliability index of 0.77 will ensure that at least seven of the nine essential items are identically reported in the data bank and field records. Setting this as the lowest limit for acceptance of a record, we may divide the sample units into two groups. Those reflecting an index of at least 0.77 may be considered to belong to the acceptance group while those having an index of at most 0.76 may be considered to constitute the rejection group.
2. The acceptance group may be further subdivided into (a) an ideal group having a record reliability index of at least 0.93, thus ensuring identical information on all nine essential items from both the data bank and field records; and (b) a tolerable group with

reliability indices ranging from 0.77 to 0.92, ensuring that seven or eight essential items tally from the two sources of information.

3. Based upon these norms, sample A records for the school year 1974-75 and sample B records for the school years 1971-72 to 1974-75 show reasonable reliability for all units as a whole.
4. Data bank records for sample B units for the school year 1970-71 need some improvements before they are accepted for any research purpose.
5. From sample A units, the data bank records for school years 1970-71 to 1973-74 also need some corrections before these could be reliably used.
6. Regular updating of the cumulative record cards for the registered Indian students at the Education District office seems desirable. This alone could have reduced the number of ineffective sample units for the present survey anywhere from one-half to two-thirds.
7. Information on allowances collected up to the school year 1973-74 was scanty, incomplete and incorrect in many cases. This item not only had the least reliability index of 0.55 for sample B units, but also lowered the aggregate reliability index considerably. The discontinuation of this item of information from the school year 1974-75 seems justified in view of our findings.

8. In view of the volume of data, the diversified background of persons handling the collection, processing and analysis of the data, and the significant role the data play in policy development, education research and program forecasts, a quinquennial evaluation of the data bank through such sample surveys seems essential.

PART B

This part of the report documents the evaluation of the Enrolment Data Bank on the basis of all samples covered in the study. The general approach of the analysis would be to present a comparative picture among the nine Education Districts and among the five school years under reference.

1. Evaluation Based Upon Table 1

The population of registered Indians in the age group 10 to 14 as of December 31, 1974 was considered as the basis for this study. Table 1 on page 34 presents this population along with the sample size and sample units effectively available for study by Education District by school year for the on and off-reserve types of population.

1.1 A sample of 169 children was available from the off-reserve population of 3,527 registered Indians. Manitoba accounted for 34% of this number, mainly due to its centralized administration. British Columbia also covered another 34% of the population through the selection of the Vancouver, Nanaimo and North Coast Education Districts for the study. Yorkton (14%), Sioux Lookout (6%), Montreal (5%), Blood-Peigan (4%) and New Brunswick (3%) represented their respective regions in proportion to the corresponding populations.

- 1.2 Information on some of the sample units selected in the study was not available from the field records. In the North Coast Education District, for example, none of the 17 sample A units could be studied for want of field records. On the other hand, all six sample units from New Brunswick and as many as 41 to 43 sample units out of a total of 57 units from Manitoba were available for the study. The low numbers of sample units effectively available for study from the respective total number of sample A units chosen for the study were mainly due to the restricted educational responsibility of the Department towards the off-reserve registered Indian community.
- 1.3 As many as 1,430 registered Indian children of on-reserve status were included in sample B, representing a total population of 8,593 individuals in the selected age group. Once again, Manitoba accounted for the largest share, nearly 32% of the population. British Columbia contributed one-fourth through its three Education Districts. Sioux Lookout and Blood-Peigan each accounted for 11% of the sample while Montreal (8%), Yorkton (7%), and New Brunswick (6%) accounted for the remainder in proportion to the respective on-reserve populations.

1.4 Information on 86% of the sample units was available in the data bank and in the field records, on an average, over the nine Education Districts under reference. Once again, New Brunswick had the highest average percentage (95%) of available records over the period under reference. It had 100% coverage for every school year except 1970-71. The Yorkton Education District, on the other hand, had the least coverage of 61% for the school year 1973-74 and also recorded the least average coverage of 67% over all the five school years included in the study.

2. Evaluation Based Upon Table 2

The student records for which no information was available in the field were analyzed for the cause of their ineffectiveness by sample type, school year and their consequential impact on the reliability of the enrolment data bank. Table 2 on page 35 presents this error analysis.

2.1 Considering all sample A units having no records in the field over the five school year period, it was observed that 83% of these units had no information in the enrolment data bank also. Since these units, technically speaking, had identical information in both the data bank and the field records, these are indicated under the column entitled one in table 2. The remaining 17% units showed a total variation in the two sources of information and hence are presented in the next columns entitled zero.

2.2 Of the sample units shown under column one, it was observed, on an average, that over the period under reference

- (a) 30% were no longer Departmental responsibility;
- (b) 28% were unknown to the field personnel;

- (c) no records were available in the field for 24% of the cases;
- (d) 9% were studying in the States;
- (e) 6% were in the care of provincial authorities and institutions like Children's Aid Society; and
- (f) 3% were not registered Indians at one time or another before December 31, 1974.

In the case of sample units shown under column zero,

- (a) 58% were no longer Departmental responsibility;
- (b) 28% had no records available in the field;
- (c) 12% were with the provincial authorities; and
- (d) the remaining were not registered at one time or another before December 31, 1974.

2.3 From the sample B units having no records in the field over the five-year period, it was seen that as many as 76% had no information in the data bank also. These are presented under column one of table 2. The remaining 24% had complete records in the data bank and consequently showed total variation between the two sources of information. These are given under the column entitled zero in table 2.

2.4 Of the sample units shown under column one, it was observed over the period of reference that

- (a) 31% had no field records available for verification;
- (b) 26% were studied on the basis of informant's guesswork in lieu of records;
- (c) 19% were not a Departmental responsibility;
- (d) 12% were under provincial jurisdiction;
- (e) 6% were not known to the field personnel; and
- (f) another 6% were studying in the States.

In respect of the ineffective sample units having information in the data bank, it was observed over the five school years that

- (a) no records were available in the field for 63% of the cases;
- (b) 20% of the students were not a Departmental responsibility;
- (c) 7% were located under provincial jurisdiction; and
- (d) the remaining 10% were unknown to the field personnel for one reason or another.

3. Evaluation Based Upon Table 3

The eight mutually exclusive classes generated by three groups of essential, acceptable and negligible items of information broadly indicate the reliability of student records. Table 3 on page 37 presents the distribution of student records in these classes over the five school years for both types of samples.

- 3.1 On an average over the reference period of five school years, two-thirds of the student records from Sample A comprising of 169 units satisfied all the three criteria and belonged to the group EAN. Another one-sixth of the records satisfied the essential and negligible criteria but had three or fewer items of information from the acceptable group for which the data bank and field records were in agreement. These accordingly belonged to the group EaN. Nearly nine percent of the student records correctly reported only the names of the students but were incorrect in both the essential and acceptable groups. About seven percent did not achieve even this accuracy and were totally inaccurate in the data bank.

3.2 A similar analysis of 1,430 sample B units over the five school-year period indicates that a little over three-fourths of the student records satisfied all the three criteria and belonged to the group EAN. Another ten percent did not meet the acceptable criterion but satisfied the essential and negligible criteria and belonged to the group EaN. As many as 8% of the student records unable to meet the essential criterion but satisfying the negligible criterion were equally divided between the acceptable and non-acceptable groups. The remaining six percent of the records failed to meet any one of the three criteria; this means that the enrolment data bank had almost all inaccurate entries in their respect.

4. Evaluation Based Upon Table 4

The inter-district comparison of student records satisfying various criteria has been presented in table 4 on page 38 of this report.

4.1 For the period under review, 83% of the student records from Sample A satisfied the essential criterion. Montreal and Manitoba, with 100% and 96% of the student records, respectively, satisfying the essential criterion, were the leading Education Districts while Blood-Peigan (37%) was the last Education District in this regard. On the whole, two-thirds of the student records from Sample A belonged to both the EA and EAN groups, indicating that there was no further loss of reliability of the data due to the information from the negligible group. In other words, we may conclude that the records which reported satisfactorily in respect of essential and acceptable items of information also reported correctly with respect to the students'

names and surname. The Montreal and Blood-Peigan Education Districts were once again at the extreme ends of the rating scale, with 90% and 31% of the student records, respectively, satisfying all the three criteria.

4.2 In the case of sample B records, the overall performance was slightly better than that for the Sample A records. Nearly 86% of the records satisfied the essential criterion. Montreal (97%), Manitoba (96%), Nanaimo (95%), and Vancouver (94%) were the leading Education Districts while Blood-Peigan (63%) was again at the other extreme.

About 10% of these records, on the whole, failed to meet the acceptable and negligible criteria. A few of the records from New Brunswick and Yorkton satisfied the essential and acceptable criteria but lost credibility in the negligible group. It is significant to note that 20% of the records in the Montreal Education District did not meet the acceptable criterion while Nanaimo lost only one percent of the records in this respect.

Consequently, with 94% of its student records satisfying all the three criteria, Nanaimo was the leading Education District while Blood-Peigan (62%), once again remained at the bottom of the scale.

5. Evaluation Based Upon Table 5

In accordance with the model discussed earlier in paragraph 5(b) of Part A of this report, aggregate reliability indices were determined for each of the nine Education Districts for each of the five school years under review. Table 5 on page 39 presents these indices and the contributions they received from the essential, acceptable and negligible groups.

5.1 For Sample A records, the highest aggregate record reliability index of 0.88 was achieved in the school year 1974-75. The index had the lowest value of 0.71 in each of the school years 1971-72 and 1972-73. The aggregate indices for the school year 1973-74 and 1970-71 were 0.73 and 0.75, respectively. Considering all sample A units over the period under review, we may conclude that a little over three-fourths of these units had identical records in the data bank and in the field. The Montreal Education District had the highest reliability index of 0.95 for Sample A units for all the school years combined while North Coast registered the lowest reliability index of 0.52 only.

Only the Montreal Education District achieved the distinction of having an ideal reliability of records, for the school year 1970-71. The Sioux Lookout Education District came close to this achievement when it presented a reliability index of 0.98 for the school year 1974-75. The lowest value of the reliability index was 0.23 for Blood-Peigan Education District for its records for the school year 1972-73. Another low index of 0.37 was recorded in the North Coast Education District for the school year 1973-74.

5.2 In the case of Sample B units, the school year 1974-75 registered the highest aggregate record reliability index of 0.84. This index decreased slowly with each preceding school year, the least one being 0.74 for the school year 1970-71. On the whole, nearly four-fifths of the student records from Sample B were identically reported in the data bank and the field, the district percentages varying from a low of 65% in the Sioux Lookout

Education District to a high of 88% in the Nanaimo Education District.

The highest record reliability index (0.92) was recorded in the North Coast Education District for the school year 1974-75, closely followed by New Brunswick with 0.91 for the school year 1973-74 and Nanaimo with 0.90 for the school year 1974-75. On the other hand, Sioux Lookout recorded the pair of lowest indices, 0.57 and 0.58, for the school years 1971-72 and 1972-73, respectively.

6. Evaluation Based Upon Table 6

Table 6 on page 40 presents the frequency distribution of the record reliability indices for all sample A and B units over the five school years under review. For the sake of convenience in statistical analysis, these indices are grouped into twenty classes with intervals of 0.05. A quick glance at the table indicates that the records are clustering at the beginning, the middle and the end of the scale.

6.1 Considering sample A units over all the school years, it was observed that 15% of the records had a reliability index in the range of 0.50 to 0.54, while 60% of the records had the maximum reliability index of one.

The number of student records with the maximum reliability index was about 94 for each of the school years except for 1974-75, when 130 records had the perfect reliability index.

One-half of the student records, on the whole, had a reliability index greater than 0.99, the median value of this distribution.

6.2 For Sample B units, over the entire five school-year period, the minimal value of the reliability index was recorded by 9% of the units. As many as 10% of the sample units belonged to the middle class with a reliability index of 0.50 to 0.54, and 28% achieved the perfect reliability index. Nearly 57% of the records had a reliability index of 0.90 or more.

The number of student records with a reliability index of one, steeply increased from 143 (10% of the total) in the school year 1970-71 to 598 (42% of the total) in the school year 1974-75. This is quite satisfactory and fairly indicates that the quality of the data bank has substantially improved with every successive school year.

On the whole, one-half of the student records had a reliability index greater than 0.93, the median value for the frequency distribution of sample B units.

7. Evaluation Based Upon Table 7

According to present procedures, the computer identifies any student record by the home district, band code, family number and child position of the individual. If these are all in agreement with the data bank, further confirmation is sought for with information on the day, month and year of birth. Once this confirmation is received, the record is accepted and added to the data bank.

The information about parents' residence is also vital in determining the Departmental responsibility of the students.

The different budgetary provisions for the federal, provincial, band-administered and private schools make the information regarding the type of school an essential item. The school number deciding the geographical location of the student and the grade indicating the student's level of achievement are similarly treated as items of importance to the Program. Table 7 on page 41 presents the reliability indices for the various items of information by school year for each of samples A and B.

7.1 For Sample A records, the highest item reliability index was 96 when the surnames and given names of the students were correctly reported for the school year 1970-71. These items were satisfactorily reported on the whole, the least value of the index being 92 for the school year 1973-74.

Also, the highest reliability index for each of home district, band code, family number, child position, day of birth, month of birth and year of birth was also 92, and was attained during the school year 1974-75. The information on allowances attained the least reliability index for the school year 1971-72 when only 60% of records were correctly reported in the data bank. Important items like the type of school and grade were reported with only 62% accuracy during the school year 1971-72. The average item reliability index over the entire five school years under review was 79 for all sample A records.

7.2 Considering sample B records, it was observed that the highest item reliability index was 95 for the surname of the students

during the school year 1974-75. Once again, the overall reporting of both the surname and the given name of the students was quite satisfactory, with the least reliability index of 92 achieved for each of the items during the school year 1970-71.

Among other items from the essential and acceptable groups, the band code, family number, child position and the year of birth achieved the highest reliability index of 90 during the school year 1974-75. Surprisingly, information on allowances had the lowest reliability index of a meagre 16 for the school year 1970-71; the closest to this index was 50, again for allowances, during the next year.

The average reliability index for all items in sample B for the entire period under review was 80, just a bit more than the corresponding average reliability for the sample A records.

8. Evaluation Based Upon Table 8

The accuracy in reporting the items from the essential group is vitally important to the Program. Consequently, the proportion of records satisfying the essential criterion of the total number of student records was considered as an important item of analysis. Incidentally, it may be pointed out that records satisfying the essential criterion also tend to satisfy the acceptable and negligible criteria. In other words, persons careful enough to record information on the essential items like identification number, year of birth, and grade are likely to be careful in reporting information on the remaining items as well. The higher proportions under columns A of table 8 on page 42 substantiate this observation.

In the second approach entitled B, different weights were attached to the items belonging to the three groups in accordance with the relative importance of these items. As such, the aggregate record reliability indices for the Education Districts and all samples are considered pertinent for comparison.

The remaining approach of the item reliability index once again treats each item separately. For the sake of consistency and importance of accuracy in reporting information on items belonging to the essential group, the average reliability index for these items only has been used for comparison and shown under columns C of table 8.

8.1 A closer analysis of the indices presented in Table 8 indicates that for the sample A units, in 58% of the cases on the whole, the indices by the three approaches were within three percentage points of each other. In 13% of the cases, they differed from each other by more than twenty percentage points; and the greatest difference of twenty-three percentage points occurred in Blood-Peigan for the school year 1972-73. We may conclude, therefore, that each of the three approaches substantiates the validity of the results to the same extent.

8.2 A corresponding analysis of the indices for Sample B units indicates that over the five school years under study, 40% of the cases had the indices by approaches A, B and C within four percentage points of each other. These indices were apart from each other by fourteen percentage points in only 14% of the cases. The greatest difference was twenty percentage points in Manitoba for the school year 1970-71.

The data for sample B units seem to be more homogeneous than those for Sample A units. All the three approaches once again establish credibility of the methodology applied in the analysis of the data and also establish their own co-relationship.

TABLE 1
REGISTERED INDIAN POPULATION AGE-GROUP 10-14; SAMPLE SIZE AND UNITS
EFFECTIVELY AVAILABLE FOR STUDY BY RESIDENCE, SCHOOL YEAR AND EDUCATION DISTRICT

Education District	Sample A - Off Reserve							Sample B - On Reserve and Crown Land						
	Population 10-14	Sample Size	Units Effectively Available for Study					Population 10-14	Sample Size	Units Effectively Available for Study				
			1970-71	1971-72	1972-73	1973-74	1974-75			1970-71	1971-72	1972-73	1973-74	1974-75
New Brunswick	125	6	2	6	6	6	6	554	92	68	92	92	92	92
Montreal	160	8	2	2	2	2	2	663	110	95	98	94	94	94
Sioux Lookout	198	9	-	2	2	2	2	905	150	98	114	102	106	109
Manitoba	1,196	57	41	41	41	43	42	2,828	471	370	409	411	410	448
Yorkton	487	24	4	2	2	3	3	562	94	61	60	66	57	67
Blood-Peigan	147	7	2	3	4	4	2	907	151	143	143	141	138	136
Nanaimo	389	19	8	8	7	9	5	799	133	118	119	119	120	115
North Coast	350	17	-	-	-	-	-	483	80	79	75	71	74	70
Vancouver	475	22	6	6	6	7	6	892	149	133	137	136	133	132
Total	3,527	169	65	70	70	76	69	8,593	1,430	1,165	1,247	1,232	1,224	1,263

The analysis of ineffective units for the study is given in table 2.

TABLE 2

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - ALL SAMPLES

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
Index	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.	8	-	7	-	7	-	7	-	7	-
2. Not registered	3	-	4	-	3	1	3	1	4	-
3. Unknown	26	-	26	-	21	-	21	-	20	-
4. No records	22	5	15	6	21	6	19	5	20	2
5. Guess work	-	-	-	-	-	-	-	-	-	-
6. Moved out	23	11	21	13	22	11	17	13	38	2
7. Other	3	3	5	2	4	3	5	2	7	-
Total	85	19	78	21	78	21	72	21	96	4
<u>Sample B -</u>										
1. Studies in U.S.	9	-	6	1	8	-	6	1	14	-
2. Not registered	1	1	1	1	1	1	1	-	1	-
3. Unknown	5	9	1	-	13	-	13	-	13	-
4. No records	80	22	33	39	34	31	44	32	45	32
5. Guess work	66	6	41	-	47	1	39	1	9	-
6. Moved out	25	10	27	9	28	12	31	17	35	2
7. Other	22	9	21	3	20	2	18	3	15	1
Total	208	57	130	53	151	47	152	54	132	35

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 2-A
NUMBER OF SAMPLE 'B' UNITS AVAILABLE FOR STUDY FROM DATA BANK AND FIELD RECORDS
BY EDUCATION DISTRICT AND SCHOOL YEAR

Education District	Sample Size	1970-71		1971-72		1972-73		1973-74		1974-75	
		Bank	Field	Bank	Field	Bank	Field	Bank	Field	Bank	Field
Number of units available for study											
New Brunswick	92	44	68	81	92	85	92	87	92	80	92
Montreal	110	92	95	97	98	93	94	92	94	95	94
Sioux Lookout	150	94	98	99	114	85	102	94	106	121	109
Manitoba	471	356	370	401	409	397	411	401	410	440	448
Yorkton	94	73	61	76	60	75	66	76	57	66	67
Blood/Peigan	151	145	143	146	143	142	141	141	138	138	136
Nanaimo	133	112	118	120	119	120	119	119	120	109	115
North Coast	80	79	79	78	75	74	71	78	74	70	70
Vancouver	149	127	133	127	137	129	136	128	133	124	132
All Samples	1,430	1,122	1,165	1,225	1,247	1,200	1,232	1,216	1,224	1,243	1,263

TABLE 3
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP
 BY TYPE BY SCHOOL YEAR - ALL SAMPLES

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	110	100	101	108	144	1,033	1,083	1,112	1,076	1,134
EAn						5	4	3	6	3
EaN	33	31	35	27	10	165	145	123	147	132
Ean									2	3
Sub-total 'E'	143	131	136	135	154	1,203	1,232	1,238	1,231	1,272
eAN	3	8	1	3	2	48	60	59	57	33
eAn									1	
eaN	17	18	17	17	5	72	39	45	48	52
ean	6	12	15	14	8	107	99	88	93	73
Total Units	169	169	169	169	169	1,430	1,430	1,430	1,430	1,430

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
 A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
 N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 4

SAMPLE UNITS SATISFYING SPECIFIC CRITERION BY EDUCATION DISTRICT, SCHOOL YEAR AND TYPE

Year	1970-71			1971-72			1972-73			1973-74			1974-75		
Criterion	E	EA	EAN	E	EA	EAN	E	EA	EAN	E	EA	EAN	E	EA	EAN
Sample A -															
New Brunswick	4	4	4	4	4	4	4	4	4	4	4	4	5	5	5
Montreal	8	8	8	8	7	7	8	7	7	8	7	7	8	7	7
Sioux Lookout	8	8	8	6	6	6	8	6	6	6	6	6	9	9	9
Manitoba	57	33	33	50	30	30	56	32	32	55	35	35	56	52	52
Yorkton	22	22	22	20	20	20	20	20	20	19	19	19	20	20	20
Blood-Peigan	4	2	2	2	2	2	••	••	••	2	2	2	5	5	5
Nanaimo	16	16	16	17	17	17	16	16	16	15	15	15	15	15	15
North Coast	7	7	7	7	7	7	7	7	7	6	6	6	16	16	16
Vancouver	17	10	10	17	7	7	17	9	9	20	14	14	20	15	15
Total	143	110	110	131	100	100	136	101	101	135	108	108	154	144	144
Sample B -															
New Brunswick	59	59	58	81	81	80	85	85	83	71	50	46	70	37	34
Montreal	105	83	83	107	84	84	107	83	83	108	84	84	109	89	89
Sioux Lookout	108	108	108	89	88	88	95	87	87	99	99	99	128	127	127
Manitoba	445	318	318	455	356	356	449	379	379	459	377	377	456	393	393
Yorkton	74	74	73	74	74	73	77	75	75	65	65	64	65	65	65
Blood-Peigan	87	87	87	96	94	93	94	94	94	92	92	91	105	102	102
Nanaimo	119	119	119	124	123	123	124	124	124	127	126	126	126	124	124
North Coast	67	59	59	67	58	58	67	58	58	68	62	62	74	67	67
Vancouver	139	131	128	139	129	128	140	130	129	142	127	127	141	133	133
Total	1,203	1,038	1,033	1,232	1,087	1,083	1,238	1,115	1,112	1,231	1,082	1,076	1,272	1,137	1,134

- Notes: 1. Criterion E: At least 5 'essential' items of information in agreement.
2. Criterion EA: At least 4 'acceptable' items of information in agreement amongst those satisfying 'E'.
3. Criterion EAN: Both 'negligible' items of information in agreement amongst those satisfying 'EA'.

TABLE 5

GROUP CONTRIBUTION TO AGGREGATE RELIABILITY INDEX
BY EDUCATION DISTRICT, SCHOOL YEAR AND TYPE

Year	1970-71				1971-72				1972-73				1973-74				1974-75				
	Group	E	A	N	Total	E	A	N	Total	E	A	N	Total	E	A	N	Total	E	A	N	Total
<u>Sample A -</u>																					
New Brunswick	.48	.16	.04	.68	.48	.16	.04	.68	.48	.16	.03	.67	.48	.16	.04	.68	.60	.20	.04	.84	
Montreal	.72	.24	.04	1.00	.68	.22	.04	.94	.68	.22	.04	.94	.68	.22	.04	.94	.68	.21	.04	.93	
Sioux Lookout	.64	.21	.04	.89	.48	.19	.30	.70	.57	.18	.04	.79	.48	.16	.03	.67	.71	.23	.04	.98	
Manitoba	.57	.17	.04	.78	.55	.17	.04	.76	.56	.17	.04	.77	.57	.17	.04	.78	.68	.22	.03	.94	
Yorkton	.65	.22	.04	.91	.59	.20	.03	.82	.60	.20	.03	.83	.56	.19	.03	.78	.60	.20	.03	.83	
Blood-Peigan	.43	.13	.04	.60	.32	.13	.04	.49	.12	.07	.04	.23	.33	.13	.04	.50	.59	.21	.04	.84	
Nanaimo	.60	.20	.03	.83	.64	.21	.04	.89	.60	.20	.03	.83	.55	.19	.03	.77	.56	.19	.03	.78	
North Coast	.30	.10	.04	.44	.30	.10	.04	.44	.30	.10	.04	.44	.25	.08	.04	.37	.68	.20	.04	.92	
Vancouver	.45	.13	.04	.62	.40	.11	.04	.55	.43	.13	.04	.60	.53	.17	.04	.74	.56	.18	.04	.78	
All 'A' Units	.54	.17	.04	.75	.51	.16	.04	.71	.51	.16	.04	.71	.52	.17	.04	.73	.63	.21	.04	.88	
<u>Sample B -</u>																					
New Brunswick	.45	.12	.03	.60	.61	.23	.03	.86	.65	.20	.03	.89	.66	.21	.04	.91	.62	.19	.03	.84	
Montreal	.61	.16	.04	.81	.62	.17	.04	.83	.62	.18	.04	.84	.61	.18	.04	.83	.64	.18	.04	.86	
Sioux Lookout	.50	.14	.03	.67	.49	.13	.02	.57	.42	.14	.02	.58	.46	.15	.03	.64	.59	.19	.03	.81	
Manitoba	.54	.16	.04	.74	.59	.18	.04	.81	.61	.18	.04	.83	.62	.18	.04	.84	.64	.20	.04	.88	
Yorkton	.52	.16	.03	.71	.52	.19	.03	.74	.53	.19	.03	.75	.48	.16	.03	.67	.49	.16	.03	.68	
Blood-Peigan	.44	.15	.04	.63	.52	.18	.04	.74	.51	.18	.04	.73	.52	.18	.04	.74	.56	.16	.04	.76	
Nanaimo	.61	.18	.04	.83	.63	.21	.04	.89	.62	.21	.04	.87	.64	.21	.04	.89	.63	.21	.04	.90	
North Coast	.61	.17	.04	.82	.60	.18	.04	.82	.60	.18	.04	.82	.61	.20	.04	.85	.66	.22	.04	.92	
Vancouver	.57	.19	.04	.80	.57	.20	.04	.81	.57	.20	.04	.81	.59	.20	.04	.83	.63	.21	.04	.88	
All 'B' Units	.54	.16	.04	.74	.57	.18	.04	.79	.57	.19	.04	.80	.58	.19	.04	.81	.61	.19	.04	.84	

E: Essential; A: Acceptable; N: Negligible.

TABLE 6
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX
 BY TYPE BY SCHOOL YEAR - ALL SAMPLES

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	25	25	29	31	13	157	128	126	116	90
.05 - .09		3				1	5	1	2	8
.10 - .14						1	1	1	1	1
.15 - .19						1	1			
.20 - .24						2	2	1	1	
.25 - .29		1	1			7		1	2	
.30 - .34		1				11	4		5	1
.35 - .39						12	4	2	2	4
.40 - .44	1	5	2	1	1	24	17	18	19	18
.45 - .49	2	1		1		10	23	20	12	14
.50 - .54	31	32	36	28	11	159	158	142	141	110
.55 - .59					1	7	2	3	2	7
.60 - .64		1		1		12	11	7	6	7
.65 - .69						9	9	4	7	1
.70 - .74	2			1	1	44	11	12	13	4
.75 - .79			1	1		37	22	29	17	9
.80 - .84	3	2	3	2	2	178	126	113	110	69
.85 - .89	1			1	3	187	113	96	114	70
.90 - .94	3	2	4	8	4	103	184	230	200	175
.95 - .99	5	2	2	1	3	325	265	180	184	244
1.00	96	94	91	93	130	143	347	444	476	598
Total Units	169	169	169	169	169	1,430	1,430	1,430	1,430	1,430

TABLE 7

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - ALL SAMPLES

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	83	78	81	80	92	84	86	87	87	89
2. Band Code	83	78	81	80	92	83	86	87	87	90
3. Family Number	83	78	81	80	92	84	86	87	87	90
4. Child Position	83	78	81	80	92	84	86	87	87	90
5. Year of Birth	83	78	81	80	92	84	86	87	87	90
6. Parent's Residence	65	63	71	73	85	73	75	77	78	81
7. School Number	63	63	70	73	87	61	72	74	74	81
8. Type of School	63	62	70	74	87	56	64	68	69	79
9. Grade	66	62	70	72	86	62	66	67	71	78
<u>Acceptable Group</u>										
1. Day of Birth	83	80	81	80	92	84	86	86	87	89
2. Month of Birth	83	80	81	80	92	84	86	87	87	89
3. Type of Course	67	63	71	74	85	74	78	79	77	73
4. Accommodation	67	64	70	75	88	72	76	77	78	81
5. Allowance	60	60	70	75	87	16	50	64	65	79
6. Language at Entry	67	64	72	75	87	68	69	70	70	70
<u>Negligible Group</u>										
1. Surname	96	94	95	92	95	92	93	94	93	95
2. Given Name(s)	96	95	95	93	95	92	92	93	93	94

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

TABLE 8

COMPARATIVE STATEMENT OF RELIABILITY INDICES

BY APPROACH, TYPE, EDUCATION DISTRICT AND SCHOOL YEAR

Year	1970-71			1971-72			1972-73			1973-74			1974-75			
	Approach	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
<u>Sample A</u>																
New Brunswick		.67	.68	.67	.67	.68	.67	.67	.67	.67	.67	.68	.67	.83	.84	.83
Montreal		1.00	1.00	1.00	1.00	.94	.94	1.00	.94	.94	1.00	.94	.94	1.00	.93	.94
Sioux Lookout		.89	.89	.89	.67	.70	.67	.89	.79	.79	.67	.67	.67	1.00	.98	.99
Manitoba		1.00	.78	.79	.88	.76	.76	.98	.77	.93	.96	.78	.94	.98	.94	.98
Yorkton		.92	.91	.91	.83	.82	.82	.83	.83	.83	.79	.78	.78	.83	.83	.83
Blood/Peigan		.57	.60	.46	.29	.49	.45	.00	.23	.16	.29	.50	.46	.71	.84	.82
Nanaimo		.84	.83	.83	.89	.89	.88	.84	.83	.83	.79	.77	.77	.79	.78	.77
North Coast		.41	.44	.41	.41	.44	.41	.41	.44	.41	.35	.37	.35	.94	.92	.94
Vancouver		.77	.62	.62	.77	.55	.56	.77	.60	.60	.91	.74	.74	.91	.78	.77
All 'A' Units		.85	.75	.75	.78	.71	.71	.80	.71	.76	.80	.73	.77	.91	.88	.89
<u>Sample B</u>																
New Brunswick		.64	.60	.63	.88	.86	.85	.92	.89	.90	.77	.91	.92	.76	.84	.86
Montreal		.95	.81	.85	.97	.83	.86	.97	.84	.85	.98	.83	.84	.99	.86	.88
Sioux Lookout		.72	.67	.69	.59	.57	.58	.63	.58	.59	.66	.64	.64	.85	.81	.82
Manitoba		.94	.74	.75	.97	.81	.82	.95	.83	.85	.97	.84	.86	.97	.88	.89
Yorkton		.79	.71	.72	.79	.74	.73	.82	.75	.73	.69	.67	.67	.69	.68	.68
Blood/Peigan		.58	.63	.60	.64	.74	.72	.62	.73	.71	.61	.74	.72	.70	.76	.78
Nanaimo		.89	.83	.84	.93	.89	.88	.93	.87	.86	.95	.89	.88	.93	.90	.90
North Coast		.84	.82	.85	.84	.82	.83	.84	.82	.83	.85	.85	.85	.93	.92	.91
Vancouver		.93	.80	.79	.93	.81	.79	.94	.81	.80	.95	.83	.81	.95	.88	.87
All 'B' Units		.84	.74	.76	.86	.79	.79	.87	.80	.80	.86	.81	.81	.89	.84	.85

Approach A: Proportion of sample units satisfying 'essential' criterion to total number of sample units (Refer Table 3).

B: Record Reliability Index (Refer Table 5)

C: Average Reliability Index for 'Essential' group of items (Refer Table 7)

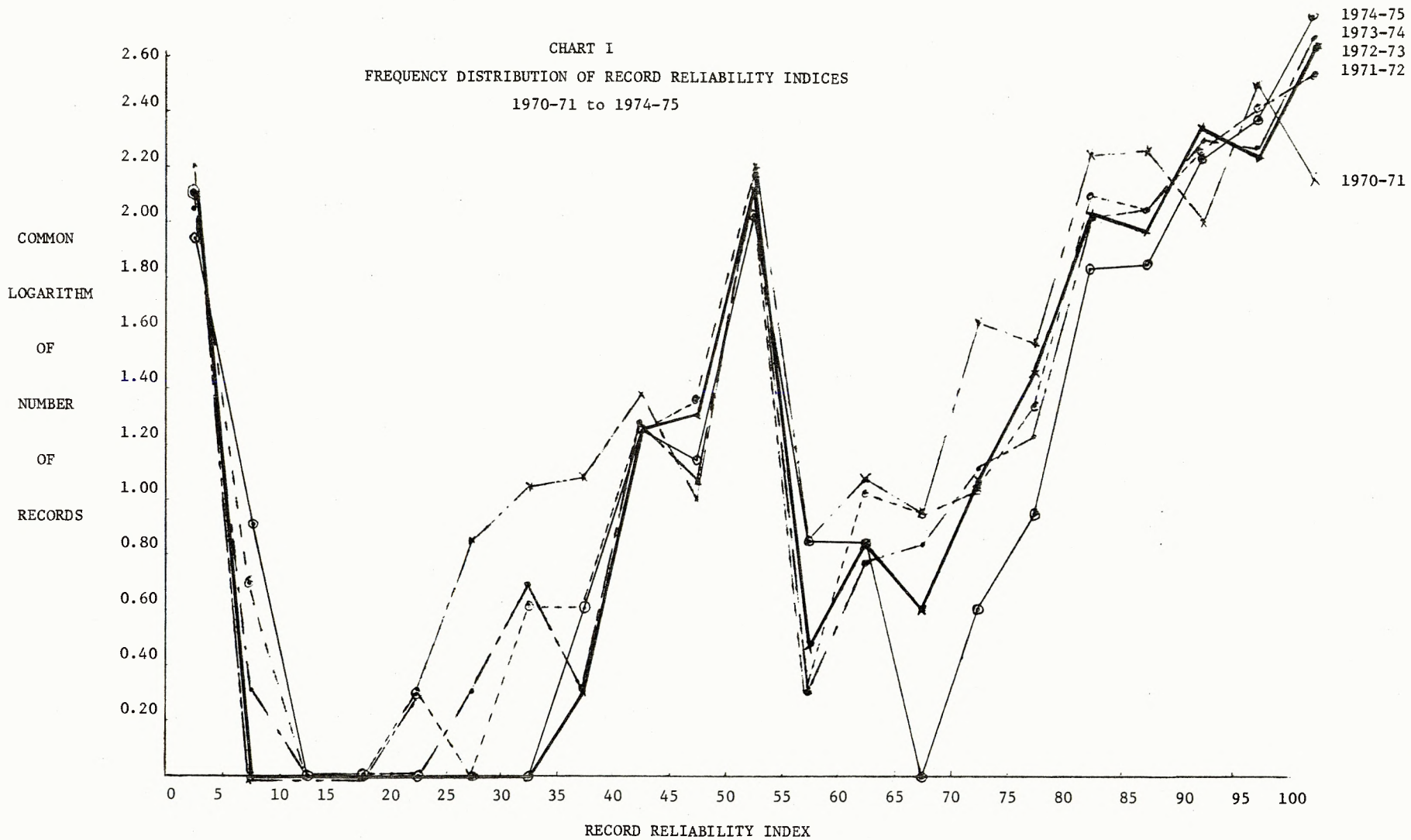
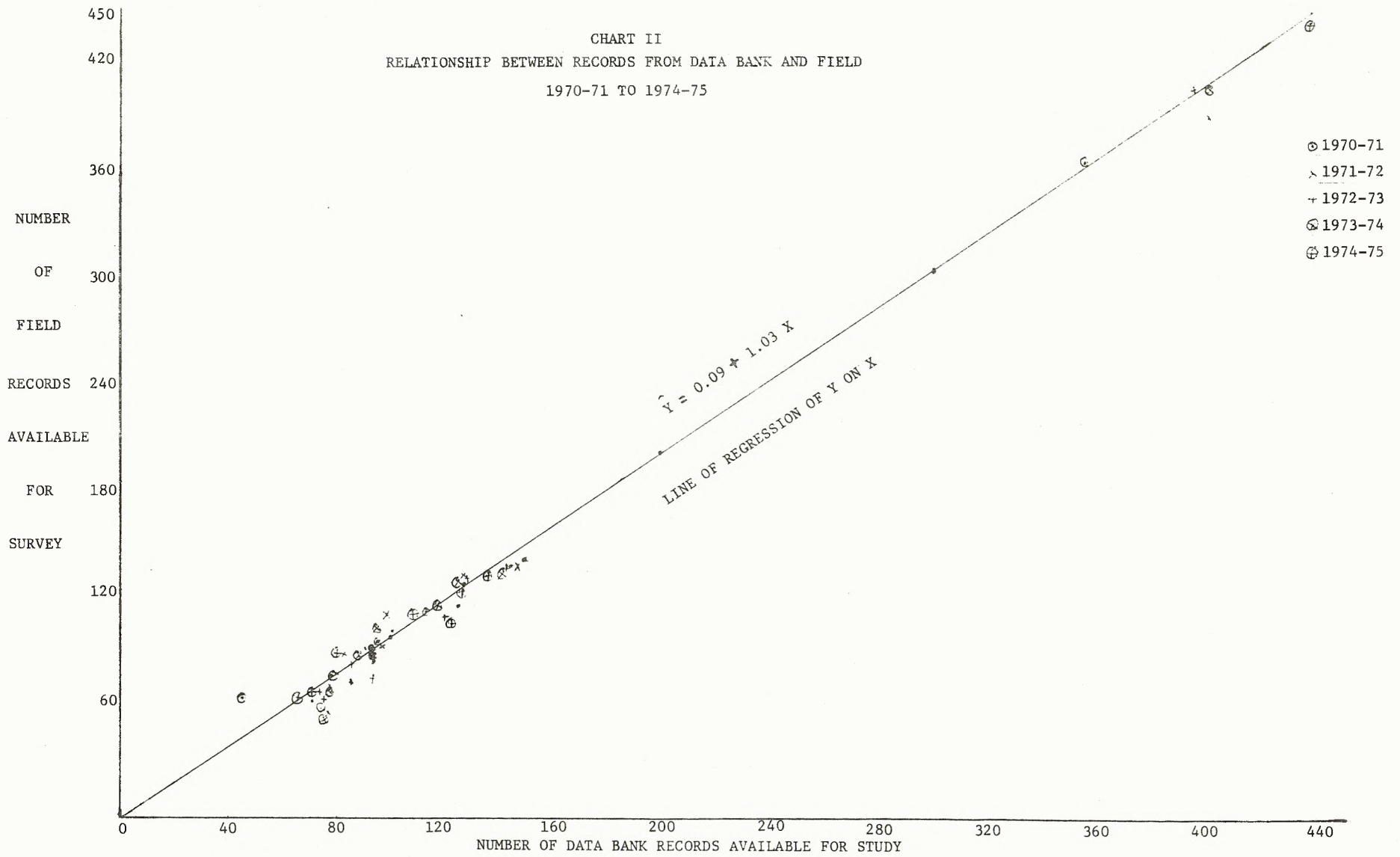


CHART II
RELATIONSHIP BETWEEN RECORDS FROM DATA BANK AND FIELD
1970-71 TO 1974-75



RELIABILITY STUDY OF ENROLMENT DATA BANK

ANNEXURE A: COMPILATION SHEET

District: _____

1970-71 TO 1974-75

Sample No. _____

Student's Surname (N1): _____ Given Name(s) (N2): _____

Other Surname, if any: _____ M-Init: _____ F-Init: _____

School Year	S O U R C E	IDENTIFICATION NUMBER				DATE OF BIRTH			R E S	School Number	Sch Type	Grade	Type of Course	A C C	A L L O W	S P O K	School Name, if different from printout	REMARKS	
		Home District	Band Code	Family Number	Child Pos.	Day	Month	Year										C O D E	Other Notes if any.
		E1	E2	E3	E4	A1	A2	E5	E6	E7	E8	E9	A3	A4	A5	A6			
1975-76	NR																	FOR REFERENCE ONLY	
1974-75	M									-	-	-	-	-	-	-			
	C												o						
	F												o						
1973-74	M									-	-	-	-	-	-	-			
	C												o						
	F												o						
1972-73	M									-	-	-	-	-	-	-			
	C												o						
	F												o						
1971-72	M									-	-	-	-	-	-	-			
	C												o						
	F												o						
1970-71	M									-	-	-	-	-	-	-			
	C												o						
	F												o						

M = Membership List; C = Computer Printout; F = Field Records;
NR = Nominal Roll

ANNEXURE B

CODE CHART

RELIABILITY STUDY OF ENROLMENT DATA BANK, 1970-74

<u>GRADE (GD)</u>	<u>LANGUAGE(S) SPOKEN AT FIRST ENTRY (SPOK) (LG)</u>
K ₄ Junior Kindergarten	1 Indian Only
K ₅ Senior Kindergarten	2 English Only
SS Special	3 French Only
25 Other (specify)	4 Indian/English
99 Unknown	5 Indian/French
	6 Indian/English/French
	7 English/French
	8 Nil/Does not communicate
	9 Other (specify)
	0 Unknown
<u>TYPE OF COURSE (TC)</u>	<u>SCHOOL(S) ATTENDED (SCHOOL NUMBER)</u>
1 Kindergarten	_____ Last 3 digits from 1974-75 list
2 Elementary	9 9 9 Unknown
3 Academic High	
4 Vocational High	
5 Special	
6 Other (specify)	
9 Unknown	
<u>ACCOMMODATION (ACC) (RC)</u>	<u>SCHOOL TYPE (ST)</u>
1 With Parents/Guardians	1 Federal
2 Boarding - off-reserve	2 Provincial Tuition
3 Boarding - honours off-reserve	3 Provincial Joint
4 Boarding - on-reserve	4 Band-operated
5 Boarding - honours on-reserve	5 Private Tuition
6 Student Residence	6 Private Joint
7 Group Home	7 Other (specify)
8 Foster Home	9 Unknown
9 Other (specify)	
0 Unknown	
<u>ALLOWANCE/ASSISTANCE (ALLOW) (BC)</u>	<u>PARENTS' RESIDENCE (ON/OFF)</u>
1 Tuition only	1 On Reserve - Crown Land
2 Tuition & Transportation (Daily)	2 Off Reserve
3 Tuition, Room & Board	3 Other (specify)
4 Transportation	9 Unknown
5 Room & Board only	
6 Transportation, Room & Board	
7 Tuition, Transportation, Room & Board	
8 None	
9 Other (specify)	
0 Unknown	
	<u>REMARKS</u>
	0 Nil
	1 USA Student
	2 Non-registered Student
	3 Unknown Student
	4 Records Not Available
	5 Personal Knowledge
	6 Changed Residence
	7 Other (specify)

CODE CHART

RELIABILITY STUDY OF ENROLMENT DATA BANK, 1974-1976

SCHOOL TYPE		PARENTS' RESIDENCE (ON/OFF)		USE OF NATIVE LANGUAGE (LANG) (FOR EACH STUDENT)	
Federal	1	On Reserve	1	Nil	1
Provincial-Tuition	2	On Crown Land	2	Medium-more than half time	2
-Joint	3	Other (No taxes)	3	-less than half time	3
Band-Administered	4	Off Reserve (local taxes)	4	Taught as a subject only	4
Private-Tuition	5			Subject & part-time medium	5
-Joint	6			Full-time Instruction	6
		STUDENT'S ACCOMMODATION (ACC)		LANGUAGES SPOKEN AT FIRST ENTRY (SPOK)	
DATE OF BIRTH		With Parents/Guardians	1	Indian Only	1
e.g. January 3, 1963		Boarding		English Only	2
= 03-01-63		-Off Reserve	2	French Only	3
SEX		-Honours Off Reserve	3	Indian/English	4
Male	1	-On Reserve	4	Indian/French	5
Female	2	-Honours On Reserve	5	Indian/English/French	6
		Student Residence	6	English/French	7
		Group Home	7	Nil	8
		Foster Home	8	No Information	9
		Other (please specify)	9		

GRADE	
Junior Kindergarten	K4
Senior Kindergarten	K5
Special (Disturbed, ect.)	SS
All others	01,02,03...13
TYPE OF COURSE	
Pre-Grade One	01
Elementary-Accelerated	02
-Normal	03
-Decelerated	04
Secondary-Academic	05
-Vocational	06
Short Term Vocational/occupational	07
Special (Handicapped etc.)	08
Other (Please specify)	09

APPLICATION OF KRUSKAL-WALLIS ONE-WAY ANALYSIS OF VARIANCE TEST TO
PERCENTAGES OF SAMPLE UNITS SATISFYING EAN CRITERION
TO CORRESPONDING SAMPLE B SIZE FOR EDUCATION DISTRICTS
FOR SCHOOL YEARS 1970-71 TO 1974-75

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
District	%	Rank	%	Rank	%	Rank	%	Rank	%	Rank
New Brunswick	63	9	87	37.5	90	41	50	2	37	1
Montreal	75	19.5	76	22	75	19.5	76	22	81	30
Sioux Lookout	72	15	59	5	58	3.5	66	10	85	33.5
Manitoba	68	12	76	22	80	28	80	28	83	31
Yorkton	78	25	78	25	80	28	68	12	69	14
Blood/Peigan	58	3.5	62	7.5	62	7.5	60	6	68	12
Nanaimo	89	39.5	92	42	93	43.5	95	45	93	43.5
North Coast	74	18	73	16.5	73	16.5	78	25	84	32
Vancouver	86	35.5	86	35.5	87	37.5	85	33.5	89	39.5
R _j (Column Total)	-	177	-	213	-	225	-	183.5	-	236.5

Calculations of $T_j = t_j^3 - t_j$ or tied ranks

R _j	3.5	7.5	12	16.5	19.5	22	25	28	33.5	35.5	37.5	39.5	43.5
t _j	2	2	3	2	2	3	3	3	2	2	2	2	2
T _j	6	6	24	6	6	24	24	24	6	6	6	6	6

Null Hypothesis (H₀) : There is no real difference within a given Education District in the percentages of sample units satisfying the EAN criterion over the five school years under study.

Kruskal-Wallis One-Way Analysis of Variance formula* is :

$$H = \frac{12}{N(N+1)} \sum_{j=1}^K \frac{R_j^2}{n_j} - 3(N+1); \quad \text{Correction for tied ranks is } 1 - \frac{\sum T_j}{N^3 - N};$$

In our study, N is 45; n_j is 9; R_j has 177, 213, 225, 183.5 and 236.5 values and T_j is 150

Therefore, H equals $\frac{12}{45 \times 46} \left[\frac{177^2}{9} + \dots + \frac{236.5^2}{9} \right] - 3 \times 46 = 1.73$ and

the correction for tied ranks equals $1 - \frac{150}{91080}$ or 0.9984 giving us the value of

corrected H as 1.73/0.9984 or 1.7328.

Since the probability associated with the occurrence under H_0 of a value as large as $H = 1.7328$ for degrees of freedom $k - 1 = 4$ is between 0.70 and 0.80*, we do not reject H_0 . That is, we conclude that the observed differences in the percentages may be due to chance fluctuations.

* S. Siegel - Nonparametric Statistics, McGraw Hill, 1956, pages 184-192, 249.

ANNEXURE D

APPLICATION OF CHI-SQUARE TEST FOR K INDEPENDENT SAMPLES TO AGGREGATE RECORD RELIABILITY INDICES FOR SAMPLE "B" UNITS IN EDUCATION DISTRICTS FOR SCHOOL YEARS 1970-71 TO 1974-75

YEAR	1970-71		1971-72		1972-73		1973-74		1974-75		TOTAL	
DISTRICT	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.	Obs.	Exp.
New Brunswick	.60	.76	.86	.82	.89	.82	.91	.83	.84	.87	4.10	4.10
Montreal	.81	.78	.83	.83	.84	.84	.83	.85	.86	.88	4.17	4.18
Sioux Lookout	.67	.61	.57	.65	.58	.66	.64	.66	.81	.69	3.27	3.27
Manitoba	.74	.76	.81	.82	.83	.82	.84	.83	.88	.87	4.10	4.10
Yorkton	.71	.66	.74	.71	.75	.71	.67	.72	.68	.75	3.55	3.55
Blood/Peigan	.63	.67	.74	.72	.73	.72	.74	.73	.76	.76	3.60	3.60
Nanaimo	.83	.81	.89	.87	.87	.88	.89	.89	.90	.93	4.38	4.38
North Coast	.82	.79	.82	.84	.82	.85	.85	.86	.92	.90	4.23	4.24
Vancouver	.80	.77	.81	.82	.81	.83	.83	.84	.88	.88	4.13	4.14
TOTAL	6.61	6.61	7.07	7.08	7.12	7.13	7.20	7.21	7.53	7.53	35.53	35.56

Obs.: Observed Value (O_{ij}); Exp.: Expected Value $[E_{ij} = (\sum_i X_{ij}) \times (\sum_j X_{ij}) \div (\sum_i \sum_j X_{ij})]$ *

Null Hypothesis (H₀): There is no difference among the aggregate record reliability indices for different school years.

$$\chi^2 = \sum_{i=1}^r \sum_{j=1}^k \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

We have 9 rows, hence r = 9; and 5 columns, hence k = 5; therefore degrees of freedom = (r - 1) (k - 1) = (8) × (4) = 32

$$= \frac{(.60 - .76)^2}{.76} + \frac{(.81 - .78)^2}{.78} + \dots + \frac{(.92 - .90)^2}{.90} + \frac{(.88 - .88)^2}{.88}$$

$$= 12.84$$

Since the probability associated with the occurrence under H_0 of a value as large as $\chi^2 = 12.84$ for 32 degrees of freedom is more than 0.99*, we do not reject H_0 and conclude that the differences amongst these indices may be due to sampling fluctuations.

* S. Siegel - Nonparametric statistics for behavioural sciences, McGraw Hill, 1956, pages 175-179, 249.

ANNEXURE E

APPLICATION OF TWO-WAY ANALYSIS OF VARIANCE TEST TO
AGGREGATE RECORD RELIABILITY INDICES FOR SAMPLE 'B'
UNITS, IN EDUCATION DISTRICTS FOR SCHOOL YEARS 1970-71 TO 1974-75

Year	1970-71		1971-72		1972-73		1973-74		1974-75		Mean	
District	Obs.	Var.	Obs.	Var.	Obs.	Var.	Obs.	Var.	Obs.	Var.	Obs.	Var.
New Brunswick...	.60	.19	.86	.07	.89	.10	.91	.12	.84	.05	.82	.03
Montreal.....	.81	.02	.83	.04	.84	.05	.83	.04	.86	.07	.83	.04
Sioux Lookout...	.67	.12	.57	.22	.58	.21	.64	.15	.81	.02	.65	.14
Manitoba.....	.74	.05	.81	.02	.83	.04	.84	.05	.88	.09	.82	.03
Yorkton.....	.71	.08	.74	.05	.75	.04	.67	.12	.68	.11	.71	.08
Blood/Peigan....	.63	.16	.74	.05	.73	.06	.74	.05	.76	.03	.72	.07
Nanaimo.....	.83	.04	.89	.10	.87	.08	.89	.10	.90	.11	.88	.09
North Coast.....	.82	.03	.82	.03	.82	.03	.85	.06	.92	.13	.85	.06
Vancouver.....	.80	.01	.81	.02	.81	.02	.83	.04	.88	.09	.83	.04
Mean.....	.73	.06	.79	-	.79	-	.80	.01	.84	.05	.79	-

Obs.: Observed value (\bar{x}_{ij}); Var.: Variation from grand mean (0.79).

Null Hypothesis (Ho): The Education Districts and School Years do not affect the aggregate record reliability indices.

Analysis of Variance @

Source	Sum of Squares	d.f.	MSS	F-Ratio
Districts...	$J \sum (\bar{x}_{i.} - \bar{x} \dots)^2 = 23.80$	$I - 1 = 8$	2.98	12.42*** 5.83*** -
Years.....	$I \sum (\bar{x}_{.j} - \bar{x} \dots)^2 = 5.58$	$J - 1 = 4$	1.40	
Residual....	$\sum_i \sum_j (x_{ij} - \bar{x}_{i.} - \bar{x}_{.j} + \bar{x} \dots)^2 = 7.60$	$(I-1)(J-1) = 32$	0.24	
Total.....	$\sum_{ij} (x_{ij} - \bar{x} \dots)^2 = 36.98$	$IJ-1 = 44$	-	-

Since the probabilities associated with the occurrences under the H_0 of values as large as observed for F-ratio in the above table, namely 12.42 and 5.83 for degrees of freedom 8,32 and 4,32 respectively are less than 0.005@, we reject H_0 and conclude that the Education Districts and the School Years jointly affect the aggregate record reliability indices.

@ H. Scheffé - The Analysis of Variance, John Wiley & Sons, Inc.

New York 1963, pages 98-103, 432.

ANNEXURE F

APPLICATION OF FRIEDMAN'S TWO-WAY ANALYSIS OF VARIANCE TEST
TO RELIABILITY INDICES FOR ALL ITEMS OF INFORMATION IN SAMPLE

"B" UNITS FOR SCHOOL YEARS 1970-71 TO 1974-75.

YEAR	1970-71		1971-72		1972-73		1973-74		1974-75	
	Index	Rank	Index	Rank	Index	Rank	Index	Rank	Index	Rank
1. Home District	.84	1	.86	2	.87	3.5	.87	3.5	.89	5
2. Band Code	.83	1	.86	2	.87	3.5	.87	3.5	.90	5
3. Family Number	.84	1	.86	2	.87	3.5	.87	3.5	.90	5
4. Child Position	.84	1	.86	2	.87	3.5	.87	3.5	.90	5
5. Year of Birth	.84	1	.86	2	.87	3.5	.87	3.5	.90	5
6. Parent's Residence	.73	1	.75	2	.77	3	.78	4	.81	5
7. School Number	.61	1	.72	2	.74	3.5	.74	3.5	.81	5
8. Type of School	.56	1	.64	2	.68	3	.69	4	.79	5
9. Grade	.62	1	.66	2	.67	3	.71	4	.78	5
10. Day of Birth	.84	1	.86	2.5	.86	2.5	.87	4	.89	5
11. Month of Birth	.84	1	.86	2	.87	3.5	.87	3.5	.89	5
12. Type of Course	.74	2	.78	4	.79	5	.77	3	.73	1
13. Accommodation	.72	1	.76	2	.77	3	.78	4	.81	5
14. Allowance	.16	1	.50	2	.64	3	.65	4	.79	5
15. Language at Entry	.68	1	.69	2	.70	4	.70	4	.70	4
16. Surname	.92	1	.93	2.5	.94	4	.93	2.5	.95	5
17. Given Name(s)	.92	1.5	.92	1.5	.93	3.5	.93	3.5	.94	5
RANK TOTAL (R _j)	---	18.5	---	36.5	---	58.5	---	61.5	---	80.0

Null Hypothesis (H₀): The school years do not have any effect on the item reliability indices.

$$\chi_r^2 = \frac{12}{NK(K+1)} \sum_{j=1}^k (R_j)^2 - 3N(k+1) \text{ according to Friedman*}$$

where N = Number of rows = 17

K = Number of columns = 5

R_j = Rank Totals = 18.5, 36.5, 58.5, 61.5, 80.0;

$$\begin{aligned} \text{Therefore } \chi_r^2 &= \frac{12}{(17) \times (5) \times (6)} \left[(18.5)^2 + \dots + (80.0)^2 \right] - (3) \times (17) \times (6) \\ &= 1.1749 \end{aligned}$$

Since the probability associated with the occurrence under H_0 of a value as large as 1.1749 for degrees of freedom $K-1 = 4$ is between 0.80 and 0.90* we do not reject H_0 and conclude that the differences in item reliability indices may be due to sampling fluctuations.

* S. Siegel - Nonparametric Statistics for Behavioural Sciences, McGraw Hill, 1956, pages 166-172, 249.

PART C

Evaluation of the Data Bank based upon individual samples from New Brunswick Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 125 (b) On-Reserve 554
2. Size of the sample selected for study
 - (a) Off-Reserve 6 (b) On-Reserve 92

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 0.6
 - (ii) In the field only 0.2
 - (b) Sample B:
 - (i) Both in the data bank and field 4.0
 - (ii) In the field only 0.8

4. Important reason(s) for loss of information:

Sample A: Unknown, No records.

Sample B: No Records, Guesswork.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

(a) Sample A	<u>70%</u>	(b) Sample B	<u>65%</u>
EA	(a) Sample A <u>70%</u>	(b) Sample B	<u>68%</u>
E	(a) Sample A <u>70%</u>	(b) Sample B	<u>80%</u>
ean	(a) Sample A <u>7%</u>	(b) Sample B	<u>15%</u>

6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN

(a) Sample A 5 (b) Sample B 8

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.84 in the school year 1974-1975
 - (ii) lowest index 0.67 in the school year 1972-1973

- (b) Sample B: (i) highest index 0.91 in the school year 1973-1974
(ii) lowest index 0.60 in the school year 1970-1971

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 70% (ii) Sample B 35%
(b) 0 to 0.04: (i) Sample A 30% (ii) Sample B 15%
(c) 0.50 to 0.54: (i) Sample A Nil (ii) Sample B Nil

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A .9931 (ii) Sample B .9600
(b) Rank: (i) Sample A 4 (ii) Sample B 2

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 97 for names and surnames
(ii) lowest index 70 for all other items
(iii) average over all essential items 70
(iv) ranking with other districts 6
(b) Sample B: (i) highest index 85 for identifiers
(ii) lowest index 64 for language at entry
(iii) average over all essential items 83
(iv) ranking with other districts 4.5

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 0.84 by approach B
in the school year 1974-1975
(ii) lowest index 0.67 by approach A, B, C
in the school year 1972-1973
(iii) average difference among the three approaches 0.01

- (b) Sample B: (i) highest index 0.92 by approach A & C
in the school year 1972-1973 & 1973-74 respectively.
- (ii) Lowest index 0.60 by approach B
in the school year 1970-1971
- (iii) average difference among the three
approaches 0.07

TABLE 2.1

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - NEW BRUNSWICK

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
Index	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown										
4. No records	1	1								
5. Guess work	2									
6. Moved out										
7. Other										
Total	3	1								
<u>Sample B -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown										
4. No records	2	1								
5. Guess work	15	3								
6. Moved out	2									
7. Other	1									
Total	20	4								

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
 2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.1

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP

BY TYPE BY SCHOOL YEAR - NEW BRUNSWICK

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	4	4	4	4	5	58	80	83	46	34
EAn						1	1	2	4	3
EaN									19	30
Ean									2	3
Sub-total 'E'	4	4	4	4	5	59	81	85	71	70
eAN									5	1
eAn									1	
eaN	2	1	1	2	1	2	2		8	8
ean		1	1			31	9	7	7	13
Total Units	6	6	6	6	6	92	92	92	92	92

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.1

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX

BY TYPE BY SCHOOL YEAR - NEW BRUNSWICK

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	2	2	2	2	1	32	11	7	5	12
.05 - .09										
.10 - .14										
.15 - .19										
.20 - .24						1				
.25 - .29										
.30 - .34										
.35 - .39										
.40 - .44										
.45 - .49										
.50 - .54										
.55 - .59						1				
.60 - .64										
.65 - .69							2	2	1	
.70 - .74										
.75 - .79						1	1	2	1	1
.80 - .84						5	3	2	4	2
.85 - .89						8	8	3	5	5
.90 - .94						13	18	11	13	10
.95 - .99						18	27	21	17	28
1.00	4	4	4	4	5	13	22	44	46	34
Total Units	6	6	6	6	6	92	92	92	92	92

TABLE 7.1

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - NEW BRUNSWICK

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	67	67	67	67	83	64	88	92	95	87
2. Band Code	67	67	67	67	83	64	88	92	95	87
3. Family Number	67	67	67	67	83	64	88	92	95	87
4. Child Position	67	67	67	67	83	64	88	92	95	87
5. Year of Birth	67	67	67	67	83	64	88	92	95	87
6. Parent's Residence	67	67	67	67	83	6 4 ₂	8 8 ₇	9 2 ₁	95	87
7. School Number	67	67	67	67	83	61	76	85	84	77
8. Type of School	67	67	67	67	83	61	82	88	92	87
9. Grade	67	67	67	67	83	59	79	85	86	85
<u>Acceptable Group</u>										
1. Day of Birth	67	67	67	67	83	63	87	90	92	85
2. Month of Birth	67	67	67	67	83	63	87	91	93	85
3. Type of Course	67	67	67	67	83	63	88	90	88	54
4. Accommodation	67	67	67	67	83	61	85	90	91	84
5. Allowance	67	67	67	67	83	17	51	76	80	98
6. Language at Entry	67	67	67	67	83	40	60	68	75	72
<u>Negligible Group</u>										
1. Surname	100	100	83	100	100	64	87	89	91	87
2. Given Name(s)	100	100	83	100	100	63	84	84	86	79

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon
individual samples from Montreal Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
(a) Off-Reserve 160 (b) On-Reserve 663
2. Size of the sample selected for study
(a) Off-Reserve 8 (b) On-Reserve 110

Table 2

3. Average number of ineffective sample units over the five school years under study
(a) Sample A: (i) Both in the data bank and field 6
(ii) In the field only Nil
(b) Sample B: (i) Both in the data bank and field 14.2
(ii) In the field only 0.8
4. Important reason(s) for loss of information:
Sample A: Unknown, studying in U.S.A.
Sample B: No records, guesswork.

Tables
3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:
(a) Sample A 90% (b) Sample B 77%
EA (a) Sample A 90% (b) Sample B 77%
E (a) Sample A 100% (b) Sample B 97%
ean (a) Sample A Nil (b) Sample B Nil
6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN
(a) Sample A 1 (b) Sample B 3.5

Table 5

7. Record reliability indices for the Education District:
(a) Sample A: (i) highest index 1.00 in the school year 1970-1971
(ii) lowest index 0.93 in the school year 1974-1975

- (b) Sample B: (i) highest index 0.86 in the school year 1974-1975
- (ii) lowest index 0.81 in the school year 1970-1971

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 88% (ii) Sample B 20%
- (b) 0 to 0.04: (i) Sample A Nil (ii) Sample B 3%
- (c) 0.50 to 0.54: (i) Sample A 10% (ii) Sample B 20%

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.9944 (ii) Sample B 0.9348
- (b) Rank: (i) Sample A 1 (ii) Sample B 4

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 100 for names, identifiers
- (ii) lowest index 87 for language at entry
- (iii) average over all essential items 95
- (iv) ranking with other districts 1
- (b) Sample B: (i) highest index 100 for names, surname
- (ii) lowest index 41 for allowance
- (iii) average over all essential items 86
- (iv) ranking with other districts 2

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 1.00 by approach A, B, C
in the school year 1970-1971
- (ii) lowest index 0.93 by approach B
in the school year 1974-1975
- (iii) average difference among the three
approaches 0.05

- (b) Sample B: (i) highest index 0.99 by approach A
in the school year 1974-1975
- (ii) Lowest index 0.81 by approach B
in the school year 1970-1971
- (iii) average difference among the three
approaches 0.14

TABLE 2.2

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - MONTREAL

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
Index	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.	1		1		1		1		1	
2. Not registered										
3. Unknown	5		5		5		5		5	
4. No records										
5. Guess work										
6. Moved out										
7. Other										
Total	6		6		6		6		6	
<u>Sample B -</u>										
1. Studies in U.S.	3		1		1				4	
2. Not registered		1		1		1				
3. Unknown	1		1		1		2		4	
4. No records	3		4		6		4			
5. Guess work	7		5		7		10		7	
6. Moved out										
7. Other										1
Total	14	1	11	1	15	1	16		15	1

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.2
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP
 BY TYPE BY SCHOOL YEAR - MONTREAL

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	8	7	7	7	7	83	84	83	84	89
EAn										
EaN		1	1	1	1	22	23	24	24	20
Ean										
Sub-total 'E'	8	8	8	8	8	105	107	107	108	109
eAN										
eAn										
eaN						5	3	3	2	1
ean										
Total Units	8	8	8	8	8	110	110	110	110	110

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
 A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
 N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.2
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX
 BY TYPE BY SCHOOL YEAR - MONTREAL

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04						5	3	3	2	1
.05 - .09										
.10 - .14										
.15 - .19										
.20 - .24										
.25 - .29										
.30 - .34										
.35 - .39										
.40 - .44										
.45 - .49										
.50 - .54		1	1	1	1	22	23	23	24	20
.55 - .59										
.60 - .64								1		
.65 - .69							1			
.70 - .74									3	1
.75 - .79						1			1	
.80 - .84						9	5	3	8	13
.85 - .89						5	7	6	11	2
.90 - .94						26	15	19	15	16
.95 - .99					1	29	34	30	23	32
1.00	8	7	7	7	6	13	22	25	23	25
Total Units	8	8	8	8	8	110	110	110	110	110

TABLE 7.2

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - MONTREAL

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	100	100	100	100	100	95	97	97	98	99
2. Band Code	100	100	100	100	100	95	97	97	98	99
3. Family Number	100	100	100	100	100	95	97	97	98	99
4. Child Position	100	100	100	100	100	95	97	97	98	99
5. Year of Birth	100	100	100	100	100	95	97	97	98	99
6. Parent's Residence	100	87	87	87	87	74	73	73	74	78
7. School Number	100	87	87	87	87	70	72	75	74	79
8. Type of School	100	87	87	87	87	74	72	65	52	73
9. Grade	100	87	87	87	87	69	72	65	68	71
<u>Acceptable Group</u>										
1. Day of Birth	100	100	100	100	100	95	97	97	98	98
2. Month of Birth	100	100	100	100	100	95	97	97	98	98
3. Type of Course	100	87	87	87	87	73	75	75	73	73
4. Accommodation	100	87	87	87	87	73	76	75	76	80
5. Allowance	100	87	87	87	87	15	39	49	53	49
6. Language at Entry	100	87	87	87	75	47	45	45	45	49
<u>Negligible Group</u>										
1. Surname	100	100	100	100	100	100	100	100	100	100
2. Given Name(s)	100	100	100	100	100	100	100	100	100	100

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon individual samples from Sioux Lookout Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 198 (b) On-Reserve 905
2. Size of the sample selected for study
 - (a) Off-Reserve 9 (b) On-Reserve 150

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 6.4
 - (ii) In the field only 0.8
 - (b) Sample B:
 - (i) Both in the data bank and field 25.2
 - (ii) In the field only 19.0
4. Important reason(s) for loss of information:

Sample A: Unknown, No records.

Sample B: Unknown, No records, moved out.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

	(a) Sample A	<u>78%</u>	(b) Sample B	<u>68%</u>
EA	(a) Sample A	<u>78%</u>	(b) Sample B	<u>68%</u>
E	(a) Sample A	<u>82%</u>	(b) Sample B	<u>69%</u>
ean	(a) Sample A	<u>18%</u>	(b) Sample B	<u>31%</u>
6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN
 - (a) Sample A 4 (b) Sample B 7

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.98 in the school year 1974-1975
 - (ii) lowest index 0.67 in the school year 1973-1974

- (b) Sample B: (i) highest index 0.81 in the school year 1974-1975
(ii) lowest index 0.57 in the school year 1971-1972

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 73% (ii) Sample B 29%
(b) 0 to 0.04: (i) Sample A 11% (ii) Sample B 30%
(c) 0.50 to 0.54: (i) Sample A 4% (ii) Sample B 1%

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.9933 (ii) Sample B 0.9315
(b) Rank: (i) Sample A 3 (ii) Sample B 5

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 89 for day and month of birth
(ii) lowest index 76 for grade, type of course, allowance
(iii) average over all essential items 80
(iv) ranking with other districts 5
(b) Sample B: (i) highest index 69 for year & month of birth
(ii) lowest index 44 for allowances
(iii) average over all essential items 67
(iv) ranking with other districts 9

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 1.00 by approach A
in the school year 1974-1975
(ii) lowest index 0.67 by approach A, B, C
in the school year 1973-1974
(iii) average difference among the three
approaches 0.030

- (b) Sample B: (i) highest index 0.85 by approach A
in the school year 1974-1975
- (ii) Lowest index 0.57 by approach B
in the school year 1971-1972
- (iii) average difference among the three
approaches 0.036

TABLE 2.3

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - SIOUX LOOKOUT

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown	5		5		5		5		5	
4. No records	2	1		1		1		1	1	
5. Guess work										
6. Moved out	1		1		1		1			
7. Other										
Total	8	1	6	1	6	1	6	1	6	
<u>Sample B -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown	4	9			12		13		13	
4. No records	24	5	7	17	5	16	6	15	4	17
5. Guess work	1				2	-			1	
6. Moved out	4	4	7	2	7	2	3	2	5	
7. Other		1	1	2	3	1	3	1		
Total	33	19	15	21	29	19	25	19	24	17

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.3

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP

BY TYPE BY SCHOOL YEAR - SIOUX LOOKOUT

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	8	6	6	6	9	108	88	87	99	127
EAn										
EaN			2				1	8		1
Ean										
Sub-total 'E'	8	6	8	6	9	108	89	95	99	128
eAN										
eAn										
eaN										
ean	1	3	1	3		42	61	55	51	150
Total Units	9	9	9	9	9	150	150	150	150	150

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.3

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX

BY TYPE BY SCHOOL YEAR - SIOUX LOOKOUT

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	1		1	3		42	57	55	50	22
.05 - .09		3					3		1	
.10 - .14										
.15 - .19							1			
.20 - .24										
.25 - .29										
.30 - .34										
.35 - .39										
.40 - .44										
.45 - .49										
.50 - .54			2					8		
.55 - .59								1		
.60 - .64							1			
.65 - .69										
.70 - .74						2				1
.75 - .79							2	3	1	
.80 - .84						10	2	2	5	6
.85 - .89					1	22	7	3	4	9
.90 - .94						14	9	9	13	31
.95 - .99					1	45	45	14	15	20
1.00	8	6	6	6	7	15	23	55	61	61
Total Units	9	9	9	9	9	150	150	150	150	150

TABLE 7.3

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - SIOUX LOOKOUT

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	89	67	89	67	100	72	59	63	65	83
2. Band Code	89	67	89	67	100	63	60	63	66	85
3. Family Number	89	67	89	67	100	71	59	63	66	85
4. Child Position	89	67	89	67	100	71	59	63	66	85
5. Year of Birth	89	67	89	67	100	72	59	63	66	85
6. Parent's Residence	89	67	67	67	100	71	55	54	63	66
7. School Number	89	67	67	67	100	70	58	55	64	84
8. Type of School	89	67	67	67	100	72	57	56	63	82
9. Grade	89	67	67	67	89	62	52	55	60	83
<u>Acceptable Group</u>										
1. Day of Birth	89	100	89	67	100	69	61	63	65	84
2. Month of Birth	89	100	89	67	100	71	62	63	65	84
3. Type of Course	89	67	67	67	89	67	57	57	65	82
4. Accommodation	89	67	67	67	100	69	58	57	64	85
5. Allowance	89	67	67	67	89	10	20	51	57	81
6. Language at Entry	89	67	67	67	100	65	57	55	59	64
<u>Negligible Group</u>										
1. Surname	89	67	89	67	100	71	59	63	66	83
2. Given Name(s)	89	67	89	67	100	73	59	61	64	82

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon individual samples from Manitoba Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 1,196 (b) On-Reserve 2,828
2. Size of the sample selected for study
 - (a) Off-Reserve 57 (b) On-Reserve 471

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 15.2
 - (ii) In the field only 0.2
 - (b) Sample B:
 - (i) Both in the data bank and field 59.4
 - (ii) In the field only 2.0
4. Important reason(s) for loss of information:

Sample A: Moved out, no records, provincial authority.

Sample B: Guesswork, no records, provincial authority.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

(a) Sample A	<u>64%</u>	(b) Sample B	<u>77%</u>
EA	(a) Sample A <u>64%</u>	(b) Sample B	<u>77%</u>
E	(a) Sample A <u>96%</u>	(b) Sample B	<u>96%</u>
ean	(a) Sample A <u>Nil</u>	(b) Sample B	<u>Nil</u>
6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN
 - (a) Sample A 6 (b) Sample B 3.5

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.94 in the school year 1974-1975
 - (ii) lowest index 0.76 in the school year 1971-1972

- (b) Sample B: (i) highest index 0.88 in the school year 1974-1975
- (ii) lowest index 0.74 in the school year 1970-1971

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 56% (ii) Sample B 29%
- (b) 0 to 0.04: (i) Sample A 1% (ii) Sample B 3%
- (c) 0.50 to 0.54: (i) Sample A 33% (ii) Sample B 18%

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.9912 (ii) Sample B 0.9250
- (b) Rank: (i) Sample A 6 (ii) Sample B 6

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 100 for given name
- (ii) lowest index 77 for type of school, grade, language at entry.
- (iii) average over all essential items 88
- (iv) ranking with other districts 2
- (b) Sample B: (i) highest index 100 for name and surname
- (ii) lowest index 48 for allownaces
- (iii) average over all essential items 83
- (iv) ranking with other districts 4.5

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 100 by approach A
in the school year 1970-1971
- (ii) lowest index 0.76 by approach B and C
in the school year 1971-1972
- (iii) average difference among the three
approaches 0.154

- (b) Sample B: (i) highest index 0.97 by approach *A
in the school year 1971-1973, 1973-74, 1974-75.
- (ii) Lowest index 0.74 by approach B
in the school year 1970-1971
- (iii) average difference among the three
approaches 0.14

TABLE 2.4

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - MANITOBA

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.										
2. Not registered	1		1		1		1		1	
3. Unknown										
4. No records	5		3		3		3		3	
5. Guess work										
6. Moved out	8		7	1	9		7		8	
7. Other	2		4		3		3		3	
Total	16		15	1	16		14		15	
<u>Sample B -</u>										
1. Studies in U.S.	1		1		1				1	
2. Not registered										
3. Unknown										
4. No records	31	1	6	1	7	1	13		9	
5. Guess work	43	3	36		38	1	35	1	1	
6. Moved out	5		5	1	5		7		7	
7. Other	16	1	12		7		5		5	
Total	96	5	60	2	58	2	60	1	23	

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.4
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP
 BY TYPE BY SCHOOL YEAR - MANITOBA

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	33	30	32	35	52	318	356	379	377	393
EAn										
EaN	24	20	24	20	4	127	99	70	82	63
Ean										
Sub-total 'E'	57	50	56	55	56	445	455	449	459	456
eAN		5				3				
eAn										
eaN		2	1	2	1	23	16	22	12	15
ean										
Total Units	57	57	57	57	57	471	471	471	471	471

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
 A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
 N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.4
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX
 BY TYPE BY SCHOOL YEAR - MANITOBA

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04				2	1	24	12	18	11	8
.05 - .09						1	2	1	1	8
.10 - .14							1	1		
.15 - .19										
.20 - .24							1			
.25 - .29		1	1							
.30 - .34		1				1				
.35 - .39										
.40 - .44		3								
.45 - .49										
.50 - .54	24	21	24	20	4	119	103	71	78	60
.55 - .59					1	6	2	1	2	5
.60 - .64		1				9	5	3	6	7
.65 - .69						5		1	2	1
.70 - .74	2					25	5	1	4	
.75 - .79			1	1		14	7	5	5	2
.80 - .84	2		2	1		63	30	37	29	18
.85 - .89				1	1	47	56	42	48	21
.90 - .94	1	1	2	2	2	15	56	67	60	40
.95 - .99					1	98	81	80	73	75
1.00	28	29	27	30	47	44	110	143	152	226
Total Units	57	57	57	57	57	471	471	471	471	471

TABLE 7.4

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - MANITOBA

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	100	89	100	98	100	94	96	96	97	97
2. Band Code	100	89	100	98	100	94	96	96	97	97
3. Family Number	100	89	100	98	100	94	96	96	97	97
4. Child Position	100	89	100	98	100	94	96	96	97	97
5. Year of Birth	100	89	100	98	100	94	97	96	97	97
6. Parent's Residence	53	60	86	91	96	62	68	72	71	79
7. School Number	51	63	86	91	96	39	68	73	70	79
8. Type of School	54	60	84	89	96	49	58	71	73	78
9. Grade	56	58	84	89	96	58	65	72	73	76
<u>Acceptable Group</u>										
1. Day of Birth	100	89	100	98	100	94	97	96	97	96
2. Month of Birth	100	89	100	98	100	94	97	96	97	97
3. Type of Course	58	58	84	89	95	66	72	76	74	70
4. Accommodation	58	63	84	89	96	64	72	75	75	78
5. Allowance	51	61	86	91	95	12	39	51	52	85
6. Language at Entry	58	53	86	91	95	62	66	68	66	67
<u>Negligible Group</u>										
1. Surname	100	98	100	98	100	100	100	100	100	100
2. Given Name(s)	100	100	100	100	100	100	100	100	100	100

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon individual samples from Yorkton Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 487 (b) On-Reserve 562
2. Size of the sample selected for study
 - (a) Off-Reserve 24 (b) On-Reserve 94

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 18.0
 - (ii) In the field only 3.2
 - (b) Sample B:
 - (i) Both in the data bank and field 14.8
 - (ii) In the field only 17.0
4. Important reason(s) for loss of information:

Sample A: Unknown, no records, moved out.

Sample B: No records, moved out.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

	(a)	Sample A	<u>84%</u>	(b)	Sample B	<u>74%</u>
EA	(a)	Sample A	<u>84%</u>	(b)	Sample B	<u>75%</u>
E	(a)	Sample A	<u>84%</u>	(b)	Sample B	<u>76%</u>
ean	(a)	Sample A	<u>16%</u>	(b)	Sample B	<u>24%</u>
6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN
 - (a) Sample A 2 (b) Sample B 6

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.91 in the school year 1970-1971
 - (ii) lowest index 0.78 in the school year 1973-1974

- (b) Sample B: (i) highest index 0.75 in the school year 1972-1973
- (ii) lowest index 0.67 in the school year 1973-1974

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 80% (ii) Sample B 32%
- (b) 0 to 0.04: (i) Sample A 16% (ii) Sample B 24%
- (c) 0.50 to 0.54: (i) Sample A Nil (ii) Sample B Nil

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.9938 (ii) Sample B 0.92
- (b) Rank: (i) Sample A 81 (ii) Sample B 7

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 84 for 13 of the 17 items
- (ii) lowest index 81 for grade
- (iii) average over all essential items 83
- (iv) ranking with other districts 3
- (b) Sample B: (i) highest index 76 for home, district, band, child position and type of course
- (ii) lowest index 62 for Allowances
- (iii) average over all essential items 71
- (iv) ranking with other districts 7.5

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 0.92 by approach A
- in the school year 1970-1971
- (ii) lowest index 0.78 by approach B and C
- in the school year 1973-1974
- (iii) average difference among the three approaches 0.006

- (b) Sample B: (i) highest index 0.82 by approach A
in the school year 1972-1973
- (ii) Lowest index 0.67 by approach B and C
in the school year 1973-1974
- (iii) average difference among the three
approaches 0.052

TABLE 2.5

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - YORKTON

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
Index	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown	16		16		16		16		15	
4. No records	1	2		3		3		3		
5. Guess work										
6. Moved out	1		2	1	2	1		2	5	1
7. Other										
Total	18	2	18	4	18	4	16	5	20	1
<u>Sample B -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown										
4. No records	8	12	6	16	5	8	7	16	6	13
5. Guess work										
6. Moved out	9	4	10	2	10	5	6	8	7	1
7. Other										
Total	17	16	16	18	15	13	13	24	13	14

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.5

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP

BY TYPE BY SCHOOL YEAR - YORKTON

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	22	20	20	19	20	73	73	75	64	65
EAn						1	1		1	
EaN								2		
Ean										
Sub-total 'E'	22	20	20	19	20	74	74	77	65	65
eAN										
eAn										
eaN										
ean	2	4	4	5	4	20	20	17	29	29
Total Units	24	24	24	24	24	94	94	94	94	94

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
 A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
 N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.5

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX

BY TYPE BY SCHOOL YEAR - YORKTON

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	2	4	4	5	4	20	20	17	29	29
.05 - .09										
.10 - .14										
.15 - .19										
.20 - .24										
.25 - .29										
.30 - .34										
.35 - .39										
.40 - .44										
.45 - .49								2		
.50 - .54										
.55 - .59										
.60 - .64										
.65 - .69						1				
.70 - .74						1		2	1	
.75 - .79						2	2	2		
.80 - .84						18	15	8	4	2
.85 - .89	1					14	3	7		1
.90 - .94	1			2		4	14	33	12	6
.95 - .99	1					18	3		11	17
1.00	19	20	20	17	20	16	37	23	37	39
Total Units	24	24	24	24	24	94	94	94	94	94

TABLE 7.5

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - YORKTON

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	92	83	83	79	83	79	79	82	69	69
2. Band Code	92	83	83	79	83	79	79	82	69	69
3. Family Number	92	83	83	79	83	77	77	80	66	68
4. Child Position	92	83	83	79	83	79	79	82	69	69
5. Year of Birth	92	83	83	79	83	77	77	79	67	68
6. Parent's Residence	92	83	83	79	83	74	76	79	69	68
7. School Number	92	79	83	75	83	66	72	77	66	67
8. Type of School	83	79	83	79	83	47	56	70	63	68
9. Grade	82	83	83	75	83	67	59	27	61	68
<u>Acceptable Group</u>										
1. Day of Birth	92	83	83	79	83	78	78	79	67	64
2. Month of Birth	92	83	83	79	83	78	79	81	70	68
3. Type of Course	92	83	83	79	83	79	79	80	71	69
4. Accommodation	92	83	83	79	83	77	77	79	67	68
5. Allowance	83	79	83	79	83	21	74	77	69	69
6. Language at Entry	92	83	83	79	83	77	77	77	69	52
<u>Negligible Group</u>										
1. Surname	92	83	83	79	83	78	78	82	70	69
2. Given Name(s)	92	83	83	79	83	74	78	81	67	66

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon individual samples from Blood-Peigan Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 147 (b) On-Reserve 907
2. Size of the sample selected for study
 - (a) Off-Reserve 7 (b) On-Reserve 151

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 2.2
 - (ii) In the field only 1.8
 - (b) Sample B:
 - (i) Both in the data bank and field 7.4
 - (ii) In the field only 3.8
4. Important reason(s) for loss of information:

Sample A: Provincial authority.

Sample B: Moved, provincial authority.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

(a) Sample A	<u>31%</u>	(b) Sample B	<u>62%</u>
EA	(a) Sample A <u>31%</u>	(b) Sample B	<u>62%</u>
E	(a) Sample A <u>37%</u>	(b) Sample B	<u>63%</u>
ean	(a) Sample A <u>29%</u>	(b) Sample B	<u>10%</u>
6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN
 - (a) Sample A 9 (b) Sample B 9

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.84 in the school year 1974-1975
 - (ii) lowest index 0.23 in the school year 1972-1973

- (b) Sample B: (i) highest index 0.76 in the school year 1974-1975
- (ii) lowest index 0.63 in the school year 1970-1971

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 31% (ii) Sample B 16%
- (b) 0 to 0.04: (i) Sample A 29% (ii) Sample B 3%
- (c) 0.50 to 0.54: (i) Sample A 9% (ii) Sample B 7%

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.4575 (ii) Sample B 0.8280
- (b) Rank: (i) Sample A 9 (ii) Sample B 9

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 100 for name, surname
- (ii) lowest index 32 for identifiers, birthdate
- (iii) average over all essential items 29
- (iv) ranking with other districts 9
- (b) Sample B: (i) highest index 100 for given name.
- (ii) lowest index 60 for Allowance
- (iii) average over all essential items 71
- (iv) ranking with other districts 7.5

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 0.84 by approach B
in the school year 1974-1975
- (ii) lowest index 0.00 by approach A
in the school year 1972-1973
- (iii) average difference among the three approaches 0.182

- (b) Sample B: (i) highest index 0.78 by approach C
in the school year 1974-1975
- (ii) Lowest index 0.58 by approach A
in the school year 1970-1971
- (iii) average difference among the three
approaches 0.096

TABLE 2.6

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - BLOOD/PEIGAN

Year Index	1970-71		1971-72		1972-73		1973-74		1974-75	
	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.	1							1	1	
2. Not registered		1								
3. Unknown										
4. No records										
5. Guess work										
6. Moved out		1		1					1	
7. Other	1	2	1	1		2	2		3	
Total	2	3	2	2		3	2	1	5	
<u>Sample B -</u>										
1. Studies in U.S.	1			1	2		1		3	
2. Not registered										
3. Unknown						1		1	3	1
4. No records										
5. Guess work										
6. Moved out	1		1	1	1	1	1	1	1	1
7. Other		6	4	1	4	1	8	1	6	
Total	2	6	5	3	7	3	10	3	13	2

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.6
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP
 BY TYPE BY SCHOOL YEAR - BLOOD/PEIGAN

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	2	2		2	5	87	93	94	91	102
EAn							1		1	
EaN	2						2			3
Ean										
Sub-total 'E'	4	2		2	5	87	96	94	92	105
eAN	3	3	1	3	2	34	50	49	45	26
eAn										
eaN										
ean		2	6	2		30	5	8	14	20
Total Units	7	7	7	7	7	151	151	151	151	151

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
 A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
 N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.6
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX
 BY TYPE BY SCHOOL YEAR - BLOOD/PEIGAN

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	2	2	4	2		10	3	5	3	2
.05 - .09										
.10 - .14						1			1	1
.15 - .19						1				
.20 - .24						1	1	1	1	
.25 - .29						7		1	1	
.30 - .34						10	4		5	1
.35 - .39						10	4	2	2	4
.40 - .44	1	2	2	1	1	22	16	16	18	16
.45 - .49	2	1		1		1	11	16	11	14
.50 - .54			1	1	1		16	15	15	10
.55 - .59								1		2
.60 - .64							1			
.65 - .69						1	2	1		
.70 - .74						6		1	1	
.75 - .79						7	4	4		2
.80 - .84						33	19	18	15	15
.85 - .89						28	7	9	13	11
.90 - .94						2	15	22	20	23
.95 - .99						7	13	12	14	29
1.00	2	2		2	5	4	35	27	31	21
Total Units	7	7	7	7	7	151	151	151	151	151

TABLE 7.6

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - BLOOD/PEIGAN

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	29	29	0	29	71	58	64	63	63	70
2. Band Code	29	29	0	29	71	58	64	63	63	69
3. Family Number	29	29	0	29	71	58	63	62	62	70
4. Child Position	29	29	0	29	71	58	64	62	62	70
5. Year of Birth	29	29	0	29	71	58	64	62	62	69
6. Parent's Residence	71	57	29	57	86	89	92	91	94	91
7. School Number	71	71	43	71	100	83	89	89	93	92
8. Type of School	57	57	29	71	100	22	78	77	74	89
9. Grade	71	71	43	71	100	60	69	70	77	81
<u>Acceptable Group</u>										
1. Day of Birth	29	29	0	29	71	58	62	62	62	69
2. Month of Birth	29	29	0	29	71	58	63	64	62	69
3. Type of Course	71	71	43	57	100	85	91	84	80	64
4. Accommodation	71	71	43	71	100	78	83	83	83	83
5. Allowance	43	57	43	71	100	11	79	77	77	54
6. Language at Entry	71	71	43	71	100	74	78	76	77	72
<u>Negligible Group</u>										
1. Surname	100	100	100	100	100	99	100	100	97	99
2. Given Name(s)	100	100	100	100	100	100	99	100	99	100

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon individual samples from Nanaimo Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 389 (b) On-Reserve 799
2. Size of the sample selected for study
 - (a) Off-Reserve 19 (b) On-Reserve 133

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 9.2
 - (ii) In the field only 2.4
 - (b) Sample B:
 - (i) Both in the data bank and field 11.4
 - (ii) In the field only 3.4
4. Important reason(s) for loss of information:

Sample A: No records, provincial authority.

Sample B: No records, moved out.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

	(a)	Sample A	<u>83%</u>	(b)	Sample B	<u>93%</u>
EA	(a)	Sample A	<u>83%</u>	(b)	Sample B	<u>93%</u>
E	(a)	Sample A	<u>83%</u>	(b)	Sample B	<u>93%</u>
ean	(a)	Sample A	<u>17%</u>	(b)	Sample B	<u>7%</u>
6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN
 - (a) Sample A 3 (b) Sample B 1

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.89 in the school year 1971-1972
 - (ii) lowest index 0.77 in the school year 1973-1974

- (b) Sample B: (i) highest index 0.90 in the school year 1974-1975
(ii) lowest index 0.83 in the school year 1970-1971

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 63% (ii) Sample B 36%
- (b) 0 to 0.04: (i) Sample A 17% (ii) Sample B 7%
- (c) 0.50 to 0.54: (i) Sample A Nil (ii) Sample B Nil

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.9922 (ii) Sample B 0.9537
- (b) Rank: (i) Sample A 5 (ii) Sample B 3

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 83 for 10 of 17 items
(ii) lowest index 76 for Grade, Allowance
(iii) average over all essential items 82
(iv) ranking with other districts 4
- (b) Sample B: (i) highest index 93 for 9 of 17 items
(ii) lowest index 67 for Allowance
(iii) average over all essential items 88
(iv) ranking with other districts 1

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 0.89 by approach A and B
in the school year 1971-1972
(ii) lowest index 0.77 by approach B and C
in the school year 1973-1974
(iii) average difference among the three approaches 0.014

- (b) Sample B: (i) highest index 0.95 by approach *A
in the school year 1973-1974
- (ii) Lowest index 0.83 by approach B
in the school year 1970-1971
- (iii) average difference among the three
approaches 0.056

TABLE 2.7

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - NANAIMO

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown										
4. No records	8	1	8	1	8	2	7	1	7	2
5. Guess work										
6. Moved out	1		1						4	
7. Other		1		1	1	1		2	1	
Total	9	2	9	2	9	3	7	3	12	2
<u>Sample B -</u>										
1. Studies in U.S.	1		1		1		1		1	
2. Not registered										
3. Unknown										
4. No records	8	3	7	5	7	5	8		11	
5. Guess work										1
6. Moved out	2		1		1		2	1	4	
7. Other								1	1	
Total	11	4	9	5	9	5	11	2	17	1

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.7
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP
 BY TYPE BY SCHOOL YEAR - NANAIMO

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	16	17	16	15	15	119	123	124	126	124
EAn										
EaN										
Ean										
Sub-total 'E'	16	17	16	15	15	119	123	124	126	124
eAN										
eAn										
eaN										
ean	3	2	3	4	4	14	9	9	6	9
Total Units	19	19	19	19	19	133	133	133	133	133

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
 A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
 N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.7
 FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX
 BY TYPE BY SCHOOL YEAR - NANAIMO

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	3	2	3	4	4	14	9	9	5	8
.05 - .09										
.10 - .14										
.15 - .19										
.20 - .24										
.25 - .29										
.30 - .34										
.35 - .39										
.40 - .44										
.45 - .49										
.50 - .54										
.55 - .59										
.60 - .64						1	1			
.65 - .69									2	
.70 - .74						3	3	2	1	1
.75 - .79							1	2	4	
.80 - .84		1			1	15	13	18	19	3
.85 - .89						20	12	13	20	13
.90 - .94	1	1	2	4	1	12	17	28	22	23
.95 - .99	3	2	2	1		45	18	13	14	19
1.00	12	13	12	10	13	23	59	48	46	66
Total Units	19	19	19	19	19	133	133	133	133	133

TABLE 7.7

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - NANAIMO

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	84	89	84	79	79	89	93	93	96	94
2. Band Code	84	89	84	79	79	89	93	93	96	94
3. Family Number	84	89	84	79	79	89	93	93	96	94
4. Child Position	84	89	84	79	79	89	93	93	96	94
5. Year of Birth	84	89	84	79	79	89	93	93	96	94
6. Parent's Residence	84	89	84	79	79	87	91	92	91	94
7. School Number	79	89	79	68	79	81	86	77	83	90
8. Type of School	84	89	84	79	74	78	77	73	69	81
9. Grade	84	79	79	68	68	64	71	68	72	78
<u>Acceptable Group</u>										
1. Day of Birth	84	89	84	79	79	89	93	93	96	94
2. Month of Birth	84	89	84	79	79	89	93	93	96	94
3. Type of Course	84	89	84	79	74	86	90	91	88	80
4. Accommodation	84	84	79	79	79	83	86	85	89	87
5. Allowance	68	74	78	79	79	23	69	76	76	93
6. Language at Entry	84	89	84	74	79	88	88	92	89	86
<u>Negligible Group</u>										
1. Surname	84	89	84	79	79	89	93	93	96	94
2. Given Name(s)	84	89	84	79	79	89	93	93	96	94

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon individual samples from North Coast Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 350 (b) On-Reserve 483
2. Size of the sample selected for study
 - (a) Off-Reserve 17 (b) On-Reserve 80

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 8.6
 - (ii) In the field only 8.4
 - (b) Sample B:
 - (i) Both in the data bank and field 4.2
 - (ii) In the field only 2.0
4. Important reason(s) for loss of information:

Sample A: Moved out.

Sample B: Moved out.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

	(a) Sample A	<u>51%</u>	(b) Sample B	<u>76%</u>
EA	(a) Sample A	<u>51%</u>	(b) Sample B	<u>76%</u>
E	(a) Sample A	<u>51%</u>	(b) Sample B	<u>86%</u>
ean	(a) Sample A	<u>Nil</u>	(b) Sample B	<u>Nil</u>
6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN
 - (a) Sample A 7 (b) Sample B 5

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.92 in the school year 1974-1975
 - (ii) lowest index 0.37 in the school year 1973-1974

index 0.44 for all remaining school years.

- (b) Sample B: (i) highest index 0.92 in the school year 1974-1975
- (ii) lowest index 0.82 in the school year 1970-1971,
1971-72, 1972-73.

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 51% (ii) Sample B 44%
- (b) 0 to 0.04: (i) Sample A 49% (ii) Sample B 3%
- (c) 0.50 to 0.54: (i) Sample A Nil (ii) Sample B 16%

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.9902 (ii) Sample B 0.9837
- (b) Rank: (i) Sample A 7 (ii) Sample B 1

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 100 for name, surname
- (ii) lowest index 50 for 15 of 17 items
- (iii) average over all essential items 50
- (iv) ranking with other districts 8
- (b) Sample B: (i) highest index 87 for parents' residence
- (ii) lowest index 58 for allowances
- (iii) average over all essential items 85
- (iv) ranking with other districts 3

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 0.94 by approach A and C
in the school year 1974-1975
- (ii) lowest index 0.35 by approach A and C
in the school year 1973-1974
- (iii) average difference among the three
approaches 0.026

- (b) Sample B: (i) highest index 0.93 by approach A
in the school year 1974-1975
- (ii) Lowest index 0.82 by approach B
in the school year 1970-1971, 1971-72, 1972-73.
- (iii) average difference among the three
approaches 0.018

TABLE 2.8

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - NORTH COAST

Year	1970-71		1971-72		1972-73		1973-74		1974-75	
	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.										
2. Not registered										
3. Unknown										
4. No records										
5. Guess work										
6. Moved out	7	10	7	10	7	10	6	11	16	1
7. Other										
Total	7	10	7	10	7	10	6	11	16	1
<u>Sample B -</u>										
1. Studies in U.S.							1		1	
2. Not registered										
3. Unknown										
4. No records										
5. Guess work										
6. Moved out	1		2	3	4	3	1	4	9	
7. Other					2					
Total	1		2	3	6	3	2	4	10	

Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.8

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP

BY TYPE BY SCHOOL YEAR - NORTH COAST

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	7	7	7	6	16	59	58	58	62	67
EAn										
EaN						8	9	9	6	7
Ean										
Sub-total 'E'	7	7	7	6	16	67	67	67	68	74
eAN						11	10	10	7	6
eAn										
eaN	10	10	10	11	1	2	3	3	5	
ean										
Total Units	17	17	17	17	17	80	80	80	80	80

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.8

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX

BY TYPE BY SCHOOL YEAR - NORTH COAST

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	10	10	10	11	1		3	3	4	
.05 - .09										
.10 - .14										
.15 - .19										
.20 - .24										
.25 - .29									1	
.30 - .34										
.35 - .39						2				
.40 - .44						2	1	2	1	2
.45 - .49						9	2	2	1	
.50 - .54						8	16	16	11	11
.55 - .59										
.60 - .64										
.65 - .69										
.70 - .74										
.75 - .79						1	1			
.80 - .84							1	1		
.85 - .89						6	2	1		
.90 - .94						3	1		6	3
.95 - .99						47	38	3	5	7
1.00	7	7	7	6	16	2	15	52	51	57
Total Units	17	17	17	17	17	80	80	80	80	80

TABLE 7.8

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - NORTH COAST

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	41	41	41	35	94	84	84	84	85	92
2. Band Code	41	41	41	35	94	84	84	84	85	92
3. Family Number	41	41	41	35	94	84	84	84	85	92
4. Child Position	41	41	41	35	94	84	84	84	85	92
5. Year of Birth	41	41	41	35	94	84	84	84	85	92
6. Parent's Residence	41	41	41	35	94	90	85	84	86	91
7. School Number	41	41	41	35	94	85	82	84	86	91
8. Type of School	41	41	41	35	94	86	82	81	85	91
9. Grade	41	41	41	35	94	84	81	80	81	86
<u>Acceptable Group</u>										
1. Day of Birth	41	41	41	35	94	84	84	84	85	92
2. Month of Birth	41	41	41	35	94	84	84	84	85	92
3. Type of Course	41	41	41	35	94	87	85	84	80	86
4. Accommodation	41	41	41	35	94	84	82	82	85	91
5. Allowance	41	41	41	35	94	4	30	81	85	90
6. Language at Entry	41	41	41	35	94	90	85	82	87	86
<u>Negligible Group</u>										
1. Surname	100	100	100	100	100	100	-	100	100	100
2. Given Name(s)	100	100	100	100	100	100	100	-	100	-

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

Evaluation of the Data Bank based upon individual samples from Vancouver Education District

Table 1

1. Population as of December 31, 1974 in the age group 10-14
 - (a) Off-Reserve 475 (b) On-Reserve 892
2. Size of the sample selected for study
 - (a) Off-Reserve 22 (b) On-Reserve 149

Table 2

3. Average number of ineffective sample units over the five school years under study
 - (a) Sample A:
 - (i) Both in the data bank and field 15.6
 - (ii) In the field only 0.2
 - (b) Sample B:
 - (i) Both in the data bank and field 14.0
 - (ii) In the field only 0.8

4. Important reason(s) for loss of information:

Sample A: Study in U.S.A., not registered, no records, moved out.

Sample B: Study in U.S.A., no records, moved out, provincial authority.

Tables 3 & 4

5. Averaged percentage to the total number of student records belonging to criterion group EAN:

	(a)	Sample A	<u>50%</u>	(b)	Sample B	<u>87%</u>
EA	(a)	Sample A	<u>50%</u>	(b)	Sample B	<u>87%</u>
E	(a)	Sample A	<u>83%</u>	(b)	Sample B	<u>94%</u>
ean	(a)	Sample A	<u>Nil</u>	(b)	Sample B	<u>Nil</u>

6. Ranking of the Education District on the basis of average percentage of student records satisfying criterion EAN

(a) Sample A 8 (b) Sample B 2

Table 5

7. Record reliability indices for the Education District:
 - (a) Sample A:
 - (i) highest index 0.78 in the school year 1974-1975
 - (ii) lowest index 0.55 in the school year 1971-1972

- (b) Sample B: (i) highest index 0.88 in the school year 1974-1975
(ii) lowest index 0.80 in the school year 1970-1971

Table 6

8. Averaged percentages to the total number of sample units with the record reliability index of:

- (a) one: (i) Sample A 40% (ii) Sample B 22%
- (b) 0 to 0.04: (i) Sample A 17% (ii) Sample B 6%
- (c) 0.50 to 0.54: (i) Sample A 33% (ii) Sample B 7%

9. Median value of the aggregate record reliability index and ranking within the Education Districts:

- (a) Median: (i) Sample A 0.6250 (ii) Sample B 0.8969
- (b) Rank: (i) Sample A 8 (ii) Sample B 8

Table 7

10. Item reliability indices averaged over all school years:

- (a) Sample A: (i) highest index 100 for given name
(ii) lowest index 44 for parents' residence, school number
(iii) average over all essential items 66
(iv) ranking with other districts 7
- (b) Sample B: (i) highest index 99 for name and surname
(ii) lowest index 50 for type of school
(iii) average over all essential items 81
(iv) ranking with other districts 6

Table 8

11. Comparison of indices by the three approaches:

- (a) Sample A: (i) highest index 0.91 by approach A
in the school year 1974-1975 and 1973-74.
(ii) lowest index 0.55 by approach B
in the school year 1971-1972
(iii) average difference among the three
approaches 0.17

- (b) Sample B: (i) highest index 0.95 by approach A
in the school year 1974-1975 and 1973-74.
- (ii) Lowest index 0.79 by approach C
in the school year 1970-1971 and 1971-72.
- (iii) average difference among the three
approaches 0.128

TABLE 2.9

ANALYSIS OF INEFFECTIVE SAMPLE UNITS BY REMARKS CODE, TYPE, INDEX AND SCHOOL YEAR - VANCOUVER

Year Index	1970-71		1971-72		1972-73		1973-74		1974-75	
	One	Zero	One	Zero	One	Zero	One	Zero	One	Zero
<u>Sample A -</u>										
1. Studies in U.S.	6		6		6		6		6	
2. Not registered	2		2		2		2		2	
3. Unknown										
4. No records	5		4	1	5		4		4	
5. Guess work										
6. Moved out	3		3		3		3		4	
7. Other										
Total	16		15	1	16		15		16	
<u>Sample B -</u>										
1. Studies in U.S.	3		3		3		3		3	
2. Not registered	1		1		1		1		1	
3. Unknown										
4. No records	4		3		4		8		8	
5. Guess work										
6. Moved out	1		1		1	1	1	1	2	
7. Other	5	2	4	3			2		3	
Total	14	2	12		12	1	15	1	17	

- Notes: 1. Index 'one' indicates total acceptance of computer printouts due to the absence of field-records.
2. Index 'zero' indicates total rejection of computer printouts due to the absence of field-records.

TABLE 3.9

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY CRITERION GROUP

BY TYPE BY SCHOOL YEAR - VANCOUVER

Criterion Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
EAN	10	7	9	14	15	128	128	129	127	133
EAn						3	1	1		
EaN	7	10	8	6	5	8	10	10	15	8
Ean										
Sub-total 'E'	17	17	17	20	20	139	139	140	142	141
eAN										
eAn										
eaN	5	5	5	2	2	10	10	9	7	8
ean										
Total Units	22	22	22	22	22	149	149	149	149	149

LEGEND

E: 6 to 9 items from 'Essential' group tally; e: 0 to 5 items from 'Essential' group tally.
A: 4 to 6 items from 'Acceptable' group tally; a: 0 to 3 items from 'Acceptable' group tally.
N: Both items from 'Negligible' group tally; n: 0 to 1 item from 'Negligible' group tallies.

TABLE 6.9

FREQUENCY DISTRIBUTION OF SAMPLE UNITS BY RELIABILITY INDEX

BY TYPE BY SCHOOL YEAR - VANCOUVER

Reliability Index Group	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
0 - .04	5	5	5	2	2	10	10	9	7	8
.05 - .09										
.10 - .14										
.15 - .19										
.20 - .24										
.25 - .29										
.30 - .34										
.35 - .39										
.40 - .44										
.45 - .49										
.50 - .54	7	10	8	6	5	10	10	9	13	9
.55 - .59										
.60 - .64				1		2	3	3		
.65 - .69						2	1		2	
.70 - .74				1	1	7	3	6	3	1
.75 - .79						11	4	11	5	4
.80 - .84	1	1	1	1	1	25	38	24	26	10
.85 - .89					1	37	11	12	13	8
.90 - .94					1	14	39	41	39	23
.95 - .99	1					18	6	7	12	17
1.00	8	6	8	11	11	13	24	27	29	69
Total Units	22	22	22	22	22	149	149	149	149	149

TABLE 7.9

ITEM RELIABILITY INDICES BY SCHOOL YEAR AND TYPE - VANCOUVER

Item of Information	Sample A					Sample B				
	1970-71	1971-72	1972-73	1973-74	1974-75	1970-71	1971-72	1972-73	1973-74	1974-75
<u>Essential Group</u>										
1. Home District	77	77	77	91	91	93	93	94	95	95
2. Band Code	77	77	77	91	91	93	93	94	95	95
3. Family Number	77	77	77	91	91	93	93	94	95	95
4. Child Position	77	77	77	91	91	93	93	94	95	95
5. Year of Birth	77	77	77	91	91	93	93	94	95	95
6. Parent's Residence	45	32	41	50	50	76	77	79	77	80
7. School Number	41	27	36	55	59	63	65	69	66	74
8. Type of School	41	27	36	55	64	44	41	36	50	78
9. Grade	45	32	41	55	68	59	60	62	65	79
<u>Acceptable Group</u>										
1. Day of Birth	77	77	77	91	91	93	93	94	95	95
2. Month of Birth	77	77	77	91	91	93	93	94	95	95
3. Type of Course	45	32	41	59	59	83	83	83	79	80
4. Accommodation	45	32	41	64	68	81	82	81	83	79
5. Allowance	41	27	36	59	68	32	74	77	77	87
6. Language at Entry	45	32	41	64	68	80	78	79	79	86
<u>Negligible Group</u>										
1. Surname	95	100	100	100	100	99	99	99	100	100
2. Given Name(s)	100	100	100	100	100	99	99	99	100	100

Indices shown here are percentages of sample records identically reported in the data bank and field records to the corresponding sample size.

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