RELIGION, OCCUPATION, SCHOOL ATTENDANCE AND LITERACY IN NEWFOUNDLAND, 1901-1921

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RELIGION, OCCUPATION, SCHOOL ATTENDANCE AND LITERACY IN NEWFOUNDLAND, 1901-1921

by

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ABSTRACT

There were two main purposes of this study. First, the study tried to determine if religion and occupation had affected school attendance in Newfoundland from 1901 to 1921. Second, the study attempted to show if religion, occupation and school attendance had affected literacy during the same period.

Arguments were presented providing a rationale for the conceptual model used in the study. These arguments indicated a positive association between the percent Protestant in a community and the percent of school attendance and literacy, and a positive association between the percent of school attendance and the percent of literacy. In addition, it was argued that there was a negative association between the percent fishermen in a community and the percent of school attendance and literacy.

The sample consisted of 404 communities selected at random from the census return of Newfoundland for 1901. The same 404 communities were also selected in 1911 and 1921. Labrador District and the city of St. John's were excluded from the sample.

The findings of the study are presented under five main headings: (1) religious composition and school attendance; (2) occupational composition and school attendance;

(3) religious composition and literacy; (4) occupational composition and literacy; and, (5) school attendance and literacy.

The hypothesized positive associations between the percent Protestant and school attendance and literacy were not supported. Indeed, in communities over 200 in population, there was a consistent negative association between percent Protestant and school attendance.

Only in communities without teachers was there a consistent negative association between the percent fishermen and school attendance. When teachers were available, there appeared to be little relationship between occupation and school attendance.

The findings of the study supported both the hypothesis of a negative association between the percent fishermen and literacy, and the hypothesis of a positive association between school attendance and literacy.

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TABLE OF CONTENTS

CHAPTER		Page
1	INTRODUCTION TO THE STUDY	1
	BACKGROUND	1
	STATEMENT OF THE PROBLEM	5
	SIGNIFICANCE OF THE STUDY	8
	LIMITATIONS OF THE STUDY	11
2	RATIONALE AND RESEARCH DESIGN	15
	Religious Composition Argument	15
	Occupational Composition Argument	19
	School Attendance and Literacy Argument	23
	A CONCEPTUAL MODEL	25
	HYPOTHESES	26
3	RESEARCH METHODOLOGY	29
	SAMPLING	29
	OPERATIONALIZATION AND MEASUREMENT OF VARIABLES	31
	Protestant	31
	Fishermen	34
	School Attendance	34
	Literacy	36
	Control Variables	37
	METHOD OF ANALYSIS	39
4	ANALYSIS OF THE DATA	42
	Religious Composition and School Attendance	42
	Occupational Composition and School Attendance	45
	Religious Composition and Literacy	47
	Occupational Composition and Literacy	49
	School Attendance and Literacy	52
5	DISCUSSION OF FINDINGS	54
	Religious Composition, School Attendance and Literacy	54

CHAPTER Page

Occupational Composition, School Attendance, and Literacy 58
School Attendance and Literacy 64

6 SUMMARY 67

The Problem 67
Research Procedure 68
Results 69
Suggestions for Further Research 72

BIBLIOGRAPHY 74

APPENDIX 79

LIST OF TABLES

TABLE		Page
1	Electoral Districts, Number of Communities in 1901, Number, Percent and Relative Frequency of Communities in Sample	9
2	Population Parameters and Sample Statistics Expressed as Percentages for Each Year of the Study	10
3	Mean, Minimum and Maximum Percentages and Number of Cases of all Variables used in the Study for 1901	32
4	Mean, Minimum and Maximum Percentages and Number of Cases of all Variables used in the Study for 1911	33
5	Mean, Minimum and Maximum Percentages and Number of Cases of all Variables used in the Study for 1921	33
6	Means and Medians of all Variables for Communities Below 200 Without Teachers for Each Year of the Study	35
7	Means and Medians of all Variables for Communities Below 200 With Teachers for Each Year of the Study	35
8	Means and Medians of all Variables for Communities Over 200 With Teachers for Each Year of the Study	36
9	Q Values and Sample Size for "Protestant" by School Attendance	43
10	Q Values and Sample Size for "Fishermen" by School Attendance	46

TABLE		Page
11	Q Values and Sample Size for "Protestant" by Literacy	48
12	Q Values and Sample Size for "Fishermen" by Literacy	51
13	Q Values and Sample Size for School Attendance by Literacy	53
14	Protestant by School Attendance in Communities Under 200 Without Teachers and With Low Percent Fishermen for Each Year of the Study	80
15	Protestant by School Attendance in Communities Under 200 Without Teachers and With High Percent Fishermen for Each Year of the Study	81
16	Protestant by School Attendance in Communities Under 200 With Teachers and With Low Percent Fishermen for Each Year of the Study	82
17	Protestant by School Attendance in Communities Under 200 With Teachers and With High Percent Fishermen for Each Year of the Study	83
18	Protestant by School Attendance in Communities Over 200 With Teachers and With Low Percent Fishermen for Each Year of the Study	84
19	Protestant by School Attendance in Communities Over 200 With Teachers and With High Percent Fishermen for Each Year of the Study	85
20	Fishermen by School Attendance in Communities Under 200 Without Teachers and With Low Percent Protestant for Each Year of the Study	86

TABLE		Page
21	Fishermen by School Attendance in Communities Under 200 Without Teachers and With High Percent Protestant for Each Year of the Study	87
22	Fishermen by School Attendance in Communities Under 200 With Teachers and With Low Percent Protestant for Each Year of the Study	88
23	Fishermen by School Attendance in Communities Under 200 With Teachers and With High Percent Protestant for Each Year of the Study	89
24	Fishermen by School Attendance in Communities Over 200 With Teachers and With Low Percent Protestant for Each Year of the Study	90
25	Fishermen by School Attendance in Communities Over 200 With Teachers and With High Percent Protestant for Each Year of the Study	91
26	Protestant by Literacy in Communities Below 200 Without Teachers and With Low Percent School Attendance for Each Year of the Study	92
27	Protestant by Literacy in Communities Below 200 Without Teachers and With High Percent School Attendance for Each Year of the Study	93
28	Protestant by Literacy in Communities Below 200 With Teachers and With Low Percent School Attendance for Each Year of the Study	94
29	Protestant by Literacy in Communities Below 200 With Teachers and With High Percent School Attendance for Each Year of the Study	95

TABLE		Page
30	Protestant by Literacy in Communities Over 200 With Teachers and With Low-Percent School Attendance for Each Year of the Study	96
31	Protestant by Literacy in Communities Over 200 With Teachers and With High Percent School Attendance for Each Year of the Study	97
32	Fishermen by Literacy in Communities Below 200 Without Teachers and With Low Percent School Attendance for Each Year of the Study	98
33	Fishermen by Literacy in Communities Below 200 Without Teachers and With High Percent School Attendance for Each Year of the Study	99
34	Fishermen by Literacy in Communities Below 200 With Teachers and With Low Percent School Attendance for Each Year of the Study	100
35	Fishermen by Literacy in Communities Below 200 With Teachers and With High Percent School Attendance for Each Year of the Study	101
36	Fishermen by Literacy in Communities Over 200 With Teachers and With Low Percent School Attendance for Each Year of the Study	102
37	Fishermen by Literacy in Communities Over 200 With Teachers and With High Percent School Attendance for Each Year of the Study	103
38	School Attendance by Literacy in Communities Below 200 Without Teachers for Each Year of the Study	104

TABLE Page

39 School Attendance by Literacy in Communities Below 200 With Teachers for Each Year of the Study 105

40 School Attendance by Literacy in Communities Over 200 With Teachers for Each Year of the Study 106

LIST OF FIGURES

FIGURE		Page
1	Factors Influencing School Attendance and Literacy	25

CHAPTER 1

INTRODUCTION TO THE STUDY

BACKGROUND

Although the first school was established in Newfoundland by the Society for the Propagation of the Gospel (SPG) around 1723,[1] more than 100 years passed before government assumed any financial role in education. "To provide for the education of the youth of this country," wrote the reform-minded Patrick Morris in 1832, "will, no doubt, be the first objective of the local legislature."[2] However, it was not before 1836, four years after the formation of the first colonial government, that an education act was passed making the first grant to education. The expenditure on education in that year was the sum of £2,100.[3]

It was believed that the role of government was not to bear the total, or even the main, burden of education

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[1]Historians are not sure about the exact date of the first school.

[2]Letter to The Newfoundlander (St. John's), July 26, 1832.

[3]Great Britain. Laws, statutes, etc., 1830-1837 (William), "An Act for the Encouragement of Education in this Colony". London: Ryan and Withers, 1836 (6th William, Cap. 13).

in the colony, but merely to assist those who were endeavouring to improve the educational conditions in the various districts. As Rowe (1964:63) notes, "it was implicit in the grants that the bulk of the cost of building schools and paying teachers was not considered a state responsibility."

The amount of money voted for education did not increase very rapidly. Fifty years after the first government grant to education, the total expenditures on education had increased to slightly more than $76,000, or about thirty-five cents per capita. In 1895, the general grant to education was actually reduced to $70,000 because of the financial situation in Newfoundland.[4]

The amounts allocated to education by the Newfoundland Government did not increase significantly until after World War I. In the school year 1920-21, the annual expenditure on education by the government was slightly more than $832,000. Rowe (1964:70) calls the education act of 1920 "the most important in the history of educational legislation in Newfoundland," because, in addition to appointing the first Minister of Education in the colony, "it raised the expenditures on education to an unprecedented level."

However, the expenditure on education by the government in 1920-21 was still only about $3.00 per capita,

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[4] In 1894, Newfoundland went bankrupt and found it necessary to obtain a loan from England.

and $15.02 per pupil.[5] In the same year, per-pupil expenditures on education in the Canadian provinces ranged from a low of $20.80 in Prince Edward Island to a high of $83.42 in British Columbia.[6] The Canadian average per-pupil expenditure on education in 1920-21 was almost $51.00, over three times the expenditure in Newfoundland.[7]

The failure of the government to provide more adequately for the education of the youth of the colony was reflected in the serious shortage of teachers and schools in Newfoundland communities. In 1901, less than half of the communities had the service of a teacher.[8] By 1921, over one-quarter of the communities were still without teachers.[9] In 1901, slightly more than 50 percent of Newfoundland communities were fortunate enough to have at least one school.[10] Twenty years later, over 25 percent of communities were still without schools.[11]

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[5]Government of Newfoundland, Department of Education, Annual Return 1920-21.

[6]Ibid.

[7]Ibid.

[8]Government of Newfoundland. Census of Newfoundland and Labrador 1901. St. John's: J.W. Withers, 1903.

[9]Government of Newfoundland. Census of Newfoundland and Labrador 1921. St. John's: J.W. Withers, 1923.

[10]Government of Newfoundland. Census of Newfoundland and Labrador 1901. St. John's: J.W. Withers, 1903.

[11]Government of Newfoundland. Census of Newfoundland and Labrador 1921. St. John's: J.W. Withers, 1923.

It was not until 1920 that the Prime Minister of Newfoundland created a Department of Education with its own minister. One writer has made the following comment on this appointment:

> Never before in the country's history had there been any such department, and the inevitable critics of the Government were not slow to hurl the accusations, first that it was simply a piece of faddery; and second, that it was nothing nobler than a cute trick on the part of the Prime Minister "to find a job" for one of his executive colleagues.
>
> (Smallwood, 1932:114)

Prior to 1920, and the establishment of the new Department of Education with Dr. Arthur Barnes as the first minister, there appeared to be very little public concern with educational matters. Smallwood (1932:114) has written that

> ... the whole subject of education was one in which it was difficult if not impossible to galvanize popular interest. Few matters claimed less attention or were given less debate in the Assembly.

With the exception of Quebec, all Canadian provinces had introduced compulsory school attendance before 1900 (Phillips, 1957:18). Most of the American states had also adopted some measure of compulsory attendance by the turn of the present century. However, compulsory attendance did not come to Newfoundland until 1943.[12]

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[12] The Education Act passed in that year made school attendance compulsory from the age of 7 years to 14 years.

Many children did not attend school on a regular basis. It was estimated that in the school year 1920-21 only two-thirds of Anglican students were attending any school at all, and only half of these students were in regular attendance.[13]

Because of the modest amount of money voted for educational purposes, and the apparent lack of interest in education in general shown by the Newfoundland Government, much that was done educationally in the colony was the result of religious charity or the efforts of individual communities. Rowe (1976:72) has written:

> One basic fact which affected all education programmes in Newfoundland until the 1930's was that virtually complete responsibility for building school houses rested on the local communities.

Within these individual communities, schools were owned and operated by churches, providing the basis for the denominational system of education which became entrenched in Newfoundland in the latter part of the nineteenth century.

STATEMENT OF THE PROBLEM

The basic problem to be researched in this study is two-fold. First, the study will try to determine if two community factors, religion and occupation, have affected

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[13] Government of Newfoundland. Department of Education. Annual Return 1920-21.

school attendance in Newfoundland during the period represented by the three years, 1901, 1911 and 1921. Second, the study will attempt to investigate whether religion, occupation and school attendance have affected literacy during the same period.

Low school attendance and low rates of literacy were characteristic of Newfoundland for much of its history. In 1836, the year that the Newfoundland Government voted the first grant to education in the colony, only 21 percent of Newfoundland children from 5 to 15 years of age were attending public school.[14] In this same year, in Twillingate District only 5 percent of the children from 5 to 15 years of age were attending school, and in Burin District only 2 percent were at school.[15]

Although the growth of school attendance was considerable after the direct involvement of the Newfoundland Government in the provision of operating grants for school boards, one child in three was still not attending school in 1901. Out of a total of 51,788 children between 5 to 15 years of age, 35,204, or 68 percent, were attending school.[16]

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[14] Clinton Herrick. Migration as an Adaptive Strategy in Newfoundland. St. John's: Institute of Social and Economic Research, Memorial University of Newfoundland, 1971, p. 29.

[15] Ibid., p. 29.

[16] Government of Newfoundland. Census of Newfoundland and Labrador 1901. St. John's: J.W. Withers, 1903.

In some districts, school attendance was below 50 percent. For example, in Burgeo-Lapoile District only 47 percent of school-age children were attending school, and in St. Barbe District only 44 percent were attending school.[17]

Similarly, in 1901, a large proportion of the population of Newfoundland could not read or write. Of a total population of 171,000 over the age of 5 years at the turn of the present century, only 98,000, or 57 percent, could write.[18] In Burgeo-Lapoile only 36 percent of the population over 5 years of age could write, and in St. Barbe only 32 percent could write in 1901.[19]

Although there has been some discussion of the effects of the "oral tradition" on literacy in Newfoundland (see Gushue, 1973; 1974a; 1974b), there has been no empirical research in this area to determine what factors have historically influenced school attendance and literacy rates. Consequently, this study is a first effort at examining these relationships.

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[17] Ibid.

[18] Although the census returns of 1901, 1911 and 1921 give the number of people in each community who can write, there is no way of determining the actual level of literacy.

[19] Government of Newfoundland. Census of Newfoundland and Labrador 1901. St. John's: J.W. Withers, 1903.

SIGNIFICANCE OF THE STUDY

Literacy and school attendance are important fields of exploration in the study of education in any country. One could well argue that they should be at the center of the history of formal education.

Previous writings on the development of education in Newfoundland have not extensively explored the problems of school attendance and literacy. No empirical research has yet been done to determine the past effects of certain community factors on school attendance and literacy. Moreover, there has been no research on the relationship between school attendance and literacy in Newfoundland. This study is an attempt to shed some light on factors that may have influenced school attendance and literacy in Newfoundland from 1901 to 1921.

This study is based on a random sample of one-third of all communities in Newfoundland selected from the census return of 1901 (see Table 1). The sample includes the same 404 communities in 1911 and 1921. Table 2 shows that this sample is very representative of the total population for each of the three years studied.

Because census returns are completed at regular intervals, it was possible to conduct multiple tests of hypotheses. Accordingly, three different samples were selected and each hypothesized relationship was tested for

TABLE 1

ELECTORAL DISTRICTS, NUMBER OF COMMUNITIES IN 1901, NUMBER, PERCENT AND RELATIVE FREQUENCY OF COMMUNITIES IN SAMPLE

Electoral District	Number of Communities in 1901	Number of Communities in Sample	Percent of Communities in Sample	Relative Frequency of Sample
St. John's (East and West)	18	11	61.1	2.7
Ferryland	21	10	47.6	2.5
Harbour Main	35	15	42.9	3.7
Harbour Grace	12	6	50.0	1.5
Twillingate	154	45	29.2	11.1
St. Barbe	161	42	26.1	10.4
Carbonear	5	5	100.0	1.3
Port-de-Grave	36	15	41.7	3.7
Bay-de-Verde	39	15	38.5	3.7
Fogo	44	15	34.1	3.7
Burin	74	25	33.8	6.2
Trinity	158	45	28.5	11.1
Bonavista	102	30	29.4	7.4
St. George	100	30	30.0	7.4
Burgeo-Lapoile	70	25	35.7	6.2
Fortune Bay	111	35	31.5	8.7
Placentia and St. Mary's	127	35	27.6	8.7
Totals	1,267	404	31.9	100.0

TABLE 2

POPULATION PARAMETERS AND SAMPLE STATISTICS[a] EXPRESSED AS PERCENTAGES[b] FOR EACH YEAR OF THE STUDY

	1901		1911		1921	
Variables	Population	Sample	Population	Sample	Population	Sample
Protestant	68	69	69	71	70	71
Fishermen	70	69	60	63	59	60
School Attendance	67	67	66	68	80	80
Literacy	48	50	61	63	74	75

[a] St. John's and Labrador have been omitted from population and sample totals.

[b] All percentages have been rounded to the nearest whole number.

the three different years, 1901, 1911 and 1921. Such a multiple test of hypotheses should be a more adequate examination of the possible relationship between variables than a single test for one year.

LIMITATIONS OF THE STUDY

Because the study uses historical data as available from the census returns of Newfoundland for the years 1901, 1911 and 1921, the variables which are used in the study are limited to the information which is actually available on the census returns for these three years. This information which is available for each community includes: population, number of teachers and schools, size of each religious denomination, total labour force including the number of men (and women) engaged in the fishery, number of children 5 to 15 years of age, number of children attending school, and the number of people who can read and write. In this study, the community factors of religion and occupation are selected to determine their effects on school attendance and literacy. In addition, the relationship between school attendance and literacy is examined.

Although the additional independent variable of the actual amount spent on education in each community would add a new dimension to the study, this information, unfortunately, is not available from the census returns of these

years, and is not available on any systematic basis from other sources.

The information on religion, occupation, school attendance and literacy is available only for the three census years in the 20-year period of the study. There seems to be no detailed information on these variables for any of the years between census returns.

In some cases, a community is listed as having no school and no teacher. However, a percentage of the population from 5 to 15 years of age is listed as attending school. We do not know in which community these children were attending school, or what effect this had on the school attendance and literacy rate where they attended.

The data on school attendance indicate only that a certain percentage of the school-age children were attending school during the years of the census returns. There is no way to determine how regular this attendance was or how long it lasted. All we know is that a certain percentage of the children from 5 to 15 years of age were attending school for some time during the school years of the census returns.

In 1903, Dr. Levi Curtis, the Methodist Superintendent of Education in Newfoundland, had said that in the school attendance reports "every name enrolled is counted, no matter for how short a time, or how irregular the attendance" (Rowe, 1964:72). Any student registered at school was probably included in the attendance figures

in the census returns.

The census returns list the number of people over the age of 5 years who can write in 1901 and 1911, and the number of people over the age of 10 years who can write in 1921. As a consequence, there are two different measures of literacy used in the study. The change in age level used in the measurement of literacy from 1901 and 1911 to 1921 must be treated with caution, especially when making comparisons between the literary levels of the first two years and the last. Unfortunately, the data used in the study did not allow any alternative to the adoption of this measure of literacy.

The age level used in the 1921 census is probably a more appropriate one than that used in 1901 and 1911. Children can hardly be classified as literate before spending a minimum of a few years at school. In the absence of a compulsory attendance law and a fixed age at which to begin, many Newfoundland children probably did not attend school as early as the age of 5 years. The attendance of younger pupils especially must have depended upon the distance from the nearest school.

The author has not been able to determine if there were any minimum requirements that had to be met before a person would be listed in the census as being able to write. No actual copy of the census questionnaire or the instructions to the census enumerators could be traced. The opinion of

most of the older citizens interviewed was that the census taker determined people's ability to write simply by asking them if they could write. Therefore, people were classified as literate or illiterate on the basis of their own assessment of themselves.

Another limitation of the study is the question of the reliability of the census data on literacy. A recent writer (Clammer, 1976:6) has made the following comment on this point:

> ... in the frequently employed census the level of literacy is self-defined, and the accuracy of this clearly depends on the ability of the respondent to assess his own competence and on his honesty. Both these factors are likely to be highly fluid, especially where the literacy level is low ... or where it is socially unacceptable to be illiterate.

The nature of the census data on literacy makes it impossible to determine the actual level of literacy that is measured in the census returns of 1901, 1911 and 1921. However, it should be noted that any measure of literacy adopted is usually "very flexible and can be stretched to cover all levels of ability from the absolute minimum to an undetermined maximum."[20] In this case, the "absolute minimum" may be nothing more than the ability to write one's name.[21]

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[20] UNESCO. World Illiteracy at Mid-Century. Westport: Greenwood Press, 1957, p. 18.

[21] For Schofield, the ability to sign one's name is "one test of literary skill which satisfies almost all the requirements of a universal, standard and direct measure." (1968:319).

CHAPTER 2

RATIONALE AND RESEARCH DESIGN

This chapter contains the explanations, or arguments, in support of the conceptual model used in the study. The main purpose of these arguments is to provide a rationale for the present investigation of the effects of selected community factors--indicated above--on school attendance and literacy in Newfoundland from 1901 to 1921. The theoretical propositions to which reference is made below serve mainly to assist in the selection of independent variables in the present study. This research is not primarily concerned with testing such propositions.

Religious Composition Argument

Weber's The Protestant Ethic and the Spirit of Capitalism (1976), one of the more controversial works of social science, addressed the question of whether religious values could influence social behavior, and, if they did, how such behavior was influenced. In this work, Weber was primarily interested in how the wordly asceticism and rationality of Protestantism might have influenced the development of capitalism. However, he suggested that Protestant-Catholic differentials in education were partly

responsible for his decision to analyze the impact of Protestant rationality and beliefs, but he does not develop the implications for education (1976:38).

Bouma (1973) presents a critical review of Protestant-Ethic research published in the major sociological journals since 1960. Much of this recent research derives from the proposition that "ascetic Protestant beliefs and norms predispose Protestants to make more effective use of educational opportunities than do Catholics" (Bouma, 1973:143). However, Bouma's review of Protestant-Ethic research leads him to conclude that "when operationalized as Protestant versus Catholic, differences in religious belief appear to have no impact on educational behavior" (1973:151).

Although recent Protestant-Ethic research concerning educational attainment neither confirms nor supports the application of Weber's thesis, it is still of interest to investigate any historical Protestant-Catholic differentials in educational attainment in Newfoundland. A conflict theory of educational stratification derived from the approach of Weber (1968; see also Collins, 1971) suggests that struggles often occur among "status groups" for educational attainment. Historically, in Newfoundland, schools were founded and operated by religious groups, which might be regarded as "status groups", and the denominational system of education still exists. Sectarian competition in

educational attainment in Newfoundland was probably intensified by the ethnic basis of membership in religious groups, since, for the most part, Protestants were English and Catholics were Irish.

Jefferies (1967:31) writes that in most countries "the main credit for the earliest efforts to develop adult literacy must go to the Christian churches, and more particularly to those of the Protestant persuasion." The first societies which were active in the promotion of education in Newfoundland--even before the government assumed a role in 1936--were founded by Protestants, and like the Society for the Propagation of the Gospel (SPG), formed in 1701, were chiefly "for the advancement of the true Protestant religion" (Rowe, 1964:26). Indeed, Rowe (1976) argues that many of the early organizations engaged in promoting education in the colony of Newfoundland were more interested in spreading the Gospel than in providing educational facilities. Because such early societies were founded by Protestants and aimed at the "advancement" of Protestant religions, their organizers wished schools in their charge to be managed by representatives of Protestant churches (Rowe, 1964:41). As a result, these early schools were often managed by Protestant clergymen (Hamilton, 1970:130).

In the early history of education in Newfoundland, Catholics were slower to organize for educational purposes than the Protestants. When the Reverend Michael Fleming

was appointed Roman Catholic Bishop in 1929, he expressed concern about the lack of educational facilities for Catholics in Newfoundland (Hamilton, 1970:135). Whether the absence of facilities was the result of a lack of resources,[1] or the restrictions against Roman Catholics,[2] or the lack of initiative,[3] is not within the scope of this study. Rather, the important implication for this study is that Catholics did not become involved as early as did Protestants in the formation of societies for the provision of educational facilities. It is possible that the failure of Catholics to become involved in the provision of educational facilities as early as did Protestant sects, that is, Anglicans and Methodists, may be reflected in lower rates of school attendance and literacy among Catholics in Newfoundland during the period with which this study is concerned.

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[1]The majority of the Catholics in Newfoundland were poor Irish immigrants.

[2]For example, freedom of worship was not extended to Catholics in Newfoundland before 1782. Rowe says that the attitude of the English who were in the dominant status group in Newfoundland discouraged the practice of the Roman Catholic religion and "probably delayed Roman Catholic organization in the field of education" (1964:200).

[3]Because educational development among Catholics was slower, it became necessary to found the Benevolent Irish Society in 1806 to encourage development in the area of Catholic education.

Occupational Composition Argument

As the number of people in a community who are engaged in occupations other than hunting or fishing becomes larger, the need for education to provide the necessary skills for individuals tends to become greater. One of the functions of formal schooling is to provide the training made necessary by the increase in the proportion of occupations in the community requiring more complex skills.[4]

In communities where the majority of the labour force were engaged in the fishery, formal education was not as necessary for making a living as in communities with a more diverse labour force. Fathers could provide their sons with 'on the job' training in the only available occupation.

In addition to the lack of occupational diversity, the nature of the fishery itself may have discouraged school attendance in other ways. When a boy was old enough, he could be of benefit to his father by helping with the inshore fishery. Perhaps it was a common practice in fishing communities for boys to be absent from school when they were needed in the boat or in the stage. In many instances,

---

[4]While this technical function theory of education accounts for the increased schooling required in developing societies, it does not address the question of how much education is necessary, or who is educated. The conflict theory with its emphasis on the educational stratification which results from competition among status groups provides a more adequate explanation of the dynamics of rising educational requirements for employment (see Collins, 1971).

this probably contributed to erratic school attendance, and may have discouraged school attendance altogether after a boy reached a certain age.

According to Bishop Fleming, "the boys at a very tender age [were] employed in some way or other about the fishery, in order to earn as much as will support themselves and render them almost independent of their parents" (Rowe, 1964:78). Phillips (1957:52) says that school attendance "was poorer than it might have been, partly because children were employed at an early age in connection with the fishery". In 1864, the teacher at Petty Harbour noted in his annual report that

> ... as [the fishery] is an employment in which children can be made useful, they are taken from school very young, to assist in curing fish, or to help their parents. The attendance of the elder children is therefore very irregular, their progress is slow, and the little knowledge they have acquired by degrees wears away and is forgotten.
>
> (Hamilton, 1970:133)

Nemec (1970) has shown that the fishing crews of the Southern Shore area of Newfoundland are usually composed entirely of family members. Research by Faris (1966) and Firestone (1967) also shows that crew recruitment in other areas of Newfoundland is based primarily on kinship ties. Some reasons that have been suggested for the kinship ties that are evident in inshore fishing crews in Newfoundland are (1) the desire for informal employer-employee relation-

ships; and (2) the greater economic return to the family unit by not having to divide the catch with 'outsiders' (Nemec, 1970).

The very fact that fishing crews were recruited along family lines quite likely helps to explain why young boys were taken from school at an early age to engage in the fishery. A father who needed an extra 'hand' in the boat would probably take his younger son out of school rather than go outside the family unit to recruit an additional member for the fishing crew.

Indeed, part of the difficulty in establishing a compulsory school attendance law in Newfoundland was the fact that politicans were aware that children were often employed in the fishery. The Honourable Mr. Morine, elected member for Bonavista District, stated in the Newfoundland Legislature in March, 1891 that

> ... every man in the House recognized the necessity for the existence of such a law, but they were, for the most part, deterred from expressing their convictions, because they thought it might turn votes against them at the elections.[5]

Traditionally, a man's wife devoted a considerable amount of time to helping her husband with the fishery. In the census returns of 1901, 1911 and 1921, the number of women listed as being engaged in the inshore fishery in each

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[5] Reported in The Evening Telegram (St. John's), March 10, 1891.

community is almost as great as the number of males listed as fishermen. This would seem to suggest that when a fisherman's wife was not busy at home, she was busy on the flake or in the stage. Consequently, since fishing is a time demanding occupation, there were few leisure moments in the home during the fishing season when a mother could encourage or aid her children in educational pursuits.

Other occupations (with the possible exception of farming, which did not exist on any significant scale in Newfoundland during the period of this study)[6] do not make such demands on the family unit. It seems probable, therefore, that children whose fathers (and mothers) were engaged in the fishery, rather than in other occupations such as mining, or logging or business, may have attended school for shorter periods and with less regularity. As a result of the erratic school attendance, lower rates of literacy could be expected in communities where the majority of the labour force were engaged in the fishery.

Lewis (1953) says that the primary needs for literacy are social, economic and political. In fishing communities with homogeneous social organization and a minimal division of labour, literacy would probably not be a functional

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[6] The census returns of 1901, 1911 and 1921 list very few people engaged in farming. In Twillingate District in 1901, for example, there were only 42 farmers compared with 2,918 fishermen. In St. Barbe District there was not a single farmer listed in 1901 or 1921.

requirement. A minimum level of literacy, or none at all, was probably enough to enable a fisherman to participate effectively in his community.

School Attendance and Literacy Argument

The relationship between school attendance and literacy is well established. The historical relationship can be demonstrated by data on both attendance and literacy rates from selected countries. A study by UNESCO (1957) on enrollment trends in primary education shows that, among 102 countries and territories covered in the survey, those with the highest rates of school enrollment have the highest rates of literacy. UNESCO findings show that in countries where primary school enrollment has been at a high rate for an extended period "illiteracy among adults is either negligible or fast disappearing."[7]

The evidence clearly demonstrates the importance of encouraging universal primary education in the attempt to eliminate illiteracy.

> Among the various cultural, social and economic factors related to illiteracy, obviously the most important is the education of children in primary schools. If all children of school age in any country attended school for a sufficient length of time, there would eventually be no adult illiterates in the population, except those mentally deficient and

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[7] UNESCO. World Illiteracy at Mid-Century. Westport: Greenwood Press, 1957, p. 165.

> incapable of learning to read or write. It follows, therefore, that the best means of preventing illiteracy is to provide adequate education for all children.[8]

Speaking in the Newfoundland Legislature in March, 1891, the member for Bonavista District noted that

> ... it was a crying shame to see men even thirty years of age (and there are plenty of them in Newfoundland) who could not read or write, and were forced to get children to write their letters for them.[9]

He contended that this could be attributed to the absence of compulsory education in the past.

> No sane man in the country would deny that the principal reason why many of our people did not take the positions to which they were entitled in Newfoundland, was owing to the fact that they were not sufficiently educated. We (are) yearly making educational grants, and the people (are) not realizing half the advantages from these grants, owing to the absence of a compulsory law.[10]

However, the question of educational attainment, as Clammer (1976:72) points out, has not always been

> ... one of the provision of educational opportunity, but of attempting to restrict social and economic pressures on non-attendance at school ... For educational levels to rise there must be a societally perceived and rewarded relationship between education and occupational status and opportunity.

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[8] Ibid., p. 165.

[9] Reported in The Evening Telegram (St. John's), March 10, 1891.

[10] Ibid.

The social and economic pressures for non-attendance at school, and the lack of the necessary social, economic and political requirements for literacy may help to explain the lower rates of school attendance in many Newfoundland communities from 1901 to 1921, and, consequently, the lower rate of literacy.

A CONCEPTUAL MODEL

Arguments have been presented in the preceding section of this chapter which suggest that the religious composition and the occupational composition of a community may have exerted an influence on school attendance and literacy in Newfoundland during the 20-year period covered by this study. It has also been argued that there is a relationship between school attendance and literacy.

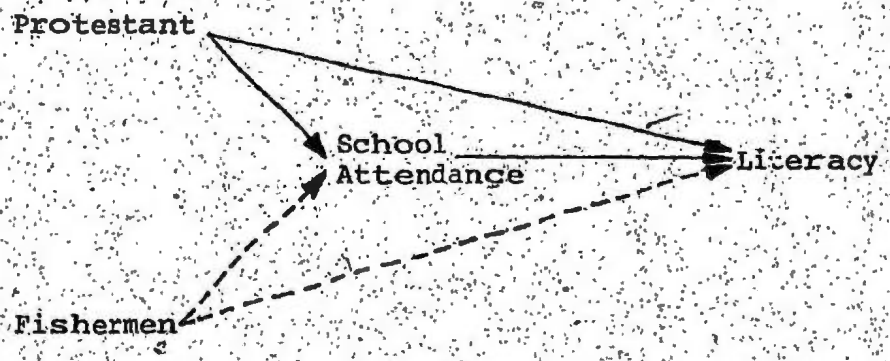


FIGURE 1. FACTORS INFLUENCING SCHOOL ATTENDANCE AND LITERACY

In this model, negative relationships are indicated by broken arrows, whereas positive relationships are indicated by continuous arrows. The relationship indicated in the model are the basis for the hypotheses presented below.

HYPOTHESES

The major hypotheses of this study are presented in this section. Other variables will be controlled when the relationship between an independent and dependent variable is examined.

The Religious Composition Argument stated that recent research does not support the thesis that Protestants make more effective use of educational opportunities than Catholics because of differentials in religious beliefs. However, Protestant-Catholic differentials in educational participation and attainment were argued for on the basis of competition among "status groups" as well as the nature of early educational development in Newfoundland.

Hypothesis 1: There will be a positive association between the percent of the community that is Protestant and the percent of school-age children in the community who attend school.

The Occupational Composition Argument stated that fishing communities may have had lower rates of school

attendance in the absence of a compulsory attendance law. Two reasons were offered: (1) the lack of occupational diversity in fishing communities, and hence less need for an education; and (2) the peculiar nature of the fishery itself which might have discouraged school attendance on a regular or sustained basis.

Hypothesis 2: There will be a negative association between the percent of the labour force of the community engaged in fishing and the percent of school-age children in the community who attend school.

The Religious Composition Argument noted the early involvement of Protestants in the provision of educational facilities and the promotion of education in Newfoundland. It also pointed out that the Protestants were mainly English, and thus part of the dominant status group.

Hypothesis 3: There will be a positive association between the percent of the community that is Protestant and the percent of people in the community who can write.

The Occupational Composition Argument implied that literacy will not be a functional requirement in fishing communities because of the lack of occupational diversity. In addition, it was argued that the labour intensive nature

of the fishery with its reliance on the family network for personnel may have encouraged erratic school attendance and contributed to lower rates of literacy in communities that were predominately engaged in the fishery.

Hypothesis 4: There will be a negative association between the percent of the labour force of the community engaged in fishing and the percent of people in the community who can write.

The School Attendance and Literacy Argument examined the well-established relationship between school attendance and literacy. Historically, as well as recently, a positive association between school attendance and literacy has been demonstrated.

Hypothesis 5: There will be a positive association between the percent of school-age children attending school and the percent of people in the community who can write.

CHAPTER 3

RESEARCH METHODOLOGY

This chapter will examine the research procedures used in the study. First, there is a discussion of the sample of communities selected for the study; second, there is a discussion of the operationalization and measurement of the variables; and, third, there is a presentation of the statistical procedures used in the analysis of the data.

SAMPLING

The sampling frame for this study is the census returns of Newfoundland for 1901. Communities identified in 1901 were then traced for 1911 and 1921. Because a census was undertaken only at 10-year intervals from 1901 to 1921, no similar data exist on the communities in the sample during the years between census returns.

During the years of this study, 1901 to 1921, there were 18 electoral districts on the island of Newfoundland and one in Labrador. However, the researcher wished to restrict the study to communities on the island portion of Newfoundland, and, as a result, decided not to include the District of Labrador in the sample. The decision was also

made not to include the city of St. John's in the sample, although the electoral districts of St. John's East and West were combined.

A random sample of communities was selected from each of the resulting 17 electoral districts included in the 1901 census. The sample selection from each district (see Table 1, page 9) is not consistent because of the great variation in the number of communities contained in the different districts. For example, in 1901, Carbonear District had only five communities, whereas St. Barbe District had 161 communities. The sample selection is as high as 100 percent (in Carbonear District), but, in no case, is the selection less than 26 percent of the total number of communities in a district in 1901. Table 1 indicates that from the 17 electoral districts a total of 404 communities are included in the sample. This is 31.9 percent of the total number of communities in Newfoundland in 1901, the first year with which this study is concerned.

When the selection of communities was being made, a list of random numbers greater than the intended sample from each community was compiled. This was necessary because some of the communities which were in existence in 1901 had either disappeared in 1911 or 1921, or had undergone a name change, and, except in a few cases, could not be identified by the researcher. Because the researcher wished to gather information on the same communities for

each of the three years of the study, only those communities from the randomly selected list of 1901 which were identifiable in each of the other two years were included in the sample. Very few communities did not meet this criteria.

Table 2 (see page 10) displays the population parameters and sample statistics for each of the three years of the study. The largest discrepancy between a population parameter and a sample statistic for each variable is as follows: Protestant 2 percent in 1911, fishermen 3 percent in 1911, school attendance 3 percent in 1911 and literacy 2 percent in 1901 and 1911. All these "larger" discrepancies are within an acceptable margin of error for survey research. This lends some credibility to the earlier claim that the sample is representative of the population.

OPERATIONALIZATION AND MEASUREMENT OF VARIABLES

This section of the chapter discusses the operationalization and measurement of the variables used in the study.

Protestant

This variable has been expressed as the percentage of the community that is Protestant. The number of Anglicans, Methodists, and other Protestants have been grouped together and expressed as the percent Protestant of the total pop-

ulation of the community. In many cases, communities are exclusively Protestant, whereas, in other cases, communities are exclusively Catholic. Protestant, then, as Tables 3, 4 and 5 indicate, will range from a minimum of 0 percent to a maximum of 100 percent for each of the three years of the study.

TABLE 3

MEAN, MINIMUM AND MAXIMUM PERCENTAGES[a] AND NUMBER OF CASES OF ALL VARIABLES USED IN THE STUDY FOR 1901

Variable	Mean	Minimum	Maximum	No. of Cases[b]
Protestant	68	0	100	404
Fishermen	77	0	100	388
School Attendance	49	0	100	403
Literacy	38	0	94	404

[a]All percentages have been rounded to the nearest whole number.

[b]Number of cases does not always add to 404 because of missing data.

The mean percent Protestant of the total sample varies little from 1901 to 1921. Table 3 shows a low of 68 percent Protestant in 1901, and Table 4 shows a high of 69 percent Protestant in 1911.

TABLE 4

MEAN, MINIMUM AND MAXIMUM PERCENTAGES[a] AND NUMBER OF CASES OF ALL VARIABLES USED IN THE STUDY FOR 1911

Variable	Mean	Minimum	Maximum	No. of Cases[b]
Protestant	69	0	100	400
Fishermen	71	0	100	400
School Attendance	55	0	100	397
Literacy	52	0	100	400

[a]All percentages have been rounded to the nearest whole number.

[b]Number of cases does not always add to 404 because of missing data.

TABLE 5

MEAN, MINIMUM AND MAXIMUM PERCENTAGES[a] AND NUMBER OF CASES OF ALL VARIABLES USED IN THE STUDY FOR 1921

Variable	Mean	Minimum	Maximum	No. of Cases[b]
Protestant	68	0	100	401
Fishermen	68	0	100	400
School Attendance	71	0	100	395
Literacy	66	0	100	400

[a]All percentages have been rounded to the nearest whole number.

[b]Number of cases does not always add to 404 because of missing data.

Fishermen

The number of males engaged in the fishery is expressed as a percent of the total labour force of each community.[1] The range of this variable is from 0 to 100 percent for the three years of the study as shown in Tables 3, 4 and 5 (see pages 32 and 33).

The mean percent of males engaged in the fishery of the total labour force of the sample shows a steady decrease from 77 percent in 1901 (Table 3) to 71 percent in 1911 (Table 4) and 68 percent in 1921 (Table 5). As Tables 6, 7 and 8 indicate, the percent of males engaged in the fishery tends to decrease as the population of the community increases.

School Attendance

In this variable, the number of children from 5 to 15 years of age who are attending school is expressed as a percent of the total number of children in the community between 5 to 15 years of age. Although this variable ranges from 0 percent to a maximum of 100 percent (see Tables 3, 4 and 5, pages 32 and 33), there were few communities where all children from 5 to 15 years of age were attending school.

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[1] The census data of 1901, 1911 and 1921 on the total labour force of each community include women as well as men in "other occupations". However, a distinction was made between men and women engaged in the fishery.

TABLE 6

MEANS AND MEDIANS OF ALL VARIABLES FOR COMMUNITIES BELOW 200 WITHOUT TEACHERS FOR EACH YEAR OF THE STUDY[a]

Variable	1901 Mean	1901 Median	1911 Mean	1911 Median	1921 Mean	1921 Median
Protestant	70	99	69	100	67	100
Fishermen	81	97	77	89	73	86
School Attendance	27	0	27	0	48	50
Literacy	28	26	38	34	57	61

[a]All percentages have been rounded to the nearest whole number.

TABLE 7

MEANS AND MEDIANS OF ALL VARIABLES FOR COMMUNITIES BELOW 200 WITH TEACHERS FOR EACH YEAR OF THE STUDY[a]

Variable	1901 Mean	1901 Median	1911 Mean	1911 Median	1921 Mean	1921 Median
Protestant	69	98	67	100	67	100
Fishermen	81	94	74	85	72	85
School Attendance	78	79	70	74	78	80
Literacy	49	51	55	55	66	67

[a]All percentages have been rounded to the nearest whole number.

TABLE 8

MEANS AND MEDIANS OF ALL VARIABLES FOR COMMUNITIES OVER 200 WITH TEACHERS FOR EACH YEAR OF THE STUDY[a]

Variable	1901 Mean	1901 Median	1911 Mean	1911 Median	1921 Mean	1921 Median
Protestant	67	86	70	87	70	92
Fishermen	66	76	61	69	60	68
School Attendance	75	76	72	76	83	87
Literacy	55	54	65	67	77	78

[a]All percentages have been rounded to the nearest whole number.

Tables 3 to 5 show that there is an increase in the mean school attendance for the total sample from 48 percent in 1901 to 71 percent in 1921.

Literacy

The initial problem in measuring the amount of literacy is to define what literacy means. Jefferies (1967), Schofield (1968), Cipolla (1969), Graff (1972) and Clammer (1976) among others have written about the vagueness surrounding the concept of literacy and the problem of attempting an adequate definition.

The age level at which persons should be classified as literate or illiterate is also questionable.

> ... obviously there is a lower limit below which the question of literacy is not applicable. What this lower level should be is by no means clear.[2]

In the present study, literacy is measured by the percent of people in each community over the age of 5 years (in 1901 and 1911) or over the age of 10 years (1921) who can write as determined by the census returns of the period. The change in the measurement of the variable in the last year of the study is necessary because of the change in information sought by the census of 1921. Whereas, in 1901 and 1911 the census returns list the number of people over the age of 5 years who can write, the census of 1921 lists the number of people over the age of 10 years who can write.

Tables 3, 4 and 5 (see pages 32 and 33) show that the range of this variable is from a minimum of 0 percent to a maximum of 94 percent in 1901 and 1911 and a maximum of 100 percent in 1911 and 1921.

The mean percent literate of the total sample increased from 38 percent in 1901 to 52 percent in 1911 and 66 percent in 1921 (see Tables 3, 4 and 5).

Control Variables

In this study, when a relationship between an independent and a dependent variable is tested other variables will be controlled.

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[2] UNESCO. World Illiteracy at Mid-Century. Westport: Greenwood Press, 1957, p. 27.

Size of community has been used as a control in all tests. Communities have been divided into two categories on the basis of size, those below 200 in population and those above 200. The decision was made to divide at this point because 200 was the mean size of communities in Newfoundland during the years 1901, 1911 and 1921.[3]

The availability of teachers in a community was also used as a control. In communities below 200 in population, relationships between independent and dependent variables were tested both in communities with teachers and communities without teachers during 1901, 1911 and 1921. In communities over 200 in population, hypothesized relationships were tested only in communities with teachers. This was because there were few communities over 200 in population who did not have teachers during this period.

In addition to the two control variables of size of community and availability of teachers, the following controls have been exercised:

1. control for fishermen when testing the relationship between Protestant and school attendance;
2. control for Protestant when testing the relationship between fishermen and school attendance;

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[3] From the census returns of these three years the average size of communities in Newfoundland can be calculated as 204, 213 and 226, respectively.

3. control for school attendance when testing the relationship between Protestant and literacy;
4. control for school attendance when testing the relationship between fishermen and literacy.

METHOD OF ANALYSIS

This section of the chapter discusses the method of analysis used in the study.

Yule's Q is used to determine the strength of the association between the variables in the conceptual model. Each variable in the study is dichotomized. Where possible, the point of division has been the mean. However, in several cases, the dividing point for high and low is either above or below the mean. This is necessary in order to insure an adequate distribution of cases in each of the four cells. Since the interpretation of Yule's Q becomes problematic if the marginal distributions are more extreme than 30:70 in samples of the size used here, an attempt was made to approximate a 50:50 split, particularly in samples where the number of cases approached 50 (see Davis, 1971: 24-30).

After the crosstabulation of the data, the concept of relationship is examined. As Davis (1971:33) notes

> statisticians often back into (the concept of relationship) by giving a precise definition of the absence of relationship (called statistical independence) and then saying there is some relationship between two variables if the data do not meet the definition of statistical independence.

Yule's Q helps us to ascertain the degree of strength of the relationship that exists between the two variables. Q equals .00 when the two variables are independent. It has a maximum value of +1.00 for the strongest possible positive association, and a maximum value of -1.00 for the strongest possible negative association. The value of Q, therefore, must fall somewhere between +1.00 and -1.00.

As with all proportionate reduction of error measures, the size of Q provides an indication of how much better than chance we would do in predicting the score on one variable from knowing the score on another. A measured Q of .00 means that we would do no better than chance; a Q of +1.00 means that we would do significantly better (sometimes 100 percent better) than chance. The sign, of course, tells us in which direction to predict.

Before inferences from the strength of the observed Q value in the sample tests can be applied to the total population, the confidence limits for Q must be calculated. The confidence intervals for Q at the .95 confidence level are determined by using (1) the sample value of Q, (2) the

cell frequencies, A, B, C, D; and (3) the following formulae:

$$\text{Upper limit} = Qxy + (1.96)\sqrt{\frac{(1.00 - Q^2xy)^2\,(1/A + 1/B + 1/C + 1/D)}{4}}$$

$$\text{Lower limit} = Qxy - (1.96)\sqrt{\frac{(1.00 - Q^2xy)^2\,(1/A + 1/B + 1/C + 1/D)}{4}}$$

With the aid of these formulae an upper and lower limit for Q can be calculated around our sample value (Davis, 1971:57). If the two confidence limits have the same sign, Q is statistically significant at the .025 level. If the confidence limits have opposite signs, or one of them is .00, the observed value of Q in the sample is not statistically significant at the .025 level (Davis, 1971:58).

The confidence limits of Q are a function of both the value of Q and the size of the sample. Ideally, one should try to avoid sample sizes of less than 40 or 50, and, if possible, seek sample sizes of 150 or more (Davis, 1971: 3). The smaller the sample, the larger the value of Q needed to meet the test of statistical significance.

CHAPTER 4

ANALYSIS OF THE DATA

This chapter examines the hypothesized associations between the variables. First, there is a discussion of the effects of religious composition and occupational composition on school attendance; second, a discussion of the effects of religious composition and occupational composition on literacy; and third, a discussion of the association between school attendance and literacy.

Religious Composition and School Attendance

Hypothesis 1: There will be a positive association between the percent of a community that is Protestant and the percent of school-age children in the community who attend school.

Table 9 shows the results of the crosstabulation of Protestant by school attendance while controlling for size of community, availability of teacher and percent fishermen.

Only in 6 of the 18 tests of the hypothesis is there a positive association between percent Protestant and school attendance. In addition, three of these positive Q values

TABLE 9

Q VALUES AND SAMPLE SIZES FOR "PROTESTANT" BY SCHOOL ATTENDANCE

Census Year	COMMUNITY SIZE: UNDER 200, Teacher: No, Fishermen: Low	UNDER 200, Teacher: No, Fishermen: High	UNDER 200, Teacher: Yes, Fishermen: Low	UNDER 200, Teacher: Yes, Fishermen: High	OVER 200, Teacher: Yes, Fishermen: Low	OVER 200, Teacher: Yes, Fishermen: High
1901	.22(62)	.02(156)	-.28(29)	.08(51)	-.48(34)	-.70*(60)
1911	.08(45)	-.34 (96)	-.04(69)	-.10(66)	-.08(40)	-.56*(72)
1921	.58(38)	.44*(73)	-.02(52)	-.06(108)	-.20(48)	-.46*(78)

*Indicates significant relationship ($p \geq .025$).

Note. Sample size is in parenthesis.

are negligible.

The two strongest positive Q values occur in 1921 in communities under 200 without teachers. Only the Q value of .44 in communities with a high percent fishermen is statistically significant ($p \geq .025$). A strong Q value of .58 is recorded for communities with a low percent fishermen, but the sample size (38) is so small that interpretation of the Q value is problematic.

Of the 12 tests of the hypothesis in communities with teachers, 11 of the Q values are negative. This is just the opposite of the hypothesized association between the percent Protestant and school attendance.

In communities under 200 in population, three of the five negative Q values are negligible. None is statistically significant ($p \geq .025$).

However, in communities over 200 in population, the negative associations are stronger, and when the percent fishermen is high the Q values (which range from a high of -.70 in 1901 to a low of -.46 in 1921) are statistically significant for each year ($p \geq .025$).

In summary, the research findings do not support the hypothesis of a positive association between the percent of the community that is Protestant and the percent of school-age children in the community who attend school. Indeed, contrary to the hypothesis, findings suggest a negative association between percent Protestant and school

attendance in communities over 200 in population. This negative association is statistically significant ($p \geq .025$) in communities with a high percent fishermen.

Occupational Composition and School Attendance

Hypothesis 2: There will be a negative association between the percent of the labour force of the community engaged in fishing and the percent of school-age children in the community who attend school.

Table 10 gives the results of the crosstabulation of fishermen by school attendance while controlling for size of community, availability of teacher and percent Protestant.

Only in communities without teachers is there a consistent negative association between the percent fishermen and the percent of school-age children in the community who attend school. The negative association appears to be stronger when the percent Protestant is high. Here, two of the Q values (-.34 and -.60) are statistically significant ($p \geq .025$).

Of the 12 tests of the hypothesis in communities with teachers, only half show a negative association between fishermen and school attendance. Of these six negative associations, two are negligible and only one (.32) is statistically significant ($p \geq .025$).

TABLE 10

Q VALUES AND SAMPLE SIZES FOR "FISHERMEN" BY SCHOOL ATTENDANCE

	COMMUNITY SIZE					
	UNDER 200				OVER 200	
	Teacher				Teacher	
	No		Yes		Yes	
Census Year	Protestant		Protestant		Protestant	
	Low	High	Low	High	Low	High
1901	-.20 (72)	-.34* (146)	.50 (30)	-.06 (45)	.24 (32)	.22 (63)
1911	-.20 (50)	-.60* (90)	.58* (43)	.38* (83)	.00 (34)	-.32* (77)
1921	-.34 (41)	-.44 (68)	-.26 (49)	-.22 (94)	.28 (39)	-.08 (89)

*Indicates significant relationship ($p > .025$).

Note. Sample size is in parenthesis.

Two of the six positive Q values recorded are statistically significant ($p \geq .025$), and a third value (.50) shows a strong association, but the sample size (30) is small enough to render interpreting the Q value problematic.

In summary, the findings of the study suggest only a partial acceptance of the hypothesis. In communities without teachers, the percent fishermen appears to have a negative effect on school attendance, that is, when the percent of fishermen in the community is high the percent of school attendance tends to be low. In communities where teachers are available, the percent fishermen does not appear to have either a consistent negative or a consistent positive effect on school attendance.

Religious Composition and Literacy

Hypothesis 3: There will be a positive association between the percent of the community that is Protestant and the percent of people in the community who can write.

Table 11 gives the results of the crosstabulation of Protestant by literacy while controlling for size of community, availability of teacher and school attendance.

Research findings do not support the hypothesized positive association between the percent Protestant and the

TABLE 11

Q VALUES AND SAMPLE SIZES FOR "PROTESTANT" BY LITERACY

Census Year	COMMUNITY SIZE: UNDER 200 — Teacher: No — School Attendance: Low	UNDER 200 — Teacher: No — School Attendance: High	UNDER 200 — Teacher: Yes — School Attendance: Low	UNDER 200 — Teacher: Yes — School Attendance: High	OVER 200 — Teacher: Yes — School Attendance: Low	OVER 200 — Teacher: Yes — School Attendance: High
1901	-.28 (126)	.22 (91)	.28 (36)	-.26 (43)	-.62* (46)	.28 (46)
1911	-.28 (83)	.62* (56)	-.12 (56)	-.20 (71)	-.54* (41)	.10 (68)
1921	-.26 (50)	.02 (58)	.04 (67)	-.04 (76)	.32 (40)	-.22 (78)

*Indicates significant relationship ($p > .025$)

Note. Sample size is in parenthesis.

percent of literacy in the community. Of the 18 tests of this hypothesis, only 8 show a positive association between the two variables, and two of these Q values are negligible. Only in one case (.62) is there a statistically significant ($p \geq .025$) positive association between Protestant and literacy.

Similarly, it can be observed from the negative Q values that only one (-.62) meets the test of statistical significance ($p \geq .025$). Another Q value (-.54) is strong, but the sample size (41) is so small that the result is suspicious.

In summary, the hypothesized positive association between the percent Protestant and the percent of people in the community who can write is not supported by the research findings. Indeed, contrary to the hypothesis, the results are negative in 10 of the 18 tests. However, since the majority of the Q values are non-significant ($p \geq .025$), it appears that there was little relationship between religious affiliation and literacy in Newfoundland during the period 1901 to 1921.

Occupational Composition and Literacy

Hypothesis 4: There will be a negative association between the percent of the labour force of the community engaged in fishing and the percent of people in the community who can write.

Table 12 gives the results of the crosstabulation of fishermen by literacy while controlling for size of community, availability of teacher and school attendance.

Negative Q values are observed in 16 of the 18 tests of the hypothesized association between the percent of fishermen and the percent of literacy in a community. Five of these negative values are statistically significant ($p \geq .025$), and only one is negligible. The other 10 negative associations range from a low of -.20 to a moderate strength of -.48.

It should be noted that the negative association between fishermen and literacy is strongest in communities below 200 in population. It is in these communities that all the statistically significant Q values are recorded.

Of the two positive associations between fishermen and literacy, one Q value is negligible, and the other, a low positive association (.28), is not statistically significant ($p \geq .025$).

In summary, there appears to be a fairly consistent negative association between fishermen and literacy, that is, communities with a high percent fishermen in the labour force tend to have a lower percent who can write. Although only five of the negative Q values are statistically significant ($p \geq .025$), the trend of negative Q values lends support to the hypothesized association between fishermen and literacy.

TABLE 12

Q VALUES AND SAMPLE SIZES FOR "FISHERMEN" BY LITERACY

Census Year	COMMUNITY SIZE: UNDER 200, Teacher: No, School Attendance: Low	UNDER 200, Teacher: No, School Attendance: High	UNDER 200, Teacher: Yes, School Attendance: Low	UNDER 200, Teacher: Yes, School Attendance: High	OVER 200, Teacher: Yes, School Attendance: Low	OVER 200, Teacher: Yes, School Attendance: High
1901	-.66*(124)	-.50*(90)	-.48 (35)	-.40(43)	-.22(48)	-.34(48)
1911	-.46* (79)	-.24 (55)	-.52*(55)	.28(70)	-.20(42)	-.30(70)
1921	-.38 (50)	-.58*(56)	-.40 (67)	-.24(76)	-.06(42)	.02(80)

*Indicates significant relationship ($p \geq .025$)

Note. Sample size is in parenthesis.

School Attendance and Literacy

Hypothesis 5: There will be a positive association between the percent of school-age children attending school and the percent of people in the community who can write.

Table 13 shows the results of the crosstabulation of school attendance by literacy while controlling for size of community and availability of teacher.

Research findings show a consistent positive association between school attendance and literacy. All nine tests of the hypothesis show a positive association between the two variables, and all but one (.12) is statistically significant ($p > .025$).

The positive association between school attendance and literacy appears to be strongest in communities under 200 in population without teachers. Here the lowest Q value is .64 for the year 1921.

The weakest association between school attendance and literacy is recorded for communities under 200 in population with teachers. Here the highest Q value is .52, and the lowest .12 in 1901 is not statistically significant ($p > .025$).

In summary, the findings of the study (with statistically significant Q values in eight of the nine tests) support the hypothesized positive association between school attendance and literacy.

TABLE 13

Q VALUES AND SAMPLE SIZES FOR SCHOOL ATTENDANCE BY LITERACY

Census Year	COMMUNITY SIZE: UNDER 200 — Teacher: No	COMMUNITY SIZE: UNDER 200 — Teacher: Yes	COMMUNITY SIZE: OVER 200 — Teacher: Yes
1901	.82*(216)	.12 (60)	.56* (94)
1911	.86*(139)	.40*(122)	.64*(111)
1921	.64*(110)	.52*(142)	.78*(122)

*Indicates significant relationship ($p > .025$)

Note. Sample size is in parenthesis.

CHAPTER 5

DISCUSSION OF FINDINGS

This chapter contains a discussion of the findings of the study. For the most part, results are discussed in the order in which the hypothesized associations are examined in the study.

Religious Composition, School Attendance and Literacy

Bouma (1973:151) concluded from his survey of Protestant-Ethic research "that the research of the sixties ... neither confirms nor supports the Weber thesis ... in its application to religion and educational attainment". The findings of the present study appear to concur with this conclusion. With one exception, the hypothesized positive association between the percent Protestant in a community and the percent of school attendance is not supported. Similarly, in only 1 of the 18 tests of the hypothesized association between the percent Protestant and the percent of literacy is there a statistically significant positive association ($p \geq .025$). Protestant beliefs or rationality, as usually stated in the Protestant-Ethic thesis, appear to have had little impact on school attendance and literacy in Newfoundland during the period 1901 to 1921.

In fact, however, the hypothesis of Protestant-Catholic differentials in school attendance and literacy from 1901 to 1921 was based, not on Weber's thesis, but on the presence of competing "status groups" and on the nature of early educational development in Newfoundland. It was argued that the earlier involvement of Protestants in the provision of schools and the training of teachers would contribute to higher percentages of school attendance and literacy in communities that were predominately Protestant. But, it was found that these hypothesized differentials are not supported by the results of the study.

Findings show that in communities below 200 in population there is only one case of a significant positive association between the percent Protestant and school attendance. However, contrary to the hypothesized association between the two variables, there is a consistent negative association between the percent Protestant and school attendance for each of the years in communities over 200 in population.

Although Catholics had consistently better school attendance in communities over 200 in population, this did not translate into consistently higher levels of literacy in these communities. In fact, in only two of the six tests in communities over 200 in population is there a statistically significant negative association ($p \geq .025$) between the percent Protestant and literacy.

Negative Q values are obtained in 10 of the 18 tests of the association between the percent Protestant and literacy, but only two of these are statistically significant ($p \geq .025$). The low Q values found in 15 of the tests indicate that there was very little relationship between the religious composition of a community and literacy in Newfoundland from 1901 to 1921.

If certain beliefs or norms predisposed the members of either religious sect to make more effective use of educational opportunity, then, other things being equal, this influence should have been present whatever the size of the community. But, in this study, the only consistent relationship between religious composition and a dependent variable is the negative association between the percent Protestant and school attendance in communities over 200 in population.

This negative association between the percent Protestant and school attendance in larger communities may be the result of the religious factor, but the lack of any clear association in communities under 200 in population suggests that other contributory factors may be affecting school attendance.

One factor which might have contributed to higher levels of school attendance in the larger Catholic communities was the increasing interest in Catholic education during the latter part of the nineteenth century. After the arrival

of Bishop Fleming in Newfoundland in 1829, the Roman Catholic church assumed a greater responsibility for the education of Catholics. The arrival of religious teaching orders in Newfoundland accelerated educational development for Catholics. Rowe (1964:119) admits that the Roman Catholic educational system in the latter part of the nineteenth century "was probably superior to some of the others". Perhaps, Catholics as a "status group" were attempting to utilize the schools to enhance their position.

A second factor that might account for the higher levels of school attendance in Catholic communities was the more favourable distribution of Catholics by geographical region. Most Catholic communities were located near St. John's, the capital city and only urban center of the period. Of the six predominately Catholic electoral districts,[1] only the District of St. George on the West Coast of Newfoundland was geographically remote from the St. John's region. The coastline around the Avalon Peninsula was heavily Roman Catholic. Much of the isolated South coast and the large bays of the North-East coast were Protestant. Catholic communities in the Avalon Peninsula area were in a more favourable geographical position to attract a supply of competent teachers trained by the

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[1] They were St. John's East, St. John's West, Ferryland, Harbour Main, St. George, and Placentia and St. Mary's (see Table 1, page 9).

religious orders in St. John's. The proximity of these communities to an urban area may have created the social, economic and political environment required for greater school attendance.

A final factor which might have contributed to the negative association between the percent Protestant and school attendance in larger communities was the denominational system of education. Certainly, multiplicity of educational services involved Protestant churches more than the Roman Catholic church. The educational effort in larger Protestant communities was often divided among two, three or more religious denominations, whereas in predominantly Catholic communities there was a unified educational effort.

However, if the factors discussed above contributed to an improvement in Catholic school attendance during 1901 to 1921, these same factors did not seem to exert any significant influence on literacy. As previously noted, there appeared to be very little relationship between religious composition and literacy during the period covered by this study.

Occupational Composition, School Attendance and Literacy

Considering the occupational homogeneity of the fishing community and the demands of the fishery on the family unit, it was hypothesized that there would be a negative association between the percent of fishermen in

the labour force and school attendance and literacy.

However, in communities of all sizes where teachers are available, the percent of fishermen does not have the negative effect on school attendance that was hypothesized. In fact, in 6 of the 12 tests, there is a positive association between the percent fishermen and school attendance. Non-significant Q values in 9 of the 12 tests of the association between the two variables in communities with teachers suggests that there was little relationship between the percent fishermen and school attendance in these communities during the years examined in the study. When schooling was available in a community, the school attendance in predominantly fishing communities was as high as that in communities with a greater percent of the labour force engaged in other occupations.

In smaller communities where teachers were not available, a consistent negative association between the percent fishermen and school attendance was observed. These findings suggest that when teachers were not available in a community, fishermen were less likely to send their children to school elsewhere.

Since a minimum standard of literacy, or none at all, was adequate in fishing communities, fishermen did not need to send their children outside the community for schooling. However, as the mean school attendance in each year for communities without teachers indicates (see Table 6,

page 35), many children were attending school outside their own community. The stronger negative association in communities with a high percent Protestant implies that more Catholics than Protestants were obtaining some schooling for their children when no teacher was available in the community.

This finding might be explained by the fact that Catholic communities were less isolated and in close proximity to one another, hence schooling was more readily available. Or perhaps, the heavy concentration of Catholics near the St. John's urban area--with its more varied occupational opportunities--created the need for more education, and consequently, better school attendance.

The findings show a negative association between the percent of fishermen in the community and the percent of literacy. Although only six of the negative Q values are statistically significant ($P \geq .025$), the presence of a negative association in all but 2 of the 18 tests is important. This indicates that even though children of fishermen were attending school equally with children of non-fishermen, people in fishing communities were less literate.

Two possible explanations were offered for this negative association between the percent of fishermen and literacy. First, it was argued that the fishery may have interrupted regular school attendance, and discouraged

attendance altogether when a boy[2] reached a certain age. Although this has been a frequent argument, no consistent negative association was found between the percent fishermen and school attendance in the community when teachers were available.

However, as noted in the limitations of the study, every person who attended school for any portion of the year was included in the census data. There is no way of determining the regularity or duration of attendance. Certainly, it is clear from the findings that the percent of children of fishermen who went to school for at least part of the year when a teacher was available in the community was no less than the percent of children of non-fishermen who attended school.

A second explanation offered to account for the negative association between the percent fishermen and literacy was the absence of any need for literacy in communities that were mainly engaged in the fishery. The measure of literacy used in this study, it should be remembered, included adults as well as students.

The negative association between the percent fishermen and literacy was observed to be strongest in

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[2]The census returns of 1901, 1911 and 1921 list almost as many women as men engaged in the inshore fishery. This suggests that girls, as well as boys, might have been taken from school to assist in some aspect of the fishery (or to help out at home while their mothers were busy with the fishery).

communities under 200 without teachers. It was only in these communities that there was a consistent negative association between the percent fishermen and school attendance. However, even when school attendance is high in communities under 200 without teachers, there is a consistent negative association between the percent fishermen and literacy. This seems to indicate that even if literacy skills were learned in smaller fishing communities, the lack of a functional requirement for literacy discouraged retention of these skills.

In communities under 200 with teachers, the negative association between the percent fishermen and literacy is weaker when the percent of school attendance is high. In one case, there is even a moderate positive association between the percent fishermen and literacy. As Tables 6 and 7 show (see page 35), the presence of a teacher in these communities is the main factor in encouraging school attendance. In 1901, in communities below 200 without teachers the mean school attendance is 27 percent, but in communities below 200 with teachers the mean attendance is 78 percent. In the same year, the mean school attendance in communities over 200 in population was 75 percent (see Table 8, page 36). Undoubtedly, more regular school attendance when a teacher was available in small fishing communities helped to lessen some of the negative effects of occupation on literacy.

In communities over 200 in population, the strength of the negative association between the percent fishermen and literacy decreases still further. In 1921, the relationship is negligible.

The low negative associations between the percent fishermen and literacy in communities over 200 in population could mean that, despite the high percent fishermen in the labour force, literacy was a functional requirement in larger communities. Increased opportunity to exercise literacy skills probably encouraged greater retention.

From Tables 6, 7 and 8 (see pages 35 and 36), it can be seen that as the mean percent literacy rises from 1901 to 1921, the percent of fishermen in the labour force declines. While this is happening, the religious composition remains almost the same and school attendance is frequently irregular. In Table 7 (page 35), for example, the mean percent literacy increased from 49 to 55 to 66 over the three years (keeping in mind the altered measure in 1921), even though school attendance in 1921 is still at the 1901 level of 78 percent, and actually dropped to 70 percent in 1911. This may be further indication of the negative effect of the fishery on literacy. The consistent increase in literacy occurs with a corresponding decrease in the percent of fishermen in the labour force.

School Attendance and Literacy

The findings of the present study support the hypothesized association between school attendance and literacy. In all tests of the hypothesis, communities with a high percent school attendance tend to have a high percent of literacy. In all but one of the nine tests, the observed Q value is statistically significant ($p > .025$).

The association between school attendance and literacy appears to be strongest in communities below 200 in population without teachers. Certainly, in most small communities without teachers during this period the only opportunity to become literate was by attending school outside the community. Perhaps, only those most interested in acquiring the basic literacy skills went through the trouble of attending school outside the community. The consequence is a strong positive association between school attendance and literacy in these communities.

The weakest association between school attendance and literacy is found in communities below 200 in population with teachers. In one test, the Q value is not even statistically significant ($p > .025$). Even though the children in these communities attended school as frequently as children in other communities, the association between school attendance and literacy is weakest.

This is difficult to explain. In many cases, perhaps, the absence of any incentive to acquire literacy

skills (the negative effect of the percent fishermen on literacy has already been observed) might explain this weaker association between school attendance and literacy.

We should note the increasing strength of this association from a low Q value of .12 in 1901 to a high of .52 in 1921. The large increase in the number of teachers and schools in this period suggests that many of these communities were just acquiring schooling opportunity. Certainly, it must have taken a while before these communities received the expected benefits from schooling, that is, there was probably a lag between the introduction of schooling in a community and the growth of literacy. This would explain the increasing strength of the association between school attendance and literacy in communities under 200 in population with teachers during the period 1901 to 1921.

The association between school attendance and literacy continues to be strong in communities over 200 in population. In fact, it even increases in strength from 1901 to 1921, despite the change in the measure of literacy (only those over 10 years of age were included in the last year).

The findings demonstrate the importance of school attendance in the attainment of literacy in Newfoundland during the period 1901 to 1921. However, as we have seen in the discussion of occupational composition and literacy,

it was not the only factor. Tables 6, 7 and 8 (see pages 35 and 36) show that there were increases in literacy when school attendance remained the same, and, in some cases, even when it dropped.

In the absence of schools and teachers in many communities, and considering the negative association between the percent fishermen and literacy, the presence of some form of compulsory attendance, could not, by itself, have done much to improve the level of literacy in many areas of Newfoundland during this period.

CHAPTER 6

SUMMARY

This chapter summarizes the study under these three subheadings: the problem, research procedure, and results. In addition, suggestions are made for further research in the area of school attendance and literacy in Newfoundland.

The Problem

There were two purposes for this study. First, an attempt was made to determine if the community factors of religious composition and occupational composition affected school attendance in Newfoundland during the three years, 1901, 1911 and 1921. Second, the study tried to show how religious composition, occupational composition and school attendance affected literacy at the same three points in time.

Following a review of the pertinent literature and a presentation of a research rationale, the following hypotheses were advanced:

Hypothesis 1: There will be a positive association between the percent of the community that is Protestant and the percent of school-age children in the community who attend school.

Hypothesis 2: There will be a negative association between the percent of the labour force of the community engaged in fishing and the percent of school-age children in the community who attend school.

Hypothesis 3: There will be a positive association between the percent of the community that is Protestant and the percent of people in the community who can write.

Hypothesis 4: There will be a negative association between the percent of the labour force of the community engaged in fishing and the percent of people in the community who can write.

Hypothesis 5: There will be a positive association between the percent of school-age children in the community who attend school and the percent of people in the community who can write.

Research Procedure

The sampling frame for this study was the census returns of Newfoundland for 1901. The sample of 404 communities was selected at random from a population including each electoral district in Newfoundland in 1901. The same 404 communities were selected in 1911 and 1921. Of the total number of communities in Newfoundland in 1901, 31.9

percent were included in the sample.

The statistic used to determine the strength of the association between the independent and dependent variables was Yule's Q.

The findings of the study were presented under five separate headings: (1) Religious composition and school attendance; (2) Occupational composition and school attendance; (3) Religious composition and literacy; (4) Occupational composition and literacy; and (5) School attendance and literacy.

Results

When size of community, availability of teacher and percent fishermen in the community are controlled, the hypothesized positive association between the percent Protestant and school attendance is not supported for any of the three census years. There is no significant association between the two variables in communities under 200 in population. In communities over 200 in population, the percent Protestant has a consistent negative effect on school attendance. This is the opposite of the hypothesized association between the two variables. Although this negative association between the percent Protestant and school attendance in larger communities could have been the result of the religious factor, the absence of any consistent relationship in smaller communities led to the discussion of other factors that may have affected school attendance.

These included the increasing interest in Catholic education in the latter part of the nineteenth century, the more favourable distribution of Catholic communities by geographical area and the denominational system of education.

When controlling for size of community, availability of teacher and percent Protestant, the percent fishermen in the community had a negative effect on school attendance only in communities under 200 in population without teachers. In communities where teachers are available, the percent fishermen in the labour force does not appear to have the negative effect on school attendance that was hypothesized. Perhaps, when no teacher was available in a community, fishermen did not send their children elsewhere for schooling because of the lack of any real need for literacy in fishing communities.

Although a positive association was hypothesized between the percent Protestant and literacy, the findings show an inconsistent association between the two variables. Of the 18 tests of the hypothesis, 10 were negative (1 was statistically significant) and 8 were positive (1 was statistically significant). In these tests, size of community, availability of teacher and percent fishermen were used as controls and the hypothesis was tested in each of the years, 1901, 1911 and 1921. Since the Q values in 16 of the 18 tests of the hypothesis are not statistically significant ($p > .025$), it appears that there was little relationship between religious composition and literacy in

Newfoundland during the period 1901 to 1921.

The findings show a negative association between the percent fishermen in the community and literacy in 16 of the 18 tests of the hypothesis when controlling for size of community, availability of teacher and percent Protestant. The negative association between percent fishermen and literacy appears to be strongest in communities below 200 in population. This could probably best be explained by the lack of any real need for literacy in small fishing communities. Moreover, even if literacy skills were learned in smaller communities the lack of a functional requirement for literacy discouraged retention of these skills.

When controlling for size of community and availability of teacher, the findings support the hypothesized association between school attendance and literacy in 1901, 1911 and 1921. There is a positive association between school attendance and literacy in all nine tests (eight of these associations being statistically significant). However, the association between the two variables seemed to be strongest in communities below 200 in population without teachers. In communities without teachers, the only opportunity of becoming literate was by attending school outside the community. It was suggested that there was a strong positive association between school attendance and literacy in these communities, because only those most interested in acquiring the basic literacy skills would

attend school outside the community.

Suggestions for Further Research

This final section gives some suggestions for future research in the area of school attendance and literacy in Newfoundland based on the findings of this study. The ready availability of census data would facilitate such research.

A study needs to be undertaken at a more recent period in Newfoundland history to see if the relationships tested in this study still exist, or have undergone significant change since 1921.

Research needs to be conducted using other independent variables that might be associated with school attendance and literacy in Newfoundland. These other variables might include size of community, number of teachers available, number of schools, religious diversity of community, and proximity of community to an urban area.

Research could be conducted using other measures of the same variables tested in this study. For example, instead of looking at Protestant-Catholic differentials in educational attainment, a study could be undertaken which looks at each Protestant religious sect (Anglican, Methodist, etc.) independently. Newfoundland may be an ideal location for such a study, because many communities were settled along religious lines, that is, almost exclusively of

members of the one religious sect.

Additional studies need to be undertaken to explore the religious factor in larger communities, especially in light of the better school attendance in Catholic communities over 200 in population during 1901 and 1921. In particular, it needs to be determined if the denominational system of education with its divided educational effort and multiplicity of schools (involving Protestant churches more than Catholic) contributed to this lower school attendance in Protestant communities.

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APPENDIX

DETAILED CROSSTABULATIONS

TABLE 14

PROTESTANT BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITHOUT TEACHERS AND WITH LOW PERCENT FISHERMEN FOR EACH YEAR OF THE STUDY

PROTESTANT	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	46.5 (20)	53.5 (23)	69.4 (43)	40.7 (11)	59.3 (16)	60.0 (27)	20.8 (5)	79.2 (19)	63.2 (24)
Low	57.9 (11)	42.1 (8)	30.6 (19)	44.4 (8)	55.6 (10)	40.0 (18)	50.0 (7)	50.0 (7)	36.8 (14)
Column Total	50.0 (31)	50.0 (31)	100.0 (62)	42.2 (19)	57.8 (26)	100.0 (45)	31.6 (12)	68.4 (26)	100.0 (38)
Q		.22			.08			.58	

TABLE 15

PROTESTANT BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITHOUT TEACHERS AND WITH HIGH PERCENT FISHERMEN FOR EACH YEAR OF THE STUDY

PROTESTANT	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	61.2 (63)	38.8 (40)	66.0 (103)	73.0 (46)	27.0 (17)	65.6 (63)	43.5 (20)	56.5 (26)	63.0 (46)
Low	62.3 (33)	37.7 (20)	34.0 (53)	57.6 (19)	42.4 (14)	34.4 (33)	66.7 (18)	33.3 (9)	37.0 (27)
Column Total	61.5 (96)	38.5 (60)	100.0 (156)	67.7 (65)	32.3 (31)	100.0 (96)	52.1 (38)	47.9 (35)	100.0 (73)
Q		.02			-.34			.44*	

*Indicates significant relationship ($p \geq .025$).

TABLE 16

PROTESTANT BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITH TEACHERS AND WITH LOW PERCENT FISHERMEN FOR EACH YEAR OF THE STUDY

PROTESTANT	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	50.0 (9)	50.0 (9)	62.1 (18)	50.0 (24)	50.0 (24)	69.6 (48)	38.9 (14)	61.1 (22)	69.2 (36)
Low	36.4 (4)	63.6 (7)	37.9 (11)	47.6 (10)	52.4 (11)	30.4 (21)	37.5 (6)	62.5 (10)	30.8 (16)
Column Total	44.8 (13)	55.2 (16)	100.0 (29)	49.3 (34)	50.7 (35)	100.0 (69)	38.5 (20)	61.5 (32)	100.0 (52)
Q		-.28			-.04			-.02	

Note. Dividing point for Protestant in 1921 is 70 percent and in 1921 is 75 percent. Both these values are above the mean (see Table 7, page 35).

TABLE 17

PROTESTANT BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITH TEACHERS AND WITH HIGH PERCENT FISHERMEN FOR EACH YEAR OF THE STUDY

		SCHOOL ATTENDANCE								
		1901			1911			1921		
		Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
PROTESTANT	High	43.8 (14)	56.3 (18)	62.7 (32)	33.3 (14)	66.7 (28)	63.6 (42)	45.5 (30)	54.5 (36)	61.1 (66)
	Low	47.4 (9)	52.6 (10)	37.3 (19)	29.2 (7)	70.8 (17)	36.4 (24)	42.9 (18)	57.1 (24)	38.9 (42)
	Column Total	45.1 (23)	54.9 (28)	100.0 (51)	31.8 (21)	68.2 (45)	100.0 (66)	44.4 (48)	55.6 (60)	100.0 (108)
	Q		.08			-.10			-.06	

TABLE 18

PROTESTANT BY SCHOOL ATTENDANCE IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH LOW PERCENT FISHERMEN FOR EACH YEAR OF THE STUDY

PROTESTANT	SCHOOL ATTENDANCE 1901 Low	1901 High	1901 Row Total	1911 Low	1911 High	1911 Row Total	1921 Low	1921 High	1921 Row Total
High	71.4 (15)	28.6 (6)	61.8 (21)	54.2 (13)	45.8 (11)	60.0 (24)	40.6 (13)	59.4 (19)	66.7 (32)
Low	46.2 (6)	53.8 (7)	38.2 (13)	50.0 (8)	50.0 (8)	40.0 (16)	31.3 (5)	68.8 (11)	33.3 (16)
Column Total	61.8 (21)	38.2 (13)	100.0 (34)	52.5 (21)	47.5 (19)	100.0 (40)	37.5 (18)	62.5 (30)	100.0 (48)
Q		-.48			-.08			-.20	

Note. Dividing point for Protestant in 1911 and 1921 is 85 percent. Both are above the mean (see Table 8, page 36). Dividing point for school attendance in 1911 is 80 percent. This is above the mean (see Table 8, page 36).

TABLE 19

PROTESTANT BY SCHOOL ATTENDANCE IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH HIGH PERCENT FISHERMEN FOR EACH YEAR OF THE STUDY

PROTESTANT	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	56.4 (23)	43.6 (17)	65.0 (39)	53.2 (25)	46.8 (22)	65.3 (47)	43.1 (22)	56.9 (29)	65.4 (51)
Low	19.0 (4)	81.0 (17)	35.0 (21)	24.0 (6)	76.0 (19)	34.7 (25)	22.2 (6)	77.8 (21)	34.6 (27)
Column Total	43.3 (26)	56.7 (34)	100.0 (60)	43.1 (31)	56.9 (41)	100.0 (72)	35.9 (28)	64.1 (50)	100.0 (78)
Q		-.70*			-.56*			-.46*	

*Indicates significant relationship ($p \geq .025$).

TABLE 20

FISHERMEN BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITHOUT TEACHERS AND WITH LOW PERCENT PROTESTANT FOR EACH YEAR OF THE STUDY

FISHERMEN	SCHOOL ATTENDANCE 1901 Low	1901 High	1901 Row Total	1911 Low	1911 High	1911 Row Total	1921 Low	1921 High	1921 Row Total
High	64.0 (32)	36.0 (18)	69.4 (50)	57.6 (19)	42.4 (14)	66.0 (33)	66.7 (18)	33.3 (9)	65.9 (27)
Low	54.5 (12)	45.5 (10)	30.6 (22)	47.1 (9)	52.9 (9)	34.0 (17)	50.0 (7)	50.0 (7)	34.1 (14)
Column Total	61.1 (44)	38.9 (28)	100.0 (72)	54.0 (27)	46.0 (23)	100.0 (50)	61.0 (25)	39.0 (16)	100.0 (41)
Q		-.20			-.20			-.34	

TABLE 21

FISHERMEN BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITHOUT TEACHERS AND WITH HIGH PERCENT PROTESTANT FOR EACH YEAR OF THE STUDY

FISHERMEN	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	62.6 (62)	37.4 (37)	67.8 (99)	73.0 (46)	27.0 (17)	70.0 (63)	43.5 (20)	56.5 (26)	67.6 (46)
Low	44.7 (21)	55.3 (26)	32.2 (47)	40.7 (11)	59.3 (16)	30.0 (27)	22.7 (5)	77.3 (17)	32.4 (22)
Column Total	56.8 (83)	43.2 (63)	100.0 (146)	63.3 (57)	36.7 (33)	100.0 (90)	36.8 (25)	63.2 (43)	100.0 (68)
Q		-.34*			-.60*			-.44	

*Indicates significant relationship ($p \geq .025$).

TABLE 22

FISHERMEN BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITH TEACHERS AND WITH LOW PERCENT PROTESTANT FOR EACH YEAR OF STUDY

FISHERMEN	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	35.7 (5)	64.3 (9)	46.7 (14)	25.9 (7)	74.1 (20)	62.8 (27)	50.0 (15)	50.0 (15)	61.2 (30)
Low	62.5 (10)	37.5 (6)	53.3 (16)	56.3 (9)	43.8 (7)	37.2 (16)	36.8 (7)	63.2 (12)	38.8 (19)
Column Total	20.0 (15)	50.0 (15)	100.0 (30)	37.2 (16)	62.8 (27)	100.0 (43)	44.9 (22)	55.1 (27)	100.0 (49)
Q		.50			.58*			-.26	

*Indicates significant relationship ($p \geq .025$).

Note: Dividing points for all variables in 1901 are: Protestant 94 percent, school attendance 80 percent, and fishermen 75 percent. All are above the mean (see Table 7, page 35).

TABLE 23

FISHERMEN BY SCHOOL ATTENDANCE IN COMMUNITIES UNDER 200 WITH TEACHERS AND WITH HIGH PERCENT PROTESTANT FOR EACH YEAR OF THE STUDY

FISHERMEN	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	50.0 (13)	50.0 (13)	57.8 (26)	34.8 (16)	65.2 (30)	55.4 (46)	50.8 (30)	49.2 (29)	62.8 (59)
Low	47.4 (9)	52.6 (10)	42.2 (19)	54.1 (20)	45.9 (17)	44.6 (37)	40.0 (14)	60.0 (21)	37.2 (35)
Column Total	48.9 (22)	51.1 (23)	100.0 (45)	43.4 (36)	56.6 (47)	100.0 (83)	46.8 (44)	53.2 (50)	100.0 (94)
Q		-.06			.38*			-.22	

*Indicates significant relationship ($p \geq .025$).

Note. Dividing points for all variables in 1901 are: Fishermen 94 percent, school attendance 80 percent, and Protestant 75 percent. All are above the mean (see Table 7, page 35).

TABLE 24

FISHERMEN BY SCHOOL ATTENDANCE IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH LOW PERCENT PROTESTANT FOR EACH YEAR OF THE STUDY

FISHERMEN	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	42.1 (8)	57.9 (11)	59.4 (19)	50.0 (11)	50.0 (11)	64.7 (22)	45.8 (11)	54.2 (13)	61.5 (24)
Low	53.8 (7)	46.2 (6)	40.6 (13)	50.0 (6)	50.0 (6)	35.3 (12)	60.0 (9)	40.0 (6)	38.5 (15)
Column Total	46.9 (15)	53.1 (17)	100.0 (32)	50.0 (17)	50.0 (17)	100.0 (34)	51.3 (20)	48.7 (19)	100.0 (39)
Q		.24			.00			.28	

Note. Dividing points for Fishermen is 70 percent for each of the three years. Dividing point for school attendance is 80 percent in 1901 and 1911, and 90 percent in 1921. All values are above the mean (see Table 8, page 36).

TABLE 25

FISHERMEN BY SCHOOL ATTENDANCE IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH HIGH PERCENT PROTESTANT FOR EACH YEAR OF THE STUDY

FISHERMEN	SCHOOL ATTENDANCE								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	56.4 (22)	43.6 (17)	61.9 (39)	53.2 (25)	46.8 (22)	61.0 (47)	43.1 (22)	56.9 (29)	57.3 (51)
Low	66.7 (16)	33.3 (8)	38.1 (24)	36.7 (11)	63.3 (19)	39.0 (30)	39.5 (15)	60.5 (23)	42.7 (38)
Column Total	60.3 (38)	39.7 (25)	100.0 (63)	46.8 (36)	53.2 (41)	100.0 (77)	41.6 (37)	58.4 (52)	100.0 (89)
Q		.22			-.32*			-.08	

*Indicates significant relationship ($p > .025$).

TABLE 26

PROTESTANT BY LITERACY IN COMMUNITIES BELOW 200 WITHOUT TEACHERS AND WITH LOW PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

PROTESTANT	LITERACY 1901 Low	1901 High	1901 Row Total	1911 Low	1911 High	1911 Row Total	1921 Low	1921 High	1921 Row Total
High	68.3 (56)	31.7 (26)	65.1 (82)	62.5 (35)	37.5 (21)	67.5 (56)	68.0 (17)	32.0 (8)	50.0 (25)
Low	54.5 (24)	45.5 (20)	34.9 (44)	48.1 (13)	51.9 (14)	32.5 (27)	56.0 (14)	44.0 (11)	50.0 (25)
Column Total	63.5 (80)	36.5 (46)	100.0 (126)	57.8 (48)	42.2 (35)	100.0 (83)	62.0 (31)	38.0 (19)	100.0 (50)
Q		-.28			-.28			-.26	

Note. Dividing point for literacy in 1901 is 21 percent, and in 1921 is 26 percent. Both are below the mean (see Table 6, page 35).

TABLE 27

PROTESTANT BY LITERACY IN COMMUNITIES BELOW 200 WITHOUT TEACHERS AND WITH HIGH PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

PROTESTANT	LITERACY 1901 Low	1901 High	1901 Row Total	1911 Low	1911 High	1911 Row Total	1921 Low	1921 High	1921 Row Total
High	49.2 (31)	50.8 (32)	69.2 (63)	27.3 (9)	72.7 (24)	58.9 (33)	37.5 (15)	62.5 (25)	69.0 (48)
Low	60.7 (17)	39.3 (11)	30.8 (28)	60.9 (14)	39.1 (9)	41.1 (23)	38.9 (7)	61.1 (11)	31.0 (18)
Column Total	52.7 (48)	47.3 (43)	100.0 (91)	41.1 (23)	58.9 (33)	100.0 (56)	37.9 (22)	62.1 (36)	100.0 (58)
Q		.22			.62*			.02	

*Indicates significant relationship ($p \geq .025$).

Note. Dividing point for Protestant in 1921 is 90 percent. Dividing points for literacy are 41 percent, 51 percent and 66 percent. All are above the mean (see Table 6, page 35).

TABLE 28

PROTESTANT BY LITERACY IN COMMUNITIES BELOW 200 WITH TEACHERS AND WITH LOW PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

PROTESTANT	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	50.0 (11)	50.0 (11)	61.1 (22)	64.1 (25)	35.9 (14)	69.6 (39)	63.6 (28)	36.4 (16)	65.7 (44)
Low	64.3 (9)	35.7 (5)	38.9 (14)	58.8 (10)	41.2 (7)	30.4 (17)	65.2 (15)	34.8 (8)	34.3 (23)
Column Total	55.6 (20)	44.4 (16)	100.0 (36)	62.5 (35)	37.5 (21)	100.0 (56)	64.2 (43)	35.8 (24)	100.0 (67)
Q		.28			-.12			.04	

Note. Dividing point for Protestant in 1901 is 80 percent. This is above the mean (see Table 7, page 35).

TABLE 29

PROTESTANT BY LITERACY IN COMMUNITIES BELOW 200 WITH TEACHERS AND WITH HIGH PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

PROTESTANT	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	52.0 (13)	48.0 (12)	58.1 (25)	42.6 (20)	57.4 (27)	66.2 (47)	37.5 (18)	62.5 (30)	63.2 (48)
Low	38.9 (7)	61.1 (11)	41.9 (18)	33.3 (8)	66.7 (16)	33.8 (24)	35.7 (10)	64.3 (18)	36.8 (28)
Column Total	46.5 (20)	53.5 (23)	100.0 (43)	39.4 (28)	60.6 (43)	100.0 (71)	36.8 (28)	63.2 (48)	100.0 (76)
Q		-.26			-.20			-.04	

Note. Dividing point for Protestant in 1901 is 80 percent. This is above the mean (see Table 7, page 35).

TABLE 30

PROTESTANT BY LITERACY IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH LOW PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

PROTESTANT	LITERACY 1901 Low	1901 High	1901 Row Total	1911 Low	1911 High	1911 Row Total	1921 Low	1921 High	1921 Row Total
High	76.7 (23)	23.3 (7)	65.2 (30)	67.9 (19)	32.1 (9)	68.3 (28)	37.0 (10)	63.0 (17)	67.5 (27)
Low	43.8 (7)	56.3 (9)	34.8 (16)	38.5 (5)	61.5 (8)	31.7 (13)	53.8 (7)	46.2 (6)	32.5 (13)
Column Total	65.2 (30)	34.8 (16)	100.0 (46)	58.5 (24)	41.5 (17)	100.0 (41)	42.5 (17)	57.5 (23)	100.0 (40)
Q		-.62*			-.54*			.32	

*Indicates significant relationship ($p \geq .025$).

Note. Dividing point for Protestant in 1911 is 87 percent, and in 1921 is 92 percent. Both are above the mean (see Table 8, page 36).

TABLE 31

PROTESTANT BY LITERACY IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH HIGH PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

	LITERACY								
	1901			1911			1921		
PROTESTANT	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	30.4 (7)	69.6 (16)	50.0 (23)	43.6 (17)	56.4 (22)	57.4 (39)	40.8 (20)	59.2 (29)	62.8 (49)
Low	43.5 (10)	56.5 (13)	50.0 (23)	48.3 (14)	51.7 (15)	42.6 (29)	31.0 (9)	69.0 (20)	37.2 (29)
Column Total	37.0 (17)	63.0 (29)	100.0 (46)	45.6 (31)	54.4 (37)	100.0 (68)	37.2 (29)	62.8 (49)	100.0 (78)
Q	.28			.10			-.22		

Note. Dividing point for literacy in 1921 is 80 percent. This is above the mean (see Table 8, page 36).

TABLE 32

FISHERMEN BY LITERACY IN COMMUNITIES BELOW 200 WITHOUT TEACHERS AND WITH LOW PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

FISHERMEN	LITERACY 1901 Low	1901 High	1901 Row Total	1911 Low	1911 High	1911 Row Total	1921 Low	1921 High	1921 Row Total
High	77.5 (62)	22.5 (18)	64.5 (80)	65.5 (36)	34.5 (19)	69.6 (55)	68.8 (22)	31.1 (10)	64.0 (32)
Low	40.9 (18)	59.1 (26)	35.5 (44)	41.7 (10)	58.3 (14)	30.4 (24)	50.0 (9)	50.0 (9)	36.0 (18)
Column Total	64.5 (80)	35.5 (44)	100.0 (124)	58.2 (46)	41.8 (33)	100.0 (79)	62.0 (31)	38.0 (19)	100.0 (50)
Q		-.66*			-.46*			-.38	

*Indicates significant relationship ($p > .025$).

Note. Dividing points for fishermen are 91 percent, 86 percent and 81 percent. All are above the mean. Dividing point for literacy in 1901 is 21 percent, and in 1911 is 26 percent. Both are below the mean (see Table 6, page 35).

TABLE 33

FISHERMEN BY LITERACY IN COMMUNITIES BELOW 200 WITHOUT TEACHERS AND WITH HIGH PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

FISHERMEN	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	63.0 (34)	37.0 (20)	60.0 (54)	45.2 (14)	54.8 (17)	56.4 (31)	51.5 (17)	48.5 (16)	58.9 (33)
Low	36.1 (13)	63.9 (23)	40.0 (36)	33.3 (8)	66.7 (16)	43.6 (24)	21.7 (5)	78.3 (18)	41.1 (23)
Column Total	52.2 (47)	47.8 (43)	100.0 (90)	40.0 (22)	60.0 (33)	100.0 (55)	39.3 (22)	60.7 (34)	100.0 (56)
Q		-.50*			-.24			-.58*	

*Indicates significant relationship ($p > .025$).

Note. Dividing point for fishermen in 1901 is 86 percent. Dividing points for literacy are 41 percent, 51 percent and 66 percent. All are above the mean (see Table 6, page 35).

TABLE 34

FISHERMEN BY LITERACY IN COMMUNITIES BELOW 200 WITH TEACHERS AND WITH LOW PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

FISHERMEN	LITERACY 1901 Low	1901 High	1901 Row Total	1911 Low	1911 High	1911 Row Total	1921 Low	1921 High	1921 Row Total
High	66.7 (12)	33.3 (6)	51.4 (18)	76.9 (20)	23.1 (6)	47.3 (26)	71.4 (30)	28.6 (12)	62.7 (42)
Low	41.2 (7)	58.8 (10)	48.6 (17)	51.7 (15)	48.3 (14)	52.7 (29)	52.0 (13)	48.0 (12)	37.3 (25)
Column Total	54.3 (19)	45.7 (16)	100.0 (35)	63.6 (35)	36.4 (20)	100.0 (55)	64.2 (43)	35.8 (24)	100.0 (67)
Q		-.48			-.52*			-.40	

*Indicates significant relationship ($p > .025$).

Note. Dividing points for fishermen are 91 percent, 81 percent and 81 percent. All are above the mean (see Table 7, page 35).

TABLE 35

FISHERMEN BY LITERACY IN COMMUNITIES BELOW 200 WITH TEACHERS AND WITH HIGH PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

		LITERACY								
		1901			1911			1921		
		Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
FISHERMEN	High	60.9 (14)	39.1 (9)	53.5 (23)	34.0 (16)	66.0 (31)	67.1 (47)	40.8 (20)	59.2 (29)	64.5 (49)
	Low	40.0 (8)	60.0 (12)	46.5 (20)	47.8 (11)	52.2 (12)	32.9 (23)	29.8 (8)	70.4 (19)	35.5 (27)
	Column Total	51.2 (22)	48.8 (21)	100.0 (43)	38.6 (27)	61.4 (43)	100.0 (70)	36.8 (28)	63.2 (48)	100.0 (76)
Q			-.40			.28			-.24	

Note. Dividing point for fishermen in 1901 is 91 percent, and in 1911 is 81 percent. Both are above the mean (see Table 7, page 35).

TABLE 36

FISHERMEN BY LITERACY IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH LOW PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

FISHERMEN	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	69.2 (18)	30.8 (8)	54.2 (26)	63.0 (17)	37.0 (10)	64.3 (27)	44.0 (11)	56.0 (14)	59.5 (25)
Low	59.1 (13)	40.9 (9)	45.8 (22)	53.3 (8)	46.7 (7)	35.7 (15)	41.2 (7)	58.8 (10)	40.5 (17)
Column Total	64.6 (31)	35.4 (17)	100.0 (48)	59.5 (25)	40.5 (17)	100.0 (42)	42.9 (18)	57.1 (24)	100.0 (42)
Q		-.22			-.20			-.06	

TABLE 37

FISHERMEN BY LITERACY IN COMMUNITIES OVER 200 WITH TEACHERS AND WITH HIGH PERCENT SCHOOL ATTENDANCE FOR EACH YEAR OF THE STUDY

FISHERMEN	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	42.4 (14)	57.6 (19)	68.8 (33)	53.7 (22)	46.3 (19)	58.6 (41)	37.3 (19)	62.7 (32)	63.8 (51)
Low	26.7 (4)	73.3 (11)	31.3 (15)	37.9 (11)	62.1 (18)	41.4 (29)	37.9 (11)	62.1 (18)	36.3 (29)
Column Total	37.5 (18)	62.5 (30)	100.0 (48)	47.1 (33)	52.9 (37)	100.0 (70)	37.5 (30)	62.5 (50)	100.0 (80)
Q		-.34			-.30			.02	

Note. Dividing point for literacy in 1921 is 80 percent. This is above the mean (see Table 8, page 36).

TABLE 38

SCHOOL ATTENDANCE BY LITERACY IN COMMUNITIES BELOW 200 WITHOUT TEACHERS FOR EACH YEAR OF THE STUDY

SCHOOL ATTENDANCE	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	23.1 (21)	76.9 (70)	42.1 (91)	19.6 (11)	80.4 (45)	40.3 (56)	26.7 (16)	73.3 (44)	54.5 (60)
Low	74.4 (93)	25.6 (32)	57.9 (125)	75.9 (63)	24.1 (20)	59.7 (83)	62.0 (31)	38.0 (19)	45.5 (50)
Column Total	52.8 (114)	47.2 (102)	100.0 (216)	53.2 (74)	46.8 (65)	100.0 (139)	42.7 (47)	57.3 (63)	100.0 (110)
Q		.82*			.86*			.64*	

*Indicates significant relationship ($p > .025$).

TABLE 39

SCHOOL ATTENDANCE BY LITERACY IN COMMUNITIES BELOW 500 WITH TEACHERS FOR EACH YEAR OF THE STUDY

SCHOOL ATTENDANCE	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	43.8 (14)	56.3 (18)	53.3 (32)	39.4 (28)	60.6 (43)	58.2 (71)	36.8 (28)	63.2 (48)	53.5 (76)
Low	50.0 (14)	50.0 (14)	46.7 (28)	60.8 (31)	39.2 (20)	41.8 (51)	65.2 (43)	34.8 (23)	46.5 (66)
Column Total	46.7 (28)	53.3 (32)	100.0 (60)	48.4 (59)	51.6 (63)	100.0 (122)	50.0 (71)	50.0 (71)	100.0 (142)
Q	.12			.40*			.52*		

*Indicates significant relationship ($p > .025$).

TABLE 40

SCHOOL ATTENDANCE BY LITERACY IN COMMUNITIES OVER 200 WITH TEACHERS FOR EACH YEAR OF THE STUDY

SCHOOL ATTENDANCE	LITERACY								
	1901			1911			1921		
	Low	High	Row Total	Low	High	Row Total	Low	High	Row Total
High	37.5 (18)	62.5 (30)	51.1 (48)	24.6 (17)	75.4 (52)	62.2 (69)	29.5 (23)	70.5 (55)	63.9 (78)
Low	67.4 (31)	32.6 (15)	48.9 (46)	59.5 (25)	40.5 (17)	37.8 (42)	75.0 (33)	25.0 (11)	36.1 (44)
Column Total	52.1 (49)	47.9 (45)	100.0 (94)	37.8 (42)	62.2 (69)	100.0 (111)	45.9 (56)	54.1 (66)	100.0 (122)
Q		.56*			.64*			.78*	

*Indicates significant relationship ($p \geq .025$).