

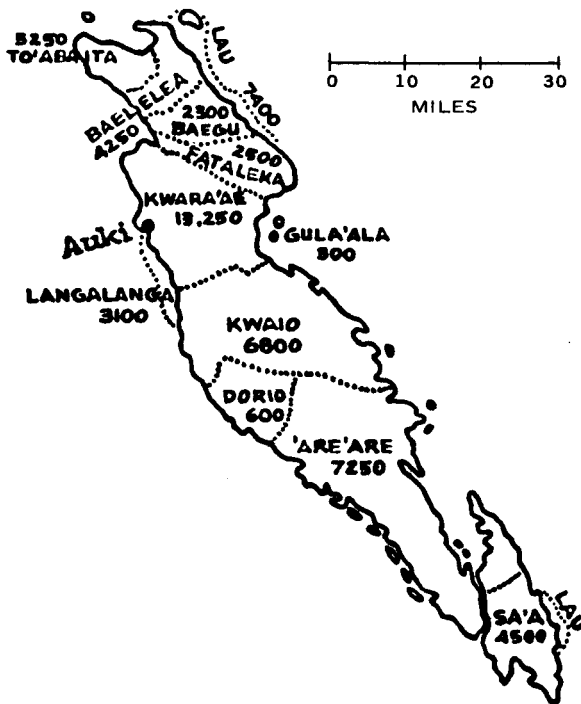
A SURVEY OF READING ABILITY AMONG THE TO'ABAITA SPEAKERS OF MALAITA

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Reading is an important skill in a developing nation. There are many aspects of development; two of them are learning and communication. As long as people must depend on word of mouth for learning and communication, development is restricted. But when the power of the written word is opened up, people can learn without a teacher and can communicate across long distances. The potential for personal, community and national development is greatly enhanced.

This study explores reading and writing among the To'abaita speaking people of northern Malaita, Solomon Islands. As well as describing the methodology of the survey, the article shows how many people can read and write and how well. 303 To'abaita speakers, representing a cross section of 10% of the adult population were interviewed. People 15 years of age and older were interviewed. These people are henceforth called "adults" in this report even though a number of teenagers are included.

Map 1 The Languages of Malaita
(Population figures are unpublished statistics from the 1976 census)



The overall results show that two-thirds of the To'abaita adults can read, although fewer than half of them read well enough to be effective in using literature independently for personal development or orally for community development. The To'abaita people's ability to read both their own language and the national language, English, is studied. The results are reported not only for the population as a whole, but are analysed according to a number of factors: sex, education, age, place of birth, place of residence, and church preference. One interesting result of this analysis is a reconstruction of the history of education in northern Malaita based on the reading abilities and education levels of people from different age groups. This report also describes the survey methodology in detail and discusses possible refinements to improve and simplify it. It is hoped that others might be able to use these sections as a guide for conducting reading surveys elsewhere in Solomon Islands.

My own interest in doing this survey was spurred by my work in writing primer booklets (with accompanying teachers' manuals) which can be used to teach To'abaita people to read and write their own language. The survey has shown that there is both a great need and desire for such materials. 52% of the adults surveyed both needed and wanted village reading classes. Over one-third of the children are not enrolled in primary school and they also would benefit from such classes.

The survey was conducted from February to May 1980. My co-investigator during the survey was Kenaz Rongoomea of Fo'ondo Village. In most cases, he conducted the questionnaire part of the interview and I followed up by administering the reading test. I owe much to his capable assistance. I am also indebted to the Solomon Islands Christian Association for their sponsorship of my work in north Malaita, and to the Malaita Provincial Assembly for permitting me to work there. Above all I am grateful to the 303 people who co-operated in answering the questionnaire and taking the reading test.

METHOD OF THE SURVEY

A total of 303 people were interviewed by the investigators. (These people are henceforth referred to as "subjects".) Each subject was interviewed in two stages. First, they were asked to answer 12 questions from a questionnaire. If the subject indicated that he could not read in the first part of the interview, then the interview ended. If the subject indicated that he could read, then he was asked to perform the second stage of the interview, an oral reading test. The way in which subjects were selected in an effort to get a random sample of the population is described below.

To'obaita Reading Ability

The questionnaire

The questionnaire contained 12 questions. Each question was written in the To'abaita language on duplicated survey forms. The questions were asked orally by the investigators and the answers filled in by them. The questions were:

- (1) What is your name?
- (2) What is your age?
- (3) Male or female?
- (4) Where were you born?
- (5) Where do you now live?
- (6) What is the name of your church?
- (7) What kind of school did you go to?
- (8) What standard did you reach?
- (9) Do you know how to read To'abaita?
- (10) If a To'abaita reading class were started in your village, would you attend it?
- (11) Do you know how to read English?
- (12) Do you know how to write?

Certain of the questions require further explanation. For question 2, many subjects did not know their age or the year in which they were born. In these cases an estimate was made based on the subject's estimation of age (or size in relation to a child standing nearby) at one of the following four major events in recent north Malaitan history: the killing of District Officer Bell in 1927, the outbreak of the Second World War in 1942 the end of Marching Rule and the Government's formation of the Malaita Council in 1953, and the great cyclone of 1966. For questions 4 and 5, a village name was sought. For question 6 the survey form contained standard responses for the interviewer to circle. These included abbreviations for the four main churches in the area (South Sea Evangelical, Church of Melanesia, Seventh Day Adventist, and Jehovah's Witness) plus a space to write in any other response. In the same way, question 7 provided standard answers for the interviewer to circle. These included primary school, village reading class, church Bible school, and a place to write in any other response. Question 8 was asked if the subject attended primary school. If he also reached secondary school, then the number of the highest form completed was filled in. For questions 9 through 12 simple "yes" or "no" answers were taken. Question 10 was asked only if the subject could not read To'abaita language, or if he proved to read poorly in the reading test.

The reading test

Subjects who answered "yes" to either or both of questions 9 and 11 were asked to complete an oral reading test. Four complete tests were made up so that consecutive subjects could be given different tests and not be disquali-

fied by hearing a previous subject read the same test. A test consisted of two stories, one in the To'abaita language and the other in English. The stories were short and simple and handprinted in fairly large letters on the facing pages of an opened filing folder. Below each story were three questions to test the reader's comprehension of the story. All eight of the stories were about culturally familiar happenings. For instance one story and its questions were as follows:

Yesterday John's pig broke its fence and spoiled some gardens. John and his father-in-law went to find the pig. When they saw it, John shot it with a spear and killed it. They cut the pig and brought it back to the village. Then they sold the meat.

1. What did the pig do?
2. Where did John go?
3. What did they do with the meat?

The subject was asked to read the To'abaita story first and answer the questions and then to do the same for the English story. To'abaita reading ability and English reading ability were scored separately. Reading ability in both languages was scored on two aspects, fluency and comprehension.

Fluency was marked on a three level scale. A reader was scored as "fluent" if the speed and intonation of his reading was that of natural speech. A reader was scored as "medium" if his reading was slower than natural speech and it contained occasional stumblings or errors, but a listener would still be able to follow the story. The reader was scored as "slow" if his reading was very slow and unnatural with most words being sounded out individually and many words being read incorrectly.

Comprehension was scored on a numerical scale from 0 to 3, with one point being awarded for each question answered correctly. Often a reader gave a wrong answer at first but then came up with the correct answer on reviewing the story, or a reader spent much time in re-reading parts of the story before giving the correct answer. In these two cases, one-half point was awarded for the question. Good readers were able to read the questions themselves and give the answers. In general, poor readers found it difficult to understand that they were to answer the questions when they read them by themselves. Therefore, the investigator usually asked the questions directly to poor readers.

The survey form also had a space to fill in the identification number of the particular reading test given to that subject. At the end of the survey the overall results given by each reading test were compiled. A test of statistical significance shows that there is no significant difference in the results given

To'obaita Reading Ability

by the four different tests¹, and thus the possibility that the four tests could have been of differing difficulties is ruled out as being a factor in accounting for the variation in reading abilities observed in the survey.

Sampling techniques

In selecting subjects to be interviewed, we attempted to take a random cross section of the whole population so that results taken from the survey sample could be generalized to the whole population. The method was not to get a few random subjects from every village, but to select certain villages and then interview a sizeable cross section of residents within each of those villages.

The villages to be visited were selected with reference to two factors, location and church affiliation. Population figures for each government council ward in the To'obaita area were studied to determine how many subjects should be interviewed in each ward in order to get an even sampling of the whole area with regard to geographical distribution. Within each ward an attempt was made to visit at least one village representing each church with adherents in that area. Other factors like age, sex, and schooling were not planned or controlled in the sampling; the randomness of the sample in each village was depended on to insure a good cross section with respect to these other factors. Section 2 discusses the adequacy of the final sample in light of the known characteristics of the population as a whole.

Within each location selected for conducting interviews, one of three methods of selecting subjects was used. The preferred method was for the investigators to visit households in the village one by one and interview every adult (15 years and older) until the quota for that location was obtained. This method obtained a random sampling of reading abilities and other factors within the village. 60% of the subjects were interviewed in this way. A second method was to interview all of the adults who gathered for a service in a local village church. Although readers and non-readers alike attend church services, these samples may be skewed in favor of readers. It is possible that readers are more likely to attend services than non-readers, although such a conjecture would have to be verified. Subjects taken in this way accounted for 28% of the total sample. The third method was when people were called to gather in a central place and volunteers came forward for interviews. This method was avoided whenever possible because the subjects interviewed in this way were definitely skewed toward readers; non-readers were embarrassed to be interviewed in front of the assembled group. Only 12% of the total sample was interviewed under these circumstances.

Thus, 60% of the sample is judged to be random, 28% is possibly skewed toward readers and 12% is definitely skewed toward readers. Note, how-

ever, that skewings towards non-readers are also described below. This probably tends to counterbalance the skewing toward readers.

THE POPULATION AND THE SAMPLE

The "population" refers to all the To'abaita speakers living in northern Malaita. The "sample" refers to those who were interviewed in the survey. The object of a survey of this kind is to visit only a small portion of the whole population (in this case 10% of the whole), and on the basis of that sample, to make generalizations about the whole population. That is, if 60% of the people interviewed have a certain characteristic we want to be able to say that 60% of the whole population have that characteristic. The accuracy of such generalizations about the population depends on how well the sample represents a random cross section of the whole population.

In this section I **report on how well** the sample of 303 adult To'abaita speakers interviewed represents a **cross section** of the entire population of about 3024 adult To'abaita speakers. The analysis is made with reference to four population characteristics: **place of residence**, sex, church preference, and age. The analysis shows that the sample is skewed in some respects, but these skewings tend to counterbalance one another.

A first question to be answered concerns what percentage of the total population the sample represents. This is not an easy question to answer because statistics on the number of adult To'abaita speakers in northern Malaita do not exist. I have therefore estimated the population in the following manner. The To'abaita language is spoken in four wards: Fo'ondo, Malu'u, Gwai'au, and Matakwalao. In the first three, essentially all of the inhabitants are To'abaita speakers². The Matakwalao ward includes To'abaita, Baelelea, and Lau speakers. Thus the first problem was to estimate what portion of Matakwalao ward is To'abaita speaking. By classifying all the villages in the Matakwalao ward in the 1970 census report (Groenewegen : 144) as To'abaita or non-To'abaita, we estimated that 45% of Matakwalao ward is To'abaita speaking. Thus by taking the 1976 census figures for each ward (C.P.O. 1979: 4) plus the projected population increase for 1980 (C.P.O. 1979: 7)³ and the projected proportion of the population 15 years of age and older (C.P.O. 1979: 7)⁴ we come up with the following estimates:

To'obaita Reading Ability

Number of To'abaita speakers per ward

	1976 census	1980 estimate	1980 estimate of 15 and older
Fo'ondo	1151	1351	681
Gwai'au	750	880	444
Malu'u	2025	2377	1198
Matakwalao	1184	1390	701
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Total	5110	5998	3024

Thus the estimated population of adult To'abaita speakers in northern Malaita is 3024. The sample of 303 represents exactly 10% of the estimated population.

In regard to place of residence, the sample includes 26% from Fo'ondo ward, 40% from Malu'u ward, 22% from Matakwalao ward, and 13% from Gwai'au ward. The estimated distribution of the whole population (taken from the above table) is 23%, 40%, 23% and 15% respectively. The geographical distribution of the sample differs insignificantly from that of the population⁵. See map 2 for details of the geographical distribution of the sample

In regard to sex, the sample included 161 females and 142 males, or 53.1% versus 46.9%. Although this appears to be a marked imbalance, the population indeed has more females. The 1976 census shows that in the Fo'ondo, Malu'u, and Gwai'au wards, females comprise 52.5% of the population and males 47.5%. The sample difference is insignificant.

In regard to church preference, the sample is skewed from the estimated population distribution. The estimates are based on classifying the villages listed in the 1970 census report as to church, adding the populations associated with each village, and thereby estimating the percentage of each church. The relation of the sample to the population estimate is as follows:

Distribution of churches in sample and population

	SSEC	COM	JW	SDA	Pagan	AOG	CB
Sample	52%	24%	11%	9%	2%	1%	1%
Expected for population	51%	19%	20%	4%	4%	1%	1%

(Key to abbreviations: South Sea Evangelical Church, Church of Melanesia, Jehovah's Witness, Seventh Day Adventist, Assembly of God, and California Baptist.)

The departure from the population estimates is significant. The main skewing is that the sample includes only half enough Jehovah's Witnesses. This occurred because it was not realized until the population estimates were made after the survey just how widespread this group was. It turns out that half of all Jehovah's Witnesses on Malaita are in the four To'abaita wards plus the Takwa ward (from unpublished 1976 census statistics). By comparing the analysis of reading ability in relation to church preference (below), rectifying the COM and JW to the population estimate would have the effect of raising the overall reading ability, and rectifying the SDA and Pagan would have the effect of lowering it back.

In regard to age, the sample does show a significant departure from the expected population distribution. The expected population distribution is based on the age distribution for all of Malaita as counted in the 1976 census (Ministry of Finance 1979: 11).

	<u>Age distribution of the sample</u>					
	15-19	20-29	30-39	40-49	50-59	60+
Sample	16%	21%	15%	15%	17%	12%
Expected for population	17%	24%	20%	16%	11%	10%

Note that for the groups 15-19 and 40-49 the sample fits the expected. For 20-39, however, the sample is too low and for 50 and over it is too high⁶. By studying the results of the section on reading ability in relation to age, we see that a skewing toward older people would tend to lower the overall reading ability. This is probably counterbalanced by the skewing toward readers described in the sampling techniques section.

RESULTS OF THE SURVEY

The results of the survey are reported and analyzed in the following eight subsections.

Reading ability in To'abaita and in English

The judgement of reading ability partly depends on the definition of reading. One possible way to define reading is in terms of the ability to pronounce the words of a language when they are seen in their written form. This definition is inadequate, however, because it misses the whole purpose of reading. The purpose of reading is to communicate ideas from the written page to the mind of the reader. Thus, if a person can sound out the written words but has no idea of what they mean, we can hardly call that reading. That is why for this survey the reading test had two parts, the oral reading of a text plus the answering of three comprehension questions. This was

To'obaita Reading Ability

for the purpose of distinguishing those who were actually reading with understanding, from those who were simply sounding out the words.

The subjects were divided into five categories of reading skill for both To'abaita and English, based on the result of their reading test. These five categories are in turn grouped into two major classes, the readers and the non-readers, as follows:

Readers

- (1) Good readers
- (2) Fair readers
- (3) Poor readers

Non-readers

- (4) Sounders
- (5) Pre-literates

"Good readers" are those who read fluently and scored complete comprehension. "Fair readers" are those who scored medium on fluency and at least 2 out of 3 on comprehension, plus those fluent readers who did not get full comprehension out at least 2 out of 3. "Poor readers" are those who scored slow on fluency with at least 1½ out of 3 on comprehension, plus faster readers who scored only 1½ on comprehension. "Sounders" are those who scored 1 or less on comprehension questions, regardless of reading fluency. In other words, if someone comprehended less than half of these simple stories, he was not considered to be a reader. "Pre-literates" are those who could not read the test selection at all; they have not yet learned even to sound out the words.

One additional group in the sample must be noted. From the total sample of 303, three subjects (or 1%) were now blind (or nearly so) and not able to attempt the reading test. For the remainder of the discussions concerning reading ability, these 3 subjects are left out so that the sample size becomes 300.

Two methods of reporting reading ability are used. The first reports the percentage of readers. This is a measure of quantity. The second method reports the quality of reading for those who are able to read. This measure of quality is based on the distribution of the readers into the three classes of good, fair, and poor. The average ability of the readers is computed by scoring 3 quality points for each good reader, 2 for each fair reader, and 1 for each poor reader. Summing the quality points and then dividing by the number of readers gives an average quality score. The scores are reported as follows:

'O'O Journal of Solomon Islands Studies

Quality Score	Reported Quality
2.9-3.0	Good
2.7-2.9	Good -
2.5-2.7	Good - -
2.3-2.5	Fair + +
2.1-2.3	Fair +
1.9-2.1	Fair
1.7-1.9	Fair -
1.5-1.7	Fair - -
1.3-1.5	Poor + +
1.1-1.3	Poor +
1.0-1.1	Poor

Remember, the quality score describes only the average skill of the readers; non-readers are ignored in the computation.

The results of the reading test for To'abaita language can be summarized as follows:

Reading Ability in To'abaita Language

Good readers	14%		
Fair readers	29%	Total readers	69%
Poor readers	26%		
Sounders	5%		
Pre-literates	26%	Total non-readers	31%

Average quality of readers: Fair -

The overall result is that two out of three adult To'abaita speakers can read their own language. Good readers plus fair readers comprise a class that we might call "effective readers". These would be people who read well enough to read orally for a public meeting and thus contribute to community development; it is unlikely that an audience could follow a poor reader with good comprehension. Also, these would be people who could read well enough to read privately (or silently) and learn independently from literature, thus contributing to personal development; a poor reader would have to be very highly motivated in order to make effective independent use of literature. Those who would qualify as effective readers comprise 43%, or less than half, of the adult To'abaita speakers.

To'obaita Reading Ability

The results of the English reading test can be summarized as follows:

Reading Ability in English

Good readers	17%		
Fair readers	19%	Total readers	47%
Poor readers	11%		
Sounders	6%		
Pre-literates	47%	Total non-readers	53%

Average quality of readers: Fair +

The overall result for English reading ability is that just under half of the To'abaita speakers can read and understand a simple story in English. This is well under the reading rate for To'abaita language which was two-thirds. It should be stressed (and kept in mind throughout the rest of Section 3) that this reading rate for English is based on simple stories dealing with culturally familiar material. Comprehension, and thus the actual reading rate, is bound to drop on culturally foreign material (such as current world affairs or the Bible) or on stylized material (like poetry or hymns).

The proportion of people who would be effective readers in public (oral) or private (silent) use of English literature is 36%, or roughly one in three persons. It is interesting to note that while fewer people can read English, those who can read English read it better on the average (Fair +) than those who read language (Fair -).

A comparison of each subject's To'abaita score with his English score shows that some read English better, some read their own language better, and some read both equally well. In the following chart only those who could read at least one of the two languages are counted. These people represent 70% of the sample (3 people could read English, but not To'abaita, thus accounting for the one per cent gain over language readers.)

Comparison of English and To'abaita reading ability among readers

Read English better	16%
Read To'abaita better	46%
Read both equally well	39%

Again, a word of caution is in order. To say that 39% of the readers can read simple stories in their own language and in English equally well is not to say that they can understand both languages equally well.

Those who read English better than their own language are of special interest because it is against expectation that someone should read a second language better, a language which they do not speak and understand as well as their own language. In looking at the characteristics of the 34 subjects who can read English better, two things become apparent. First, they have all been educated in primary schools. In fact, 43% of the people who had finished at least Standard 4 read English better than their own language. No one who has been schooled only in a village reading class or a church sponsored Bible school or both can read English better. Secondly, all but one of the subjects who read English better are 29 years old or younger. 26% of all those in this age bracket read English better.

Writing ability

One question was used in the interviews to find out about writing abilities: "Do you know how to write?" The question did not specify which language; writing ability in either language was accepted. No writing test was given to confirm the subject's opinion. Thus a wide range of writing abilities from ability to write only one's name to ability to write complete texts would have been covered by affirmative answers. Our interest in this survey was actually ability to write complete texts. A question like, "Would you be able to write a letter to your relatives?", would have been more meaningful.

66% of the subjects responded that they were able to write. However, when tested for reading, it was found that 8% of those who answered "yes" were not able to read. Since a functional writing skill presupposes reading skill, we can conclude that these individuals would not be able to write a letter and should not be counted as writers. Thus I estimate that 61% of the population can write. A comparison of reading and writing abilities is as follows:

Reading and writing abilities

Can read To'abaita	69%
Can also write	61%
Can read English	47%

The 61% of the population which can both read and write could be called "literate",

Closer investigation of those subjects who were able to read but not write (that is, those who were partly literate) shows that all such persons in the sample had not been to a primary school. They had received no education at all or had attended a church sponsored village reading class. Stated another way, all readers in the sample who went to primary school could also write.

To'obaita Reading Ability

Reading ability in relation to sex

The general pattern is that more men than women are able to read. However, between male and female readers there is no difference in the average quality of reading. These results are shown in the following table:

Reading ability in relation to sex

	To'abaita	English
Male	79% Fair -	57% Fair +
Female	60% Fair -	38% Fair +

In rough terms, 4 out of 5 men can read To'abaita while only 3 out of 5 women can. 3 out of 5 men can read English while only 2 out of 5 women can. There is no difference between men and women readers in average quality of reading.

Reading ability in relation to education

Studying the relation of reading ability to type and amount of education shows that the more education a person has had, the better he reads. It also shows that the church sponsored village reading classes and Bible schools have been as effective in producing To'abaita readers as the primary schools.

On the questionnaire, subjects were asked what kind of school they had attended and for how long. For those who went to primary schools, the last standard completed was recorded as the measure of their degree of education. Three of the people interviewed had been to secondary school; these are joined in with the Standard 7 leavers in the results below. Some people had attended only village reading classes sponsored by their local church. These classes were very widespread in the past and are still functioning in a few villages today for children who are not attending primary school. A higher level of education is offered by churches in regional Bible schools. Under the label of Bible schools I am including any kind of formal schooling offered by church groups for the purpose of promoting Christian ministries. I am referring to the village reading classes and Bible schools together as "church sponsored schools"; this label is not to be confused with the situation in the past when the churches ran most of the primary schools. Many people have gone on to the Bible schools after completing studies in the village reading classes. In the tables below it is these people who are listed under the category of Bible schools. Some also attended Bible schools after completing some years in primary school. For these I have added the number of years they spent in Bible school to the number of the last standard completed to reach a comparable number of standards completed. Thus a Standard 4 leaver with an additional two years of Bible school is listed under the Standard 6 category. A final category in the tables below is those who have had no schooling. Surprisingly, one-third of these are able to read.

In most cases, it appears they have learned by following along as someone else reads and by asking readers to help them with words they do not know.

The following table shows results for reading abilities in relation to education. The percentage figures in parenthesis indicate how much of the adult population is in each schooling category.

Reading ability in relation to education

	To'abaita	English
Standard 7 (8%)	100% Fair +	100% Good -
Standard 6 (9%)	96% Fair +	96% Fair ++
Standard 5 (4%)	92% Fair -	92% Fair +
Standard 4 (3%)	80% Fair -	50% Fair ++
Standard 1-3 (5%)	60% Fair -	67% Fair --
Bible school (12%)	100% Fair -	89% Fair -
Reading class (21%)	84% Fair -	35% Fair
None (37%)	35% Poor ++	8% Fair --

For people with primary schooling, we see that 100% of Standard 7 leavers read both languages. Then the percentages for each successively lower standard fall off to only 60% To'abaita readers and 67% English readers for those with Standard 3 or less. The quality of reading also decreases as the number of years in school decreases. In comparing To'abaita ability with English ability for primary leavers, note that the percentage of readers is comparable in each category; however, the quality of reading is better in English for those who have completed at least Standard 4. In general, one would expect a person to read his native language better than a second language. The opposite trend among the primary educated To'abaita speakers must indicate the emphasis put on reading in English rather than in the native language in the school system.

In considering those with Bible school or village reading class education only, note that these institutions have been very successful in producing readers of To'abaita. The Bible schools have produced 100% readers; the same as Standard 7. The reading classes have produced 84% readers; slightly higher than Standard 4. These church sponsored schools have produced an equivalent percentage of To'abaita readers in approximately half the number of years (about 4 and 2 years versus 7 and 4 years). This must be indicative of the emphasis on reading the native language in these church sponsored schools. Note, however, that while the church schools produce equal numbers of To'abaita readers, they produce significantly fewer English readers.

To'obaita Reading Ability

One surprising result is that 35% of the people who have had no schooling at all have nevertheless learned to read their own language. However, they are basically poor readers while those who have learned by means of schooling are basically fair readers. As for English, only 8% of those without schooling have managed to learn to read it.

Another way to look at the same data is, rather than to ask "How many in each schooling category have become readers?" to ask instead "How many of the readers have been produced by each type of schooling?". The following table summarizes this. Again the parenthesized figures are the percentage of the sample that received each type of schooling. The percentage figures in the body of the table are the percentages of all readers who received their training in that way.

Where were the readers trained?

	To'obaita	English
In primary schools (30%)	38% Fair	55% Fair ++
In Bible schools and reading classes (33%)	43% Fair -	39% Fair -
No schooling (37%)	19% Poor ++	6% Fair --

The church sponsored schools have produced the greatest portion of To'obaita readers, while the primary schools have produced the greatest portion of English readers. Note that in both cases, the readers produced by primary schools read better on average.

Reading ability in relation to age

Studying reading ability in relation to the age of the readers gives a glimpse of the history of education in Solomon Islands. To better analyze the results in terms of dates in history, the ages of the subjects must first be converted to the years in which they were of school age. In discussions with experienced missionaries I have learned that before the second world war children generally entered school at the age of 12 or 13. Up through the 1960s they generally entered at about 10 or 11 years. More recently they enter school at 7 or 8 years of age. For the purposes of this study I will use the year during which a subject was ten years old as an average approximation of when he reached school age.

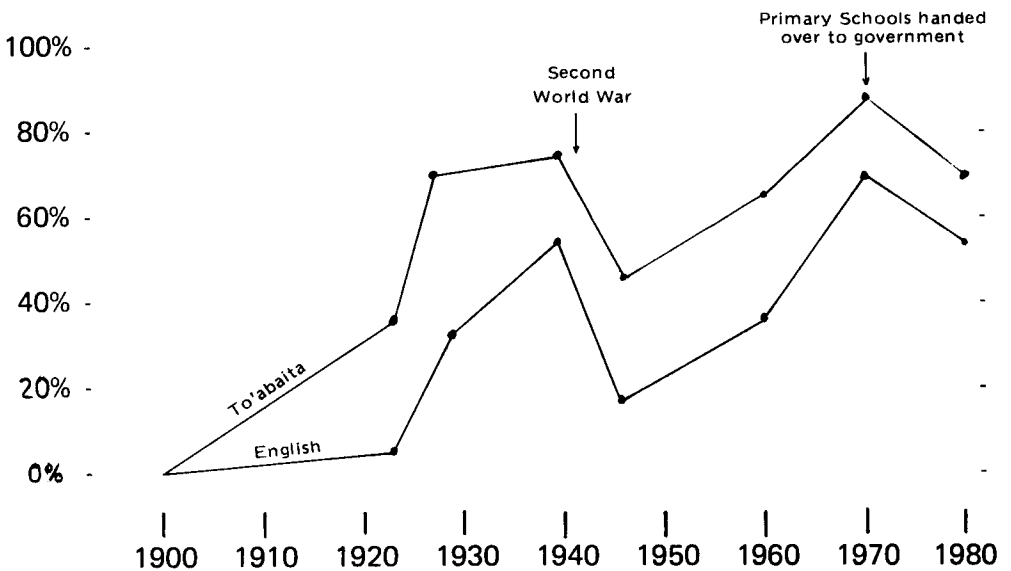
On analysing the relation between age of subject and reading ability, the subjects seemed to divide naturally into seven age categories: 12 to 18, 19 to 29, 30 to 43, 44 to 49, 50 to 60, 61 to 67, and 68 and over. The years during which subjects in these categories would have been 10 years old are 1972 to 1978, 1961 to 1971, and so on. The percentage of readers and

average quality of readers for each age group is given in the following table.

Reading ability in relation to age			
Current age	Years at age 10	To'abaita	English
12-18	1972-78	67% Fair - -	52% Fair +
19-29	1961-71	85% Fair	67% Fair + +
30-43	1947-60	64% Fair - -	36% Fair -
44-49	1941-46	43% Fair - -	17% Fair
50-60	1930-40	75% Fair	53% Fair
61-67	1923-29	65% Poor + +	29% Poor + +
68+	to 1922	33% Poor + +	8% (only one reader)

The historical trends are easier to see in the graph plotted below. The point corresponding to each age group is plotted at the final year of its year span. Note that the graph plots not the percentage of people who could read in each year, but the percentage of people who were school age at that time who can now read.

Percentage of readers in relation to years during school age



To'obaita Reading Ability

Before piecing together the history of education in the To'abaita area, it is also helpful to study how the subjects within each age category were educated. The following table tells what percentage of the subjects in each age group received what kind of education.

How the age groups were educated

Current age	Years at age 10	Primary school	Bible school or reading class	No schooling
12-18	1972-78	62%	21%	17%
19-29	1961-71	62%	11%	27%
30-43	1947-60	12%	42%	45%
44-49	1941-46	0%	30%	70%
50-60	1930-40	5%	61%	33%
61-67	1923-29	6%	47%	47%
68+	to 1922	0%	17%	83%

By comparing the reading abilities and type of education for each age group, we can reconstruct the following history of education within the To'abaita area. Education within the To'abaita area appears to have begun in 1900 with the arrival of a European missionary teacher (a forerunner of the South Sea Evangelical Mission) for a school at Malu'u (Young: 150). Up until that time a handful of To'abaita speakers would have learned to read outside Malaita, but in contrast to the whole population they would have been a negligible percentage. I am assuming that the percentage of readers and school attenders was essentially 0% in 1900. The first schools established by the missions were village reading schools and Bible schools. By 1922 nearly one-fifth of the children were attending these schools. 33% of the people who were school aged during that period have learned to read their own language; presumably half of them learned in these early schools and the other half have learned by following along over the years. As the missions became better established, they started more and more schools. The first primary school students in the sample appear in the 1923 to 1929 group. By 1929, 6% were in primary school and 47% in the reading classes and Bible schools; over half the school aged population was in some kind of school. 65% of the people who were school aged at that time can now read. For the period ending 1940 there is a further increase in literacy. The percentage of readers produced by this period is 75%. Although primary school enrolment had not increased, enrolment in reading classes and Bible schools had increased to 61%.

Then the second world war broke out and education suffered a great loss. Schools were suspended as coastal people fled into the bush and missionaries fled the country. The war did reach northern Malaita with the Japanese

setting up a camp in early 1942 at Afufu, the mistaken bombing of Fo'ondo shortly thereafter, and the establishment of an American camp at Fulifo'oe. In addition, many young north Malaitans went to Guadalcanal and joined the American Labor Corps.

The anti-government and anti-church Marching Rule movement immediately following the war served to prolong the low level of education. During the survey I interviewed two older men who said they had attended school, but when questioned further about how far they got in school they explained that they had only just begun school when Fo'ondo was bombed. Everyone ran away and the school did not re-open for many years. Of those who were school age during the war years, only 43% learned to read their language. None attended primary school; only 30% attended reading or Bible schools.

After the war there was a period of reconstruction in which the missions rebuilt their school system and expanded it. By 1960, the reading rate among school aged children was back up to 64% (the level it had been in 1929). There was a doubling of the previous primary school system so that 12% were in such schools. The decade of the 1960s saw a further growth in education. The main event of that decade was a tremendous blossoming of the primary school system so that suddenly 62% of the children were in primary school and only 11% in Bible or reading schools. By 1971, 85% of school age children had learned to read. This peak is well above the pre-war peak of 75%. (Note that these two peaks in number of readers also correspond to peaks in the quality of reading.) This strong growing trend came to an end when the primary schools were handed over to government control in the early 1970s. Since then the reading rate has dropped back to 67%, a level comparable to the 1929 level and well below the pre-war peak. Note that primary school enrolment has not dropped, only the number of readers produced by the schools. Another trend is that enrolment in the village reading classes and Bible schools has doubled from the previous decade, apparently as an alternative for those who can not be accommodated by the primary schools. Thus in the last decade 85% of school age children attended some sort of school.

The reading rate for English has exactly followed the pattern for To'abaita, except that it has always been 15 to 36 percentage points lower. Note, that in spite of the fact that the current education system stresses reading and writing in English (to the exclusion of the students' own language) throughout the whole primary education, reading ability in English has dropped since the 1960s and it is still well below the To'abaita level. On the other hand, this trend is balanced by the fact that in terms of reading quality, the average reader of English reads better than the average reader of To'abaita.

To'obaita Reading Ability

Reading ability in relation to place of birth

One question in the interview was, "Where were you born?" The name of a village was taken for the answer. For analyzing the results each village was put in one of two categories, coastal villages and bush villages. Coastal villages are here defined as villages within 30 minutes walking distance of the sea coast. In this group are also included persons who were born in coastal towns outside the To'abaita area, like Auki or Gizo. The bush villages are defined as villages in the interior of the island (further than 30 minutes walk from the coast). In the total sample, 52% were born in bush villages and 48% in the coastal villages.

Since the schools have been in coastal villages, we might expect that persons born in bush villages would be less likely to read than those born in coastal villages. In actual fact there is no significant difference between percentage of To'abaita readers in relation to place of birth (70% for coastal, 68% for bush), although the people born in coastal villages read with a little better quality. For English reading, however, there is a significant difference: 57% of the people born in coastal villages read English, while only 37% of those born in bush villages do. Again the quality of reading for the coastal group is better. Here is a summary table of the results:

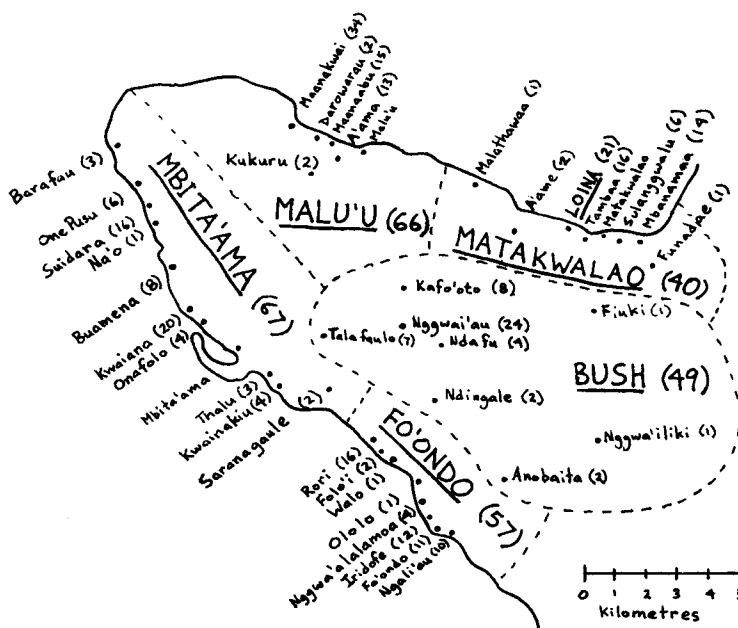
Reading ability in relation to place of birth

	To'abaita	English
Coastal village	70% Fair	57% Fair +
Bush village	68% Fair -	37% Fair

Reading ability in relation to place of residence

The number following each village name is the number of subjects who live in that village. For the sake of analysis, the villages are divided into six groups. These include five districts (Fo'ondo, Mbita'ama, Malu'u Matakwalao, Bush) and one village (Loina). The five districts are not official government divisions, but are informal groupings which the To'abaita speakers seem to use. The one village, Loina, is inside the Matakwalao district but its residents were exceptionally good readers in comparison to the rest of the district. This can be attributed to the efforts of some diligent church leaders in Loina who have held classes for the local church over the years. To avoid skewing the results for the Matakwalao district, the Loina subjects are treated as a separate group.

Map 2 - Villages (and number of subjects) included in the survey



The following table shows the reading ability in each residence group. The groups are listed from top to bottom in a descending order of best readers to worst readers.

Reading ability in relation to place of residence

	To'abaita	English
Malu'u district	74% Fair	59% Fair ++
Loina village	76% Fair	52% Fair
Mbita'ama district	70% Fair	46% Fair ++
Fo'ondo district	74% Fair -	58% Fair - -
Matakwalao district	58% Fair - -	32% Fair +
Bush district	61% Fair - -	27% Fair

The six residence groups fall into two major divisions. Malu'u, Loina, Mbita'ama, and Fo'ondo have 70% to 76% To'abaita readers and 46% to 59% English readers. The Matakwalao and Bush districts on the other hand have 58% to 61% To'abaita readers and 27% to 32% English readers. Thus the people of the Malu'u, Loina, Mbita'ama, and Fo'ondo groups are significantly better readers than the Matakwalao and Bush groups. Within the first

To'obaita Reading Ability

four groups it is possible to see significant differences. The Fo'ondo district scores the same as the Malu'u district in terms of percentage of readers. However, the quality of the Fo'ondo readers is very much lower. For this reason, I have ranked Fo'ondo as the poorest of the first four. The Mbita'ama district, which is ranked third, is equal to Malu'u terms of the quality of the readers, but lower in terms of percentage of readers.

Reading ability in relation to church preference

Each subject was asked to state his church preference. The church names are abbreviated in the following way: COM - Church of Melanesia (Anglican), JW - Jehovah's Witness, SDA - Seventh Day Adventist, and SSEC - South Sea Evangelical Church. "Pagan" is used for those who still follow the traditional religion. "Other" includes subjects from two small church groups in the To'abaita area, the Assemblies of God and the California Baptists.

In following table of reading ability in relation to church preference, the groups are again listed from top to bottom in what I judge to be an ordering from best readers to worst readers.

Reading ability in relation to church preference

	To'abaita	English
SSEC	72% Fair	54% Fair
JW	81% Fair - -	44% Fair -
SDA	63% Fair -	52% Fair +
Other	67% Fair -	50% Poor + +
COM	62% Fair -	34% Fair + +
Pagan	33% Poor	0%

The SSEC appears to have the most and best readers. Although the JW have a higher percentage of To'abaita readers the quality is much lower, and their two measures for English are lower. The JW, the SDA, and the two "other" churches are recent breakaways from the SSEC in the To'abaita area. These breakaways began happening in the late 1950s and have continued to happen over the years. Before that time there would have been only two churches, the SSEC and the COM, plus the pagans. Thus most current members of these breakaway churches would have been educated by the old SSEM (South Sea Evangelical Mission). The fact that these churches have shown a slight decline in reading ability with respect to the SSEC is probably due to the fact that they cut themselves off from the system of education which the original church had developed. I understand that the JW have developed a system of adult reading classes, thus accounting for their higher percentage, inspite of the lower quality.

The COM clearly has fewer readers than the SSEC. It has 10% fewer To'abaita readers and 20% fewer English readers. The pagans in the sample are definitely worse readers than the church members, however with only 6 pagans in the sample it is difficult to generalize with much accuracy. In the sample, one-third of the pagans were poor readers of To'abaita and none could read English.

Analyzing these same results in terms of sex shows that the basic differences between churches involve the reading ability of women rather than men. In the following table, other and pagans are left out because there are too few subjects to see a trend.

Reading ability by church and sex

	To'abaita		English	
	Men	Women	Men	Women
SSEC	79%	67%	56%	50%
SDA	70%	59%	60%	47%
JW	94%	67%	65%	20%
COM	76%	46%	53%	14%

For the SSEC and SDA, the number of women readers (for both languages) is only slightly below the number of men readers. The range is from 6% to 13% lower. For the JW and COM the number of women readers is far below the number of men readers. For them the range is from 27% to 45% lower. Note that with the exception of JW readers of To'abaita, the number of male readers in each church is roughly comparable. The significant differences between the churches come in the number of female readers.

TOWARD A SIMPLER SURVEY METHOD

In conducting this reading survey I have found ways in which the methodology could be refined to make interviews simpler and faster and, in places, more meaningful. These suggestions are offered here for the benefit of those who might conduct a similar reading survey in the future in some other part of Solomon Islands.

Refining the questionnaire

One way of improving the methodology is to refine the questionnaire.

The first question, "What is your name?", was asked so that it would be possible to revise a form at a later date if it was found that something was not marked or was unclearly marked. However, we found that some subjects objected to us writing down their names and we eventually did not bother

To'obaita Reading Ability

to ask the question. Taking the question out altogether would be one way of streamlining the procedure.

The second question, "What is your age?", was often time consuming because subjects did not know their age or year of birth. In such cases a lengthy discussion followed in which we tried to determine their age at certain outstanding events in history. If exact years are not necessary for the final analysis of survey results, but broad groupings are sufficient, then questions like the following could be used on the questionnaire to place subjects quickly into the broad categories:

Had you been born when Mr. Bell was killed?
(That happened in 1927; "yes" indicates 53 or older.)

Had you been born when the war started on Guadalcanal?
(That happened in 1942; "yes" indicates 38 or older.)

Had you been born when the Malaita Council was formed?
(That happened in 1953; "yes" indicates 27 or older.)

Had you been born when the big cyclone hit Malaita?
(That happened in 1966; "yes" indicates 14 or older.)

The fourth question, "Where were you born?", was also time consuming because many people did not know where they were born so they discussed it with older relatives. Many knew the general area but had to discuss it with relatives to find a specific village or place name. In this survey I was only interested in learning if people who were born near the seacoast were better readers than those born in the interior. To ask "Were you born near the seacoast or in the bush?" would have been much simpler and to the point. To have asked, "Were your parents Christians or pagans when you were born?" would also have given useful information.

The twelfth question, "Do you know how to write?", was not precise enough. Perhaps replacing the one question with the following two questions would give more meaningful results: "Do you know how to write your name?" and "Would you be able to write a letter?". The answers to these questions would establish two levels of writing skill.

A thirteenth question was tried with the first subjects interviewed: "Which would you rather read, books in To'abaita or books in English?" This proved to be a difficult question to ask and make understood (partly because the To'abaita language has no direct equivalent to the English comparative degree). After about the first thirty subjects I felt that the question was not being generally understood and that the answers were not reliable.

However, questions of this sort which try to elicit peoples' attitudes about reading and about different languages can give valuable information and should be considered for future surveys.

Asking rather than testing the subject

The most time consuming part of the interview was the reading test. Scoring the reading tests also posed something of a problem because it required a subjective judgement. For this reason it is desirable that the same interviewer score all the reading tests in order to keep the results consistent. While an oral reading test is ideal for the accuracy of results, if reliable results could be obtained by simply asking questions, this would be ideal for simplicity and a survey which uses many interviewers. Eliminating the reading test would also simplify the logistics because it would not be necessary to isolate subjects so that potential subjects would not hear the reading test. Also, potential subjects who could not read well or read at all would not be frightened off by the prospects of an oral reading test.

In order to test the reliability of a subject's opinion about his reading ability, the subjects in this survey were both asked and tested. The questions asked were simply, "Do you know how to read To'abaita?" and "Do you know how to read English?" The relationship of the percentage of people who answered "Yes" to the question in relation to the percentage who actually could read when tested is as follows:

Percentage of readers by subject opinion and test results

	To'abaita	English
Subject opinion	75%	58%
Test results	69%	47%
Correct opinions	92%	81%

The final row in the above table tells how many of the opinions were correct. In the case of reading To'abaita, 92% of the opinions were correct. That is, if we take 92% of those who said they could read To'abaita (75%), we get 69%, which is the actual test result. For reading English, 81% of the opinions were correct. This means that for this survey, if we had only asked the questions and then adjusted the results by 92% and 81%, we would have got accurate results. Of course, we had to test as well in order to know what the adjustment had to be. However, for further surveys these adjustment percentages could be used as estimates of the reliability of subject opinions and the reading test could be eliminated. A more reliable option would be to test only a small percentage of the subjects in order to have a control group for computing the adjustment to subject opinions for the whole sample.

To'obaita Reading Ability

Using opinions in this way to estimate the percentage of readers does not tell us anything about the quality of reading. Even quality of reading could possibly be estimated by using the subject's opinions. This would require experimentation to determine the reliability of the results, however. Possible questions for estimating the quality of reading might be:

Do you understand what you read?

Do you understand it the first time or do you have to reread it many times?

Can you read quickly or do you often have to stop and figure out words?

APPLYING THE SURVEY RESULTS

The primary application of the survey results is in the area of planning for a drive to teach the skills of literacy (reading and writing) to the To'abaita speakers. The results show that 31% of the To'abaita speakers 15 years and older cannot read their language. Another 26% can read their language but they read so poorly that they would not be suitable as public readers nor would their reading skill be likely to enable them to use literature independently and meaningfully. Thus 57% of the adult population needs to learn to read or to learn to read better before a goal of 100% effective users of literature could be achieved among the To'abaita people.

After determining that 57% of the adult population needs to be taught literacy skills, we must find out how many of these people want to be taught these skills before committing effort and resources to such a project. In the interviews, non-readers and poor readers were asked, "If a To'abaita reading class were started in your village, would you attend it?" The overall response was an overwhelming, "Yes". 83% of the non-readers said they would attend reading classes if they were available. Taking 83% of 31% shows that 26% of the adult population are non-readers who want to learn to read. The poor readers were unanimous in their response; 100% of them, or another 26% of the total population, said they would attend classes.

The overall result is that 52% of the adult population both needs and wants training in reading and writing. These are all people who are beyond the reach of the Government's education system because they are past primary school age. To fill this need the local churches are standing by as the institutions through which this training could be brought to the people. The churches have a history of sponsoring village reading and writing classes but this has fallen off in recent years with the development of the primary education system. However, discussions held during the reading survey have indicated that many church leaders are anxious to revive this ministry of the church. Many local catechists, pastors, and lay leaders are ready to

be trained as village reading teachers when primer booklets and teachers' manuals are completed and distributed.

The need for village reading classes does not exist solely for those beyond school age. Many young children do not attend primary school and will thus not learn to read and write unless they are taught in village reading classes. For Malaita as a whole, in 1977 only 49% of those aged between 7 and 12 years were enrolled in primary school (C.P.O. 1979: 9). The trend does not appear to be improving. The net increase in primary school enrollment was only 3% from 1970 to 1978 (Ministry of Finance 1979: 145). By contrast the total population increased 22% in the same eight year period (C.P.O. 1979:3)⁷. Statistics of the same nature are not available for the To'abaita area by itself.

This survey suggest that primary school enrolment may be higher in To'abaita than it is in the island as a whole. We saw above that 62% of 12 through 18 year olds had attended primary school. However, the general trend of the whole population growing much faster than primary school enrolments certainly holds true in the To'abaita area. Thus the percentage of school age children who do not attend primary school and who thus also would benefit from church sponsored village reading classes is somewhere between 38% and 50%. That the majority of those not enrolled in primary school want reading classes is evident from the fact that among children aged 12 to 18, there were more children who attended village classes than who went to no school at all, inspite of the fact that village reading classes are not now widespread enough to be available to all children. In conclusion, approximately 50% of the To'abaita population, both children and adults, needs and wants village reading classes.

The survey results also suggest something about the more effective method of teaching reading, namely, to teach students to read their own language first and then English, not the other way around. We saw above that the church sponsored Bible schools and reading classes (with their emphasis on the native language, at least in the beginning stages of a student's training) produced the same percentage of readers as the primary schools (with their emphasis on English) but in about half the number of years in school. We saw also that the percentage of primary school enrolments stayed the same from the 1960, to the 1970s but the percentage of readers produced dropped sharply. It is no wonder that students have difficulty learning to read when they begin by learning to read English, a language which they do not yet speak or understand.

The introduction of primer booklets for teaching To'abaita speakers to read and write their own language will meet both a real and a felt need in northern Malaita. Hoepfully, it will bring them a step closer to the world of

To'obaita Reading Ability

knowledge and the potential for personal, community, and national development which the effective use of literature opens up.

FOOTNOTES

1. A chi-squared test was used. A four-by-three contingency table was set up for both the To'abaita and English tests. On the one dimension were the four tests and on the other were three levels of reading skill: good readers, fair readers, and poor readers grouped together with sounders. For the To'abaita tests the probability that the differences between test results was due to chance sampling variation was 30%; for the English tests it was 70%. A probability less than 5% is generally required before we are justified in concluding that the differences in results are due to differences in test difficulty.

2. The most notable exceptions are Roman Catholic enclaves of Lau speakers on Basakana Island and in Afufu, and Mbita'ama villages and workers at the government station in Malu'u. They are nevertheless included in the population estimates. As for how the estimates relate to the total number of To'abaita speakers in the country, it is hard to know. Many To'abaita speakers are living outside northern Malaita, probably more than the number of non-To'abaita speakers living inside the To'abaita area.

3. The *Resource Study* estimates the 1980 population for Region 2 at 10920, a 17.4% increase over the 1976 figure of 9305 (page 4). Region 2 comprises five wards, including the four with To'abaita speakers. My 1980 estimates of To'abaita speakers are based on a 17.4% increase for each ward.

4. The *Resource Study* estimates that in 1980, 5504 of the 10920 residents of Region 2 are 15 years of age or older. The same proportion, 50.4%, is used to estimate the 15 and over population for To'abaita speakers in each ward.

5. A chi-squared test was performed. The probability that the sample distribution falls within a normal sampling variation of the population is 50%.

6. This is probably due to the fact that those subjects 50 and over would have been the assistant investigator's age mates. I was not aware of the

skewing taking place during the survey. For future surveys it would probably be good to set quotas for each age group and thus attempt to control the distribution.

7. Based on an annual growth rate of 2.5%, *Resource Study*, page 3.

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