0. Introduction

In multilingual contexts, it is typical that the different languages spoken have different roles within society, different domains of usage. In the case of language use in Northern Thailand, the domains of usage for Standard Thai[1] and Kam Myang[2] (Northern Thai) appear to be fairly well demarcated.[3] Casual observation has suggested to me that speakers of Kam Myang (KM) will generally use that language in any situation with the following exceptions: KM will usually not be used when speaking with non-speakers of KM. In schools, only Standard Thai is supposed to be used (though teachers and students do speak to one another in KM to some extent). In temples, local monks will preach using KM but will switch to Pali vocabulary as needed for certain religious terminology.[4] In Christian churches in Northern Thailand, KM is often used, though not in all cases and, in particular, Scripture readings and singing are all in Standard Thai. All printed mass media and almost all non-print mass media use Standard Thai. In virtually any situation where written language is used, the language will be Standard Thai;[5] thus, for example, while two people might discuss a business matter entirely in KM, any written documentation of it would be in Standard Thai.

In using KM and Standard Thai according to the generalizations just described for domains of use, the assumption is made that native speakers of KM control Standard Thai well enough to use it competently in the contexts in which it is required. While it is certainly the case that this assumption is valid for some native speakers of KM, it is by no means obvious that it is true for all. Indeed, casual observation indicates that at least some speakers of KM have rather limited competence in Standard Thai.[6] Such an observation does not establish that speakers of KM generally experience communication barriers whenever they are in any of numerous contexts in which Standard Thai might be required, but it does raise the question: *Do speakers of KM ever find that they are unable to communicate adequately in Standard Thai?* Additional questions follow: *If so, how common is this? How limited in their ability to communicate is any given person?* These questions translate directly into measurable questions regarding bilingualism: *What portion of the KM-speaking population have any given level of competence in Standard Thai?*

Such questions are of no small relevance. If someone wants to communicate some particular message to a broad audience and are assuming that Standard Thai is an appropriate medium of communication, they will fail to accomplish their purposes if it turns out that their KM-speaking audience does not have a high enough level of competence in Standard Thai to understand that message.

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[1] A distinction is assumed between Standard Thai and Central Thai (c.f. Smalley 1994).

[2] The orthographic symbol "y" is used here to represent the phonetic value [ɯ].

[3] We are interested here only in the relationship between Standard Thai and Kam Myang and not in the relationships with any of the many other languages spoken in Northern Thailand.

[4] For Standard Thai, such words would be considered to be loans that are now included as part of the Standard Thai language. It is not yet clear to me whether the same should be said for KM or whether such situations should rather be counted as cases of code-switching into Standard Thai, or possibly even code-switching into Pali. It is possible that monks do switch into Standard Thai for entire paragraphs that contain such religious terminology as opposed to simply inserting Pali loans into KM speech. I have not gathered evidence regarding this, however.

[5] Copies of Buddhist scriptures and sermons written in Lanna script which are found in many temples in Northern Thailand are a particular exception to this rule.

[6] As an example, my wife currently employs a housekeeper who appears not to have a very high level of competence in Standard Thai. (That is her assessment of herself as well as our impression.)

This suggests the potential value in initiating a study of bilingualism in Standard Thai among the KM-speaking population of Northern Thailand. Given, however, that there are an estimated 5–6 million native speakers of KM,[7] that this population is spread over a large geographic area, and that within this population there is considerable variation on several variables that may correlate with levels of competence in Standard Thai, such a study would be a very major undertaking.

This paper describes research being done on a smaller scale: to develop an instrument to measure levels of comprehension of formal Standard Thai to be used to test a sample population of KM-speakers in one particular location. Although this will not reveal levels of bilingualism for the entire KM population, it will provide a picture of the levels of bilingualism for one community; this information could be used, in turn, to estimate the state of bilingualism in other communities. Furthermore, this research will provide information that would be useful should a larger-scale study of bilingualism in Northern Thailand be undertaken.

More specifically, this paper describes the development of a test instrument. The aim of the paper is to document the process of developing the test and to describe various problems that have been encountered which not only have affected the course of the research but which also provide some interesting findings of themselves.

The paper is organised as follows: §1 describes the goals and methodology of the research; §2 presents the results of the hometown testing; and §3 discusses problems encountered in the development stage of the bilingualism test and some possible implications of those problems. Conclusions follow, as well as appendices which present the five Standard Thai texts used in the test along with the comprehension questions used for each text.

1. Description of Research

1.1 Research Goals

Interest in levels of bilingualism in Standard Thai among speakers of KM arose initially in relation to whether KM-speaking Christians could adequately understand the Bible as translated into Standard Thai. This question could potentially be investigated in various ways, such as testing comprehension of selected portions from some given translation. Such an investigation might not be conclusive, however, since problems in comprehension could be attributable to the particular translation or to the extensive cultural differences between the ancient Near East and modern Thailand. If it could be shown, on the other hand, that some portions of the KM-speaking population have limited levels of competence in Standard Thai, this could infer limited comprehension of Standard Thai translations of the Bible regardless of any questions about the translation or of cultural differences.[8]

Bilingualism in general refers to a collection of learned abilities, including speaking, oral comprehension, reading comprehension and writing. (Indeed, each of these involve several component abilities, such as pronunciation, range of vocabulary, etc.) Defining a composite measure of bilingualism

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[7] Smalley (1994) gives an estimate of 4,800,000 speakers; Grimes (1992) states that there are 6,000,000 speakers.

[8] The situation may not necessarily be as simple as this, however: It is possible that some people might have low levels of competence in Standard Thai in general yet have higher levels of comprehension of the Bible in Standard Thai as a result of instruction and extensive exposure to this particular text.

that takes each of these components into consideration is fraught with difficulties, and tests of bilingualism usually test only certain combinations of components. For the purpose of assessing comprehension of texts in Standard Thai, it is sufficient to limit a study to tests of oral and written comprehension.

Both oral and reading comprehension are relevant to the question raised above: all KM-speaking Christians will hear the Bible being read aloud in meetings and church services, and some, at least, will also read the Bible. Measuring each of these abilities would require somewhat different test methods, however. Indeed, measuring reading comprehension is decidedly more difficult. If a comprehension question asks about the content of the text and the subject is looking at the text while responding, they might be able to identify the correct answer in the text without actually understanding it. For this reason, either access to the text must somehow be controlled or else questions would have to require the subject to make inferences based on the text rather than asking about the content of the text directly. Either of these would be quite difficult, and it is unclear that either could be done without introducing biases.

There is sure to be a relationship between levels of oral and reading comprehension, though the correlation is not necessarily direct or simple. For some, reading a text rather than listening to it may facilitate comprehension, but others may have very limited reading ability which would greatly limit their ability to comprehend a written text. In general, however, a speaker of KM who has high oral comprehension of Standard Thai is likely to be fully literate and to have high reading comprehension of Standard Thai as well. Also, a speaker of KM who has a very low level of oral comprehension of Standard Thai is likely to have a low level of reading comprehension of Standard Thai. A speaker of KM who has a moderate level of oral comprehension of Standard Thai may have higher or lower levels of reading comprehension, though they probably do not have extremely high reading comprehension; they may have very low reading comprehension, particularly if they are not very literate. Thus, oral comprehension of Standard Thai can provide a rough estimation of reading comprehension.

Since it is not expected that all speakers of KM do read the Bible as a regular practice, since a measure of oral comprehension gives at least a rough estimation of reading comprehension, and since a test of reading comprehension would be quite difficult to develop and administer, it has been deemed sufficient to measure levels of oral comprehension.

Standard Thai is "a diverse phenomenon" (Smalley 1994), consisting of a several varieties of speech that are related yet differ in relation to numerous variables.[9] These include social distance and relationship between speaker and audience, ranging from language appropriate to casual relationships between equals to deferential, polite speech appropriate when speaking to a person of much higher status; the social value placed upon any given discourse or speech exchange, ranging from vulgar to elegant; and language ranges—ordinary versus sacred or royal language. (Cf. Smalley 1994, chapters 2–4.) Not all of these varieties are necessarily controlled even by native speakers of Standard Thai. Smalley notes that the "public distance"[10] variety and the elegant variety require considerable education before a speaker can use

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[9] Such variation is to be found with any living language, especially when the language under discussion is a "standard" form of some language continuum. Perhaps the only simple way to define what is meant by the "standard" form of a language is as what "educated people... think they should speak or write, and which they use as norms when using the language carefully" (Smalley, 1994, p. 26). This definition allows for considerable variation from speaker to speaker. Furthermore, any given speaker may vary from their own conception of the ideal yet still be viewed as speaking the "standard" form of the particular language.

[10] Smalley defines three points on the scale of social distance: The "consultative" variety is "characteristic of social interaction with acquaintances or strangers" and is the basis for the other two varieties. The "personal" variety is

them effectively (pp. 43, 49f). The sacred and royal varieties likewise generally require considerable education to master. (It is possible, though, that the average person may learn some of these ranges through casual exposure, such as in temples or by reading newspapers. I am not certain to what extent this may in fact occur.) Certain correlations exist among the mentioned variables: the elegant variety usually is used at "public distance" (Smalley 1994:50), and use of the royal range would always be accompanied by the elegant variety. Hence, in general these variables correlate on a scale ranging from informal (close social distance, equal status, vulgar or slang, ordinary range) to formal (distant social relationship, especially when the audience is of higher status, elegant, including royal and sacred ranges where relevant).

In deciding whether or not Standard Thai is an appropriate medium in which to communicate some particular message to a given audience of non-native speakers, it would be appropriate to consider what specific varieties of Standard Thai are needed to express that message and determine if the target audience can control those varieties. For example, an audience might understand informal Standard Thai but not formal Standard Thai; if the message to be communicated does not require formal language, then Standard Thai could be used to successfully communicate the message. In the case of interest here, any translation of the Bible into Standard Thai is likely to utilize varieties ranging from informal (though not likely vulgar) to formal, including some use of the royal and sacred ranges. Accordingly, it is necessary to determine whether or not speakers of KM have adequate comprehension both in formal varieties of Standard Thai as well as informal.

As mentioned above, learning the formal varieties of Standard Thai is dependent to some extent upon education. Vocation is likely an important factor in maintaining or continuing to develop abilities in the formal varieties since certain jobs (e.g. teacher or middle- or high-level government bureaucracy) would require use of formal Standard Thai whereas other vocations (e.g. farming, the vocation of a majority of KM speakers) would not. Another important factor in maintenance of ability for large parts of the population would be exposure to media, in particular news broadcasts, and exposure to formal contexts in which Standard Thai would be used (e.g. political speeches). While currently the vast majority of youths attend school for at least six years, a large portion of KM speakers have had less education than this, suggesting that they have had substantially less opportunity to learn formal varieties of Standard Thai. Only those that have had considerable education will have jobs that require use of Standard Thai, so those that did not learn much formal Standard Thai in school will not have learned it through their work experience. Most KM speakers would have limited exposure to formal contexts in which formal Standard Thai would be used, so news media would be the primary means for maintenance of ability, though maintenance assumes that a person has first learned formal Standard Thai, and it is uncertain whether a KM speaker could learn formal Standard Thai by listening to news broadcasts or by reading newspapers. In contrast, speakers of KM are more likely to be exposed to informal Standard Thai through interaction with friends, relatives or acquaintances from Central Thailand, with store owners who are natives of Central Thailand, through some lower-level government bureaucrats, and through non-news media such as movies and soap-operas. As a result of the combination of these factors, it is expected that an average speaker of KM will be less likely to understand formal Standard Thai than informal Standard Thai.

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less careful, including ellipses, contractions, slang, etc., and is typical of closer acquaintances and family. The "public" variety is more careful, utilising more elaborate grammar, pronunciation, vocabulary and discourse organization, and is typical of public addresses.

Accordingly, it is sufficient in our study of bilingualism to focus on testing levels of comprehension of formal Standard Thai.

The goals of the research, therefore, have been to develop a test instrument to measure levels of oral comprehension of formal Standard Thai.

1.2 Tests of Bilingualism

Various types of tests are available for measuring levels of bilingualism. Several of these are described by Blair (1990). In part, this variety is due to the difficulty in defining explicitly what bilingual ability is: different types of tests have been developed that measure distinct abilities. For example, some concentrate on oral comprehension while others focus equally on oral comprehension and production. Each type of test also has certain merits and weaknesses. For example, self-evaluation questionnaires can be developed and administered easily, quickly and inexpensively, but the results of such a test may not be valid or reliable.[11]

For this research, the *recorded text test* (RTT) method was chosen. RTTs can be administered easily and quickly, and are generally reasonably easy to develop. They are not typically favoured as indicators of bilingualism since they directly measure at most oral comprehension, which is only one aspect of bilingual ability. Also, this type of test was initially developed for, and is considered more suitable to, measuring inherent intelligibility between related languages or dialects (cf. Casad 1974). It is not uncommon in cases of inherent intelligibility, as opposed learned intelligibility (i.e. bilingualism), that the level of ability that speakers have in the second language is relatively low. RTTs are appropriate for measuring lower levels of ability in a second language but are less likely to be able to differentiate among higher levels of ability that are typical in cases of widespread bilingualism. It has been suggested, however, that it may be possible to extend the range in which the test can provide sufficient discrimination by using texts that require greater proficiency in the tested language (Grimes 1986; Blair 1990; Calvin Rensch, personal communication). This fits in line with the goals of the present research since the interest of the research is on levels of comprehension of *formal* Standard Thai. In addition, because the research goals extend to measuring levels of comprehension only, the fact that the RTT method is limited to testing comprehension only is not a hindrance in this case. Because RTTs require less expenditure of time and resources, Blair (1990) states that they are appropriately suited to pilot studies of bilingualism.

A caveat is in order here: While it has been suggested that the RTT method may be adapted in the way just described to make it more suitable to bilingualism testing, I am unaware of any studies in which this has been attempted; indeed, the current research is the first such attempt of which I am aware. There is an open question as to whether using a RTT in this way is valid or not. This question will not be answered here, though some of the observations made here may contribute to a discussion of the issues.

1.3 Recorded Text Testing

RTT testing involves two stages: development of the test, and the actual testing. I will briefly describe each of these stages; a more detailed explanation of procedures may be found in Blair (1990), Casad (1974) or Grimes (1993). The testing phase will be described first.

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[11] *Reliability* refers to the consistency of results that a test instrument would produce: a reliable test would consistently yield the same results if repeated measurements were made of the same thing. *Validity* refers to the degree to which a test instrument actually measures what it claims to measure. (Cf. Casad 1974, chapter 4.)

A RTT consists of one or more short texts recorded by mother-tongue speaker(s) of the language being investigated as the second language for some population (hereafter, the *test language*). Using a tape player and headphones, a subject listens to a text one time completely through, and then listens to the text a second time with ten comprehension questions regarding the content of the text inserted at appropriate points. As the tape reaches a question, the machine is paused to allow the subject to answer the question. The tester notes down the response, and the tape is resumed.[12] If a subject is unable to answer on the first attempt, no second chance is given. Likewise, they are not given a third opportunity to hear any portion of the text.[13] This procedure is repeated for each text on the tape.

Development of the test requires a slightly more involved process. (The time required for development may be shorter than, equal to, or longer than the time required for testing depending, on the one hand, upon the type and number of texts to be used and, on the other hand, on the number of subjects to be tested.) The following steps are involved in the development of the test:

(1) **Obtaining texts.** One or more short texts (typically 2–3 minutes) in the test language are recorded on tape; these must be provided from mother-tongue speakers of the test language. Typically, simple narrative texts are used (e.g. a first-person account of some personal experience), though one may attempt to provide a more discriminating measure by using several texts that involve different text genres or which cover different topics or domains of language use (see discussion in §1.2). The texts should involve things that are culturally familiar but should not be stories or be about topics that others are likely to be familiar with. (Otherwise, a subject may be able to answer a question correctly even if they had not understood the text.) After the texts have been recorded, they should be transcribed and also glossed and translated (unless the researcher and any assistants have enough competence in the test language to fully understand the texts.)

For both the "hometown" (see below) and final testing, a simple text will be required in the first language of the subjects being tested to be used as a subject control test. At the initial development stage, therefore, a simple text in the test language should be recorded. A simple text in the language of the target subjects can be recorded after the hometown testing has been completed.

(2) **Obtaining questions.** After a text has been transcribed, several questions should be devised for each of the first 20 or more sentences of the text. These questions should be specific, focusing on details in the text, and should cover as wide a semantic range as possible. The questions should require only short answers.

Grimes (1993: 19) indicates that at least 30 questions should be prepared. Blair (1990: 77) says to prepare as many as possible and then select the best 15. The common criterion is this: Hometown testing will be done to determine which questions are usable. After the hometown testing, ten questions will be required on the final test. Accordingly, enough questions will need to be tested on the hometown test to

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[12] Blair (1990:73) indicates that the entire response should be recorded and then later translated and scored. (The translation would be needed in cases where the researcher does not understand the language spoken by the subjects.) In contrast, the procedure presented by Casad (1974: 27) and Grimes (1993: 20) both state that the response is scored immediately. This would require that the researcher, or a trained assistant who is recording scores, understand the language spoken by the subject fluently.

[13] This practice is followed so that, all other things being equal, every question has an equal chance of being answered correctly by every subject. Exceptions may be made in cases where it is obvious that the subject could not hear the tape, for example if the headphones fall off.

provide ten usable questions. In many cases, 15 may be sufficient, though in some cases many more will be required. (See the discussion in §3.)

After preparing the questions, they should be translated into the test language, if not already in the test language, and recorded by a mother-tongue speaker of the test language. The voice used for the questions should be reasonably distinct from the voice used on the corresponding text.

(3) Preparing a "hometown" test. At this stage, a pilot, control test must be done to determine that the test is valid, i.e. that each of the questions are appropriate for determining comprehension of the test language. For this, the test must be applied to "hometown" subjects, i.e. subjects who are mother-tongue speakers of the test language. The reasoning being applied is this: If a question tests only comprehension of the language and not any other knowledge or ability, then mother-tongue speakers of that language should all be able to answer the question correctly.

A test tape should be prepared as follows: The tape should begin with a brief introduction to the test in the test language; this should include instructions for doing the test with a brief (3 sentence) sample text and questions, with answers to the questions also recorded on the tape.

After the introduction and instructions, a subject control test is added:[14] Dub a simple text in the first language of the subjects, in this case the test language, onto the test tape. After adding the complete text, dub it onto the tape a second time with ten or more questions for that text interspersed. Each question should be placed after the first natural pause after the sentence in the text that contains the answer to the question. A brief period of silence (1–2 seconds) should occur before and after the question. After each question, the following segment of the text is added, followed in turn at the appropriate point by the next question. This is repeated until the last question has been added. (It is not necessary to record the remainder of the text, if any, after the last question.) After the last question, add a slightly longer period of silence (4–5 seconds) to mark a transition to the next text.

After the subject control test, each of the texts to be used on the test are added to the tape along with the questions for each text using the same method just described.

(4) "Hometown" testing. Once the "hometown" test tape has been prepared, testing should be done on ten or more mother-tongue speakers of the test language.[15] As the test is being administered, it is useful to record the complete response given to each question rather than simply assigning a score right away.[16]

If any given subject does not perform well on the subject control test (Blair 1990 uses a threshold of 70% correct responses), that subject may be rejected, in which case it is not necessary to complete the remainder of the test with that person.

Once the testing is completed, scores can be determined for each question. The aim is to arrive at ten questions for each text to be used on the test. Any question that was answered correctly by 100% of the subjects is acceptable for use on the test. If ten or more questions had scores of 100%, the questions for the test should be chosen from among these. It may be that in some instance a subject was briefly distracted

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[14] The purpose of the control test is to control for subjects that do not understand how to do the test or who or, for some other reason, are unable to perform the test. One such reason could be that they are not in fact mother tongue speakers of the language assumed for test subjects.

[15] Each question should be tested on ten subjects. If it is not practical to make up a single test tape with all the questions (if, for example, you needed to test several questions that pertain to the same sentence in a text), multiple test tapes could be prepared, in which case each test tape would be used with ten subjects with a total number of subjects of 20, or 30, etc.

[16] Cf. note 12.

causing them to answer a question incorrectly that they otherwise would have correctly answered. Because of this, questions with scores of 90% or higher may be added to the pool of possible questions.

Of the questions that pass this first screening, ten must be chosen for each text. An important criterion in the selection, if there are more than ten candidates for any text, is to avoid having multiple questions that address the same semantic range (e.g. several questions regarding times or dates of events). It may also be desirable to choose questions to which only a single response was given by all subjects (i.e. questions for which there is unambiguously one correct response only).

(5) **Preparing the test tape.** After ten questions have been selected for each text, the final test tape is prepared. For this, each of the questions must first be translated into the language of the target subjects and recorded by a mother-tongue speaker of that language. Also, a simple text in that language must be recorded to be used for the subject control test, and ten questions for that text must be prepared and recorded. In addition, the introduction and instructions must be translated and recorded in the language of the target subjects.

The test tape is assembled in the manner described above for the "hometown" test tape with the exception that the introduction and instructions, the subject control test, and the questions for each text are now in the language spoken by the target subjects.

(6) **Testing.** After development of the test tape has been completed, testing is done on the target subjects. The number of subjects will vary according to the particular aims of the research being undertaken. (See chapter 5 of Blair 1990 for further discussion.)

1.4 Development of a RTT for Standard Thai.

To develop a RTT for use in measuring levels of comprehension of formal Standard Thai among speakers of KM, four texts in Standard Thai were obtained. A fifth text in Standard Thai was also obtained for use as a subject control test on the "hometown" test. All five texts in Standard Thai are presented in Appendices I–V along with the complete set of questions prepared for each text. The texts will be identified as ST1–4, and ST/SC (the text used for the subject control test on the "hometown" test).

As mentioned in §1.2, it has been suggested that by using different types of text it may be possible to make a RTT more sensitive to higher levels of ability in the second language. Any texts that make use of a greater level of sophistication in language use might be expected to have this effect. For example, one might use hortatory or explanatory texts rather than narrative texts, or texts that utilize more formal registers of language. Considerable care must be taken, however, not to use vocabulary such as technical terminology that would only be known by certain groups within the native-speaking population. Also, it is important not to use questions that require making logical deductions from a text rather than relating to the content of the text directly. As with any RTT, it is also important that a text is not about something that others would already be familiar with, as mentioned above.

This approach has been taken in the current research: Texts ST1–4 have been specifically chosen in an attempt to make the test more suitable for use in bilingualism testing. Texts were sought that used formal Standard Thai and which varied from one another in topic and/or domain of language use. One text was sought which would specifically contain language from the royal range of Standard Thai.

It was assumed that, for most speakers of Standard Thai, formal language is produced spontaneously most often in written form rather than orally. For this reason, three of the texts used, ST1–3, were adapted from written sources.

Text ST1 was adapted from a newspaper article entitled ชร. จัดแถวตั้งชมรมต้าน "ค้าประเวณี" ('Chiang Rai Establishes Association to Counter Prostitution'). It combines narrative and explanatory genres and is somewhat formal in style; the topic is culturally familiar but not something that would be discussed by most people with high frequency.

Text ST2 was also adapted from a newspaper article, entitled การศึกษาของชาวบ้านเพื่อชาวบ้านโดยชาวบ้าน ('Education of Villagers for Villagers and by Villagers'). Like ST1, it is more formal in style and has a topic that is familiar but not commonly discussed, but it is more purely explanatory rather than narrative.

Text ST3 was adapted from a booklet distributed at the opening of the Center for Vocational Training for Students of Border Patrol Police Schools, a project sponsored by H.R.H. Princess Maha Chakri Sirindhorn. In particular, this text was adapted from the first two sections of the booklet, entitled พระราชดำริ ('The Royal Plans') and การสนองพระราชดำริ ('Responding to the Royal Plans'). This text was chosen for its use of royal language. It is mostly narrative, but is also to some degree explanatory; it is highly formal; the topic involves people, places, things and activities that are all culturally familiar but in the context of a development project that might be only nominally familiar to some.

Text ST4, authored by Miss Watsana Doklamyai, is a first-hand account of her attendance at the opening of the Center for Vocational Training for Students of Border Patrol Police Schools, over which H.R.H. Princess Maha Chakri Sirindhorn presided. Watsana was asked to recount her experience as she might to a friend, though with the expectation that she might make the text slightly more formal than might be appropriate when talking to a close friend. This text was elicited with the expectation that it would make use of some royal language but overall would use only moderately formal language.

Texts ST1–4 were all obtained with the assistance of Miss Watsana Doklamyai. Watsana was asked to adapt the texts that were taken from written sources to fit within 3–5 minutes when recorded. Since there is no guarantee that a written text, especially one taken from a newspaper, is a good and representative example of Standard Thai, and since the process of shortening a text may affect the coherence, clarity and naturalness of the text, texts ST1–3 were further checked and edited to ensure that coherence, clarity and naturalness were maintained. This was done with the assistance of Mr. Santi Saengtong, Mrs. Chirawadee Karuna, Mr. Pipat Prasatsuwan, and Dr. Pearl Watanakul. Text ST1 required few changes after the initial adaptation. For texts ST2 and ST3, slightly more extensive revisions were necessary. At one particular point, text ST3 was reduced in formality by replacing the word ศักยภาพ /sàgkajaphaab/ 'potential' with the synonymous expression ความเป็นไปได้ /khwaam pen paj dâj/; this was done since several of the reviewers commented that few speakers of Standard Thai would be familiar with the original word.

After texts ST1–3 were prepared, they were recorded by Mrs. Suntari Maninop.

Text ST/SC was elicited from Mrs. Phailyn Yupanon. This text is a 1st person account of flooding in Chiang Mai. The language used on this text is simple, polite but non-formal, and the topic is very familiar.

Questions for each text were prepared in Standard Thai with the assistance of Mrs. Phailyn Yupanon. The number of questions prepared for each text were as follows:[17]

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[17] The numbers for each text represent the number of questions tested on the "hometown" testing. For some texts, there were a few other questions which were prepared but which were not tested on the "hometown" testing.

Table 1. Number of questions per text

Text	# of questions
ST/SC	16
ST1	20
ST2	32
ST3	22
ST4	28

The questions were recorded in Standard Thai by Mr. Akom Vivatvarin, who also recorded the introduction and instructions for use on the "hometown" test..

Because of the somewhat large number of questions prepared for some of the texts and, in particular, because in many cases two questions pertained to the same sentence from a given text, two test tapes were prepared for the "hometown" test. For ST/SC, all 16 questions were used on each tape; for each of the other texts, exactly half of the questions were used on each tape.

For the "hometown" test tape, texts were recorded in the following order: ST/SC, ST1, ST2, ST4, and ST3. This order was chosen since it was expected that texts ST2 and ST3 would be the most difficult parts of the test; text ST4, which is somewhat simpler, was place between these two texts to avoid having subjects becoming discouraged and losing interest.

The "hometown" control testing was done in Bangkok and in Chiang Mai. Ten subjects were tested for each of the two test tapes, for a total of 20 subjects (9 in Bangkok and 11 in Chiang Mai). With one exception, all subjects were born and grew up in Central Thailand. (Subject 9 was born in Khorat, grew up in Yala and later moved to Chiang Mai; this subject performed acceptably on the subject control portion of the test.) They ranged in age from 12 to 42 and had education ranging from completion of ป. 6 (grade 6) through completion of a master's degree. Recording of responses was done with the assistance of Mr. Santi Saengtong.

After the completion of testing, a list of alternate responses given to each question was prepared. This was then reviewed and scored with the assistance of Mrs. Phailyn Yupanon.

2. Results of "Hometown" Testing

Responses to questions were given scores of 0, ½ (for partially correct responses), or 1. The results of the "hometown" testing are presented in Tables 2–6. Scores for each question have been converted to percentages.

Scores for text ST/SC, shown in Table 2, were generally high, as expected. Three subjects, 1, 2, and 9, scored below 90%. Some of their errors were fairly minor and may have been the result of being distracted or nervous (subjects 1 and 2 were 12 years old). At the time, each of these seemed generally able to perform the test, and all three were retained as subjects.