FLIS: Audible computer-aided language learning for Southeast Asian languages: observations after a year of use

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0. Introduction: The NIU Foreign Language Instruction Station (FLIS) System

Computer-Aided Instruction for foreign languages typically is completely mute. Few systems for the commonly taught languages have any audio capability, and those few make limited use of audio; no systems (other than FLIS) for the less commonly taught languages have an audio capability.

The FLIS System provides the ability to create, edit, and present audio-rich language lessons, with "random access" to the audio so that any audio segment (or "speech") can be accessed and played instantly under software control. The strength of the system is in presenting listening comprehension lessons with built-in tools to assist the learner in achieving comprehension. Other lesson types such as tutorial, drill and practice, and interactive fiction are easily implemented. FLIS offers the following features:

1. An integrated, menu-driven, frame-based authoring system designed so that individuals can create and modify lessons for the system with no knowledge of computer programming.

2. Built-in audio support. Up to 27 minutes of audio per lesson consisting of up to 400 separate speeches ranging from 1 second to over a minute.

3. Attractive color graphics to illustrate the lessons.

4. L2 (Thai, Burmese, etc.) script support. Text can be displayed in the L2 script anywhere on the screen, students
can type answers in the L2 script, and authors can create new fonts or modify old ones.

5. Built-in learning aids for the student, including (1) instant speech repeat; (2) instant repeat of a slower re-recording of the speech; (3) instant play of an "alternate speech" which may be a translation or simpler re-phrasing of the speech; (4) a pop-up menu of author-supplied audio hints or explanations; (5) a pop-up menu of glossary items for the lesson; (6) ability to display the text of the speech; and (7) ability to record the student's voice and play it back.

These learning aids are available at any time during the lesson when the student is to enter a response (even in the middle of typing an answer) via a pop-up menu.

6. Multiple choice questions with audio feedback and/or a forced branch for each possible answer. In addition, short answer questions with several methods of feedback are supported. Answer entry may be in roman or L2 script. Both feedback and answer entry mode are specified by the lesson author.

7. Built-in Administrative support for defining courses and lessons, registering students, and collecting and reporting on student usage statistics.

Additional information on the FLIS system can be found in Henry, Hartmann, and Henry (1987, 1989).

1. The FLIS System in use

For the past year, students at Northern Illinois University have used FLIS as an integral part of their study of beginning level Thai and Indonesian. While it is too early for definitive conclusions about effects on student achievement, there are indications that students find the system useful and interesting. In addition, a number of observations growing out of intensive use of the system may have implications for future courseware development and for other systems of this type, and possibly for foreign language curriculum development in general.

1.1. Description of Thai and Indonesian courses
Thai and Indonesian are taught intensively at Northern Illinois University. Classes meet five days a week for 50 minutes during a 15 week semester. A two-semester sequence can fulfill a student's language requirement for the B.A. There are several significant differences between the two courses. Indonesian uses the familiar roman orthography, and so reading and writing are used from the beginning and throughout the course. Partly because of the use of roman orthography, the total lexicon presented in the Indonesian course is greater than that in the Thai course. Thai uses an "exotic" and unfamiliar script, which is introduced in class at about the fifth week. FLIS Thai lessons assume increasing familiarity with the script after that point, but it is not a major emphasis (although there are plans to develop lessons which explicitly teach and provide practice in Thai orthography). The Thai class thus has a natural initial emphasis on listening skills as opposed to reading skills. This emphasis continues at a somewhat reduced level throughout the course.

The grammars of the languages differ greatly. Indonesian is based on a rather complex inflectional grammar, with categories unfamiliar to Western learners. Even looking up words in a dictionary requires familiarity with at least part of this system. Mastering the grammar receives considerable time and attention in the second semester of the course. Thai is not an inflected language. Its grammatical complexities are governed largely by word order, hence an imperative to rely more on rote memorization of "chunks" of the language in context.

There is, in general, a greater emphasis in listening and speaking in the Thai course than in the Indonesian course. Indonesian class tests are entirely based on reading and writing with about half of each test based on memorized material and half on grammar, while a component of most Thai class tests involves listening comprehension (in which students translate a passage they have heard) or communicative activities (for example, a student written script-based conversation in which one group presents a short passage, and a second group listens and asks questions about the passage). Both courses have periods of in-class listening and speaking practice, but only Thai explicitly tests listening comprehension. Because of this fact, and the difficulty of reading Thai, the Thai students may be more naturally focussed on and attentive to listening comprehension.
Finally, there was a difference in the stated FLIS lab requirement for the two groups. Students of Indonesian were required to spend one hour per week (or more if they so desired) using FLIS lessons. They were asked to re-take and review lessons if they completed the current week's material before the end of the hour. Thai students were asked to complete a certain number of lessons, but no set minimum time was given.

1.2. Design and use of current FLIS courseware

One of the primary design requirements of current FLIS courseware was that it be consistent with and relevant to other aspects of the language courses. That is, rather than providing apparently unrelated supplementary or enrichment exercises, FLIS courseware was designed to explicitly reinforce students' classroom and textbook study experiences. It is by now a truism that courseware which is not directly related to classroom instruction and course goals will either not be used by teachers (who cannot spend the time to determine how it might fit in with or be adapted to the course) or will not be accepted by most students (who will not see any relevance to the course instructional goals and, in particular, to the class tests).

Since classroom instruction (for both Thai and Indonesian) was designed to parallel the textbook used, the text itself became the primary determiner of lesson content and pedagogical emphasis. Both books used (Wolff for Indonesian and the Brown AUA text for Thai) feature grammar and memorization-based pedagogical methodologies which date back to the audio-lingual methods of the 1960's. More modern comprehension and communication-based approaches and exercises are almost entirely absent from these books, with obvious implications for the design of CALL lessons meant to accompany them. (Discussions of some of these approaches may be found in Blair (1982), Krashen (1982), Winitz (1981), Johnson (1989), and Underwood (1984)) Thus, most FLIS lessons were designed to help students memorize and understand the texts' dialogs and narratives (with minor variations), to memorize vocabulary, and to explain and provide practice for various grammatical constructions. A notable exception is a series of lessons designed to give learners practice in hearing and discriminating spoken Thai tones.