THE DEVELOPMENT OF PERCEPTION OF ENGLISH VOWELS

BY INDONESIAN STUDENTS

by

Moneta S. Prince, B.A., M.A.

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CHAPTER 1

INTRODUCTION

Katherine: Comment appelez-vous le col?
Alice: De nick.
K: De nick. Et le menton?
A: De chin.
K: De sin. Le col, de nick, le menton, de sin.
A: Sauf votre honneur, en vérité vous prononcez les mots aussi droit que les natifs d'Angleterre.
K: Je ne doute point d'apprendre, par la grâce de Dieu, et en peu de temps.

—Henry V, Shakespeare

This may be the first English-as-a-second-language lesson recorded in literature. Alice was well aware that her mistress’s pronunciation was not as proficient as the natives of England, but Katherine, future bride of Henry V, fully believed that, with the grace of God and a little time, she would speak English acceptably. The first step in that pursuit was to be able to hear the language, and Alice was not an ideal model.

Katherine needed to know that there is a non-trivial difference in English between ‘sin’ and ‘chin’ and ‘nick’ and ‘neck’. Phonological contrasts in a target language that are not present in one’s own language must be learned if good communication is to be achieved.

This study concerns the process of the acquisition of English vowels by students in Central Java, Indonesia. It attempts to answer the following questions: Is talker-normalization a factor in perceptual performance of learners of English as a
foreign language? How helpful is perception and pronunciation drill to them in acquiring the ability to perceive the English vowel system? How do young Javanese who are beginning to learn English adjust their vowel space to accommodate the new vowel system?

The study was conducted in a small town in Central Java, Indonesia, named Salatiga. The main employer of the town is Universitas Kristen Satya Wacana, a private university with over 6,000 students. In addition there is an entire school system attached to the Education College referred to as the Laboratory School. It consists of a six-year elementary school, a three-year junior high, and a three-year senior high, or, respectively, Sekola Dasar, Sekola Menenagh Pertama, and Sekola Menengah Atas. Subjects in this study were students in the first year of the junior high school, freshman students in the English department of the University, and special teacher trainees in the English department who were not enrolled in a degree program.

English is a required subject for all six years of junior and senior high school in Indonesia. In addition, some private elementary schools offer beginning English in order to give their graduates an advantage in future schooling. Ability to speak and understand the language is extremely varied. Some junior high school teachers of English can barely speak a single sentence and cannot understand a native speaker at all. On the other hand, most college professors of English can participate in an academic conference in which all papers are presented in English.

English, however, is often not the first second language that Indonesians learn. For most individuals, the native language is a local vernacular, which may be spoken by millions of people (e.g., Javanese) or by only a few thousand (e.g., some of the languages of Irian Jaya). In order to promote national unity, the government requires all schools to be conducted in the national language, Indonesian (Malay). Children of educated parents learn Indonesian quite early, but children in rural areas whose parents are uneducated do not learn it until they go to elementary school, which is now mandatory. In areas where Indonesian is not generally spoken, schools begin with the local language and gradually phase into full-time use of
Indonesian by the fourth grade. Often a third language is learned if one lives in a border area or moves into a new region, as in the case of those in the government's "transmigration" program. People in Jakarta, where there is a great ethnic mixture, and people of Chinese ethnic background who are not well integrated into the local community often speak only Indonesian.

English has more vowel categories than Indonesian or any of the vernaculars that this writer is familiar with. Indonesian has six vowels: /i, e, a, o, u, ø/. Javanese, the vernacular of Central and East Java, has seven vowels: /i, e, æ, a, o, u, ø/. There are no diphthongs in Indonesian or Javanese.

The precise number of English vowels is debatable and varies from dialect to dialect. In this study, a 14-vowel system is assumed. These are the vowels that can receive stress in American English, including diphthongs with off-glide. Here, the vowel in 'youth' is treated as /u/ preceded by a consonant, and thus is not a category separate from the /u/ in 'booth.' The American /i/ (as in 'bird') was not used in the study because Javanese and Indonesian both lack retroflex vowels. Of the three English diphthongs with long off-glide, /ai, oI, uI/, only /ai/ was used in this study. This reduced the number of English vowels used to twelve: /i, ɪ, e, æ, æ, s, ø, u, ø, U, u, ø, aI/.

Chapter Two reviews pertinent background literature. It describes vowel perception (vowel cues, variability, categorical perception, and talker and rate variation). The literature of auditory memory is then reviewed along with studies of second-language development of phonology. This chapter closes with an examination of studies on the effects of language training.

In Chapter Three, two experimental studies are discussed. Both of these involved university students as subjects. In one, the effect of talker variation on the vowel perception of language learners was tested. Since the formants of each vowel vary from person to person, especially between male and female speakers, it was hypothesized that speech perception in a foreign language would be more difficult if one listens to a group of male and female talkers than if one listens to only one talker. Subjects were given identification tests that used single- and multiple-talker stimulus
recordings. The other experiment evaluated the effect of training in perception over a period of one semester. The hypothesis was that short, frequent sessions of perception and production drill over a semester would improve the students' ability to hear distinctions among English vowels. An experimental group received the drills, while a control group performed communication activities without emphasis on phonology.

Chapter Four is a descriptive study of the phonological progress of a group of Javanese junior high students through their first school year of English studies. The data were derived from a set of tests on vowels periodically administered to the subjects. Two pencil-and-paper tests and two tests requiring oral responses were used. The written tests were an identification test and a standard matching test. On both of these, subjects listened to recordings of single syllables presented by a native speaker of English. On the identification test, subjects labeled the stimulus vowel by selecting one of four response alternatives given on the answer sheet. On the standard matching test, a standard stimulus repeated four times at the beginning of a trial was matched with one of eight alternatives presented on the recording. Subject errors on the last administrations of these tests were analyzed. The two oral-response tests were mimicking and shadowing, the latter requiring a more rapid response. The subjects listened to model voices of American junior high school students and either mimicked or shadowed their one-syllable stimuli. These responses were recorded and formant frequency measurements were made of them and also of the stimuli. In addition, the subjects' native Javanese vowels were recorded and analyzed in like manner. The magnitude of variability of responses for each test administration was also analyzed. A hypothesis of the development of vowel acquisition in a foreign language is tentatively proposed.

The final chapter summarizes the results of Chapters Three and Four, discusses implications for teaching foreign language, and proposes further research.