

Native-like Phonology in a Second Language

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The main objective of this paper is to investigate if native-like phonology can be achieved in a second language. The theory of innateness assumes that all human beings are born with a language acquisition device, which precedes linguistic experience. In other words, the theory states that language acquisition is species-specific and that humans are able to yield a particular language, using the principles of Universal Grammar (UG) in interaction with presented experience.

Research has proven that language acquisition is quite a difficult and cumbersome process (Klein, 1991). Research has also proven that despite this difficulty, children acquire language with relative ease and speed (Hyams, 1991). However, the acquisition of second language in general, and second language phonology in particular, is seldom successful among adult language learners. The following is the hypothesis I will attempt to validate in this paper.

Hypothesis

Native-like phonology can be achieved in second language acquisition by average learners, if they use relevant learner strategies, which have been identified as helpful to successful learners.

Rationale

1. First language acquisition capability is virtually universal, as is the capacity for second language acquisition of syntax, morphology, lexicon, semantics, and pragmatics.
2. Some second language learners achieve native-like phonology in their second language.
3. By extension the capability for complete acquisition of second language phonology should also be universal; however, evidence supporting this conclusion is scarce.

Date Collection Procedures

Phase A:

The purposes of the phase A data collection are to identify learner strategies used in second language phonology acquisition and to provide reference to control data to compare successful and non-successful acquirers who have had several years of English as a Second Language (ESL) instruction with beginning/progressing ESL students. Data to be collected by:

Step1. Interviewing:

Interviews to be conducted one on one and taped.

1. Ask respondents about the types of learner strategies they felt were helpful to them in acquiring English phonological forms/pronunciation.
2. Request description of the strategies.
3. How were strategies used?
4. What tasks were they used on?
5. How frequently were they used?

6. Which strategies seemed most effective?
7. Use list of suggested strategies below to clarify definitions or as prompts if the respondent has difficulty remembering strategies used:

Suggested Strategies List:

1. Successive approximation
2. Rote memorization
3. Avoidance of troublesome forms
4. Willing to use unmastered forms even at expense of sounding foolish
5. Practice
6. Monitoring
7. Asking for correction
8. Focusing on English intonation patterns
9. Directed, selective attention to phonetic detail in aural reception of English
10. Self-evaluation
11. Making opportunities for practice
12. Requesting English speakers to speak slowly
13. Mimicking
14. Reading aloud to oneself instead of silently
15. Focusing on form-on correct phonology
16. Repetition
17. Resourcing-looking up correct pronunciations in dictionary
18. Creating and grouping auditory representations in memory

Step 2. Follow-up Self Report Questionnaire:

Questions regarding the use of strategies reported in step 1 and in the suggested strategies list will be formulated, then asked in written form. Questions will be of the type "Do you ever practice English in front of a mirror so you can watch the positions of your lips, tongue, etc.?" All answers to this questionnaire will be in closed form, recorded by putting a mark next to one of four possible answers, either "seldom/never," "occasionally," "often," or "usually/always." The same questionnaire will be used in Phase B of the study.

Phase B:

Longitudinal study of effectiveness of proposed good phonology learner strategies. Must provide instruction in use of effective strategies, which have been identified in Phase A. The benefits anticipated from the use of those strategies should also be communicated to the subject learners, as this will probably provide the primary motivation for using them.

Test speech production initially and periodically at 6 month intervals. Oral production to be tested by free speaking, reading aloud a monologue prepared to include sufficient representative English phonological forms, and reading of word lists.

Follow oral testing with self-report questionnaire.

After completing the questionnaires each test group should be refreshed in how to use the appropriate strategies and in their resultant benefits.

The control subjects, who will be drawn from the same classrooms as the test subjects will not receive strategy instructions. They will be tested orally along with the test subjects.

Subject Pool:

Phase A. Advanced ESL students, and graduates of ESL programs (may include university students and teachers). Native languages of Spanish, Japanese, and Arabic will make up separate test cells within each cell type. Age and other variables not controlled.

Cell type 1: Subjects with native-like phonology; Cell type 2 (control): Subjects with non native-like phonology.

Initial selections of subjects could come from teacher recommendations or from oral screening. Decision on whether subjects have native-like or non native-like phonology would be based on a consensus decision of a panel of native-English speakers. Phase B. Beginning ESL students, about 9th grade level with Japanese, Hispanic, and Arabic native languages. Select subjects from different classes and schools, from both multilingual classes and classes with the identified languages as the predominant first language.

This age group was selected because they have possibly the largest potential for improvement, making it easier to show the relative effects of relevant strategy use, and because they have reached Piaget's stage of formal operations which means they have the metacognitive awareness to be able to benefit from instruction in strategy use.

Control group will come from same pool.

Method of Analysis of Data:

A. In Phase A, identification of definition of learner strategies reported by interviewees and from suggested strategy prompts. Review tape recordings are required.

B. Self report questions keyed to strategies defined in A. Relative strategy use quantified by responses to questionnaire: seldom/never = 0, occasionally = 1, often = 2, and usually/always = 3.

C. Oral production errors would be tallied by type (e.g. intonation, incorrect phone, incorrect distinctive feature, vowel quality, etc.). The errors which allow minimal intelligibility but fall short of native like production would be weighed, with close to native form receiving 1 point, distinctly different but intelligible receiving 2, and unacceptable receiving 3 (native-like forms would receive 0 points, making it unnecessary to tally the correct forms). All judgements to be based on consensus by the previously described native English speaking panel.

The scores for each strategy would be maintained by test and control cells and compared for relative gains over time in Phase B and between Phase A and Phase B.

D. Try to answer the following questions, based on test data comparison:

1. Are there learner strategies which, if taught to learners and used consistently, will enhance second language phonology acquisition?
2. What is evidence for discontinuous versus accretive phonological development?
3. Which learner strategies are best for specific phonetic tasks (according to cognitive complexity)?

4. As certain phonological forms are acquired, does the effectiveness of specific learner strategies change?
5. How can fossilization of phonological development be forestalled?
6. Can effectiveness of learner strategies by first language be correlated with minimization of first language transfer?
7. What inferences can be made from the self report questionnaire data about the effect of motivation on the use of appropriate learner strategies?
8. It has been hypothesized that some learners do not pay attention to their phonological acquisition after achieving some minimal functional level of competency so that they can focus on other aspects of second language acquisition. Will encouraging learners to remain focused on phonological acquisition until native-like proficiency is attained result in slower or poorer acquisition of English syntax, semantics, pragmatics or vocabulary?
9. Variables which may affect results of testing of use of phonological acquisition strategies
10. 1. Age
11. ESL vs. English as a Foreign Language
12. Multilingual or single first language classroom
13. Effectiveness of specific strategies by learner development stage
14. Effectiveness of specific strategies by task type
15. First language type
16. Variability in native English of panel selecting Phase A subjects
17. Acquisition (and strategy use) in formal versus natural learning environment
18. Individual learner differences
19. Frequency, amount and quality of class instruction in strategy use and benefits
20. Instructional content in questionnaires
21. Motivation

Hypothesized effects on acquisition, and ideas on how to account for variability in test

1. Age: doesn't affect rate or path of second language acquisition except starting younger may let learner achieve better phonology-remove variable from Phase B by studying age group with most potential (hypothesized) for improvement, i.e. adolescents
2. ESL vs. EFL: affects exposure to native phonology-limit study to ESL.
3. Multilingual or single first language classroom: effect unknown-try to represent both in Phase B subject pool and note trends in data collection
4. Effectiveness of specific strategies by learner development stage: try to capture-test periodically in Phase B to relate strategy use to developmental acquisition of English phonological forms
5. Effectiveness of specific strategies by task type: ask respondents in Phase A about using different types of strategies for different type tasks, ask similar questions in Phase B self report questionnaire after periodic oral tests, including differentiation of strategies by oral test type
6. First language type: strategies may vary with first language-analysis of phonological and phonotactic errors in oral tests may reveal strategies of underdifferentiation, systematic (first language) misrepresentation of second language contrasts, or phone

substitutions-capture possible variable strategy use by testing Japanese, Hispanic and Arabic ESL learners (both test phases)

7. Variability in native English of panel selecting Phase A subjects: since it is difficult to determine the brand of English learned by each of the subjects in their ESL programs, the selection panel which assesses whether the subjects have native-like phonology should be representative of a variety of English phonologies-this will minimize possible selection bias
8. Acquisition (and strategy use) in formal versus natural learning environment: subject pool to consist of learners with formal exposure-selection of ESL over EFL students should ensure some “natural” exposure-ask good speakers in interviews if different strategies are used in formal versus natural environment
9. Individual learner differences: minimize possible effect on test results by using large subject pool
10. Frequency, amount and quality of class instruction in strategy use and benefits: will affect strategy use-instruct Phase B test subjects in use and benefits of strategies after every periodic test sequence, use same instruction for all test cells.
11. Instructional content in questionnaires: will reinforce strategy learning-this effect will be consistent and not objectionable across test cells; effect on control cells could bias results-plan to split control cells and measure relative gains due to learning achieved by reading and answering questionnaire
12. Motivation: Neufeld (1977) claims that all learners can achieve a primary language level, which includes a functional lexicon, and competency in pronunciation and syntax. A secondary language level which has access to complex grammatical structures, a variety of language registers and native-like phonology is only achieved however with high motivation. If motivation is the key to attaining native-like phonology, then (after identification of strategies and instruction in their use) testing for use of event the most productive phonology learner strategies will show a range of improvements which vary primarily by the motivational level which underlies the use of the strategies.

Conclusion

It is believed that UG is available to first language learners only. Second language learners, on the other hand, do not have access to UG and use information-processing strategies or problem-solving procedures, which make adult language learning very different from child language acquisition. Although the input processing strategy may not work sometimes, “the insight that acquisition involves input-processing strategies of some kind is important and should be pursued” (White, 1991).

Motivation seems to have the most significant effect on the acquisition of second language phonology. This supposition would require adding a qualifier to our principal hypothesis, something along the lines of “native-like phonology can be achieved in second language acquisition by average learners, assuming sufficient motivation, if they use relevant learner strategies which have been identified as helpful to successful learners.” A strong dependency on motivation would not necessarily discount the potential importance of appropriate strategy use however. Whether the use of certain

learner strategies results in across the board gains in phonological acquisition should still be verifiable.

Assuming the likely outcome of a range of gains, one would still be faced with the possibility that there were remaining unaccounted for variabilities in the test. However, although the contribution of motivation to the success of the learner strategies cannot be quantified in a statistically meaningful way, it can be accounted for. This could be done by including questions in the self report questionnaire designed to obtain relative motivational rankings by learner, task, and development stage.

References

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