

Aspects of the Perception and Production of a Second Language: A progress report

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ABSTRACT

This paper is a progress report on a project dealing with L2 acquisition. The research work presented here is concerned with the ability of second language (L2) users to understand spoken L2. A test battery was administered to assess some relevant abilities. These test results will be compared to an assessment of L2 speech production and related to several background factors

INTRODUCTION

This paper presents some preliminary results of experiments with the assessment of second language (L2) perception. The investigation and description of language comprehension has been approached from many different directions. The work reported here takes a broad view of the comprehension process with a particular emphasis on its phonological and phonetic aspects.

The concept of "foreign accent" has always attracted considerable attention in the study of L2 learning and use. A more modern linguistic view of this general term has opened up in the past decade and there is an ever growing interest in various aspects of that which is today known as "the acquisition of L2 speech". An excellent review of recent work in this field has been written by Leather and James (1991). In a previous progress report the idea of "perceptual foreign accent" was introduced and some arguments and data to specify this concept were presented (McAllister, 1993).

A number of social and personal factors have been proposed in recent research as constraints in a learner's progress toward acquisition of L2 speech. Social motivation, social acceptance and social distance have been investigated in relation to foreign accent and have been shown to have an influence on the mastery of L2 phonology and phonetics (Leather and James, 1991 p. 309-310). It has been argued by several researchers that personality variables play an important role in the learning of L2 pronunciation (ibid. p. 310). Certain oral and auditory capacities of the individual learner have also been shown to relate to degree of success in the mastery of L2 speech (ibid. p. 311). The present investigation of L2 perception is part of a project whose overall goal is to clarify the relationship between the production and perception of L2 and to relate overall pronunciation ability to linguistic factors and to some of the social and personal factors mentioned above.

METHODS

We have attempted in this work to measure L2 comprehension and to relate the results of the comprehension tests to some social and personal background factors which may have an influence on L2 phonological proficiency. At a later stage of the project mentioned above we will be relating the results of the comprehension test battery to an assessment of production ability.

Subjects and the test battery.

A test battery was administered to 11 american L2 users of Swedish. These subjects had a similar educational background, all the subjects had been using Swedish for more than three years and all but one of the subjects were over thirty years of age. All subjects tested with standard pure tone audiometry to establish normal hearing.

The test battery consisted of the following tests:

1. Psychoacoustics - A sub-battery composed of three computerized tests of frequency discrimination, temporal resolution, and signal type discrimination.
2. L2 word recognition in noise.
3. "Top-down" test: Phoneme monitoring in L2 sentences to determine the L2 users ability to utilize signal independent information.
4. QAR (question and response) test designed as a global measurement of speech comprehension.
5. Modified hearing measurement scale. A self assessment test designed to measure the L2 users own estimation of their comprehension ability in various listening situations.

The subjects also completed a written interview containing a number of questions about their preferred language and everyday language use.

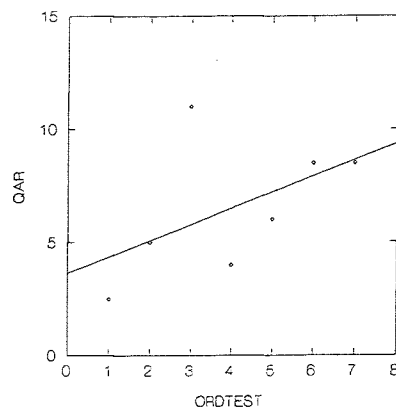
An experimental session also included the recording of a short segment of spontaneous speech to be used in the later assessment of L2 production ability. For a detailed description of these tests see Dufberg (this volume).

RESULTS AND DISCUSSION

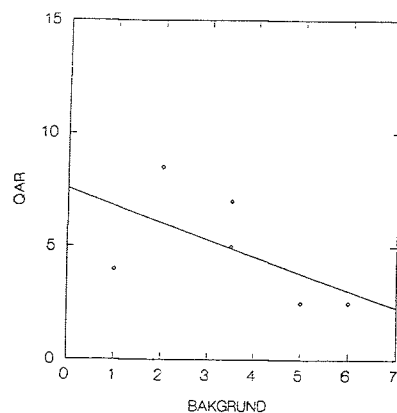
Only about one-third of the subject group has been tested thus far in this phase of the project. Consequently the statistical analysis of the test results has been limited to a pair wise Pearson rank correlation between all the tests. Most of these showed no relationship between the pairs of tests, probably partly due to our limited material at this point in time. Some of these were, however, of some interest, and could be, if they are borne out later with a larger number of subjects, worthy of comment here.

Figure 1 shows a positive relationship between the QAR test and the word test results. This is a tendency we would hope would continue to be evident as we increase the number

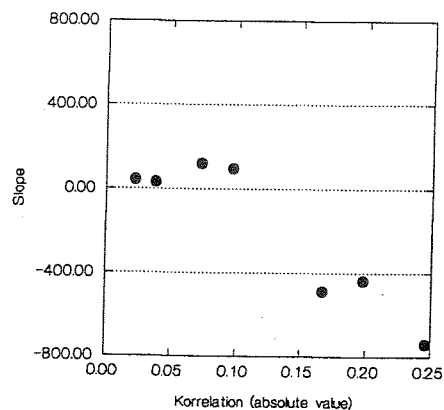
FIGUR 1



FIGUR 2



FIGUR 3



of subjects. The QAR test was designed as a global comprehension test whereas the word test was included as an important level in the battery designed to test separate components of comprehension ability. Our assumption is that word recognition ability is an important part of the global comprehension ability and therefore we would expect, if these tests have a reasonable degree of validity, a relationship between the test results like that in figure 1.

Figure 2 shows a relationship between more frequent use of and preference for L2 and a higher score on the global comprehension test QAR. This is, of course, an expected relationship which may indicate that this QAR test has the validity which we intended.

In figure 3 it can be noted that only three of the seven subjects who took the top down test responded appropriately during the test. These three subjects were not able to make use of the linguistic environment, i.e. the probability of the occurrence of the word, in their lexical search. This agrees with our previous suggestion that a major component in perceptual foreign accent is the L2 users difficulty in using signal independent information provided by a mastery of the language and its redundancies (McAllister and Dufberg, 1989).

We will, in the near future, be continuing our testing activities with new groups of L2 users.

REFERENCES

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