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FOR THE WANT OF A NAIL: SHOULD WE TEACH PRONUNCIATION TO TEACH GRAMMAR?

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Introduction

As teachers of English as a Second Language, we are all familiar with the problems of teaching English grammar to non-native speakers. The question is, how can we teach grammar more effectively? The poor efficiency of existing grammar-dominated teaching methods has led to the development of audiolingualism, notional-functional approaches, and all the present communicative approaches to teaching English. However, the perfect teaching method still eludes us, and will no doubt continue to do so for some time (Blair, 1982).

Rationale

Most of the world's ESL or EFL students rely on a formal, grammatical approach (or "propositional" as described by Breen, 1984) to learning English. Organized grammar in a propositional syllabus is a nice, neat, easy-to-arrange teaching method, (from simpler to more complex structures) and it is easy to test and grade. Until someone achieves satori in teaching methodology, in a way that will fulfill all the above academic-bureaucratic requirements for syllabus design, grading, and testing, grammar teaching will be with us in ESL and EFL. Nevertheless, something is missing from the learning equation, for the results of our labors are usually not those we desire (Garret, 1986:134). Grammar teaching is often overdone, creating a distasteful attitude towards the language being learned (Blair, 1982:214). The orderly learning process prescribed by propositional grammar teaching, that language will be gradually assimilated, is not evident; not many learners can successfully transfer mechanical grammatical abilities to real world tasks (Taylor, 1987: 55).

The strange interlanguage fossilization patterns that appear in adult learners' speech (Selinker, 1972: 215) seem to indicate that the Brown studies of first language morphological acquisition (1973), which suggest invariant, increasing levels of complexity, have much less bearing on second language acquired competence for adults (Larsen-Freeman, 1975: 417). Second language learners often have gaps in their grammatical competence, using a morpheme higher on the order of acquisition with greater facility than a morpheme lower on the order of acquisition. Much the
same result is apparent with grammar teaching; the learner can at times use more complex structures more easily than simple ones. The lack of success with grammar teaching at teaching integrative skills is not due to lack of experimentation with teaching methods, grammar teaching methods abound. Grammar has been taught:

...inductively and deductively, in the native language and the target language, with explanation and without, in paradigms and in dialogues.

(Garret, 1987:134)

Thus, it is obvious that hidden factors are negatively influencing the effectiveness of grammar teaching.

Relevant Literature

Until the publication of the Dulay-Burt studies (1974) of child second language acquisition, native language interference was accepted as the basic cause of learning problems in foreign languages. However, the L1=L2 hypothesis of Dulay and Burt seemed to indicate that morphemes are learned in an invariant order by all child learners of English as a Second Language. Their 1974 article stated that "the sequences of acquisition of 11 functors obtained for Spanish and Chinese children are virtually the same." While the overall statistical picture may indicate this, Figure One from the Dulay-Burt article is article indicates several areas of noticeable disparity in levels of competence between the two native language backgrounds. These represent areas of linguistic commonality or dissimilarity, which are classified in this paper as:

A) [+ or [-] morphological in relation to English. The native language of the subject does or does not have the same type of morphological structure as English in this area (e.g. plurals).

B) [+ or [-] phonological in relation to English. The native language of the subject does or does not have the same phonological structure in that particular position (e.g. word-final) in relation to English.

The most notable disparities in achievement for the two groups in Figure One are in areas which are both [-] morphological and [-] phonological for the Chinese learners in relation to English. This can be seen in the differences in the group means for the plurals, long plurals, and third person singulars. (Chinese has no final alveolar fricatives, nor does it use the same morphological strategy for plurals or possessives; also third person
singular verb inflection is absent). When taken as a group or individually, these final fricatives as morphological markers demonstrate greater disparity of competence than any other group or single category, excepting the slightly larger "past regular" category, which is also [-] morphological and [-] phonological in Chinese.

Figure One

This figure from the 1974 Dulay-Burt article, with mean scores highlighted

The Ss in Dulay and Burt's group are not carefully ranked by age, length of exposure to a naturalistic English environment, or amount of formal instruction, any one of which might have affected the outcome of the analysis. However, the differences in acquisition of the morphemes, while significantly consistent within language groups in order of acquisition, is very different in levels of competence. Does this mean that children within the pre-pubescent Critical Period of Lenneberg (1967) are having troubles with transfer? Could this be evidence of phonological filtering?

Bloomfield (1933) addressed phonological filtering as a significant barrier to language learning and stated that people tend to ignore sounds that are non-phonemic in their native language (e.g. an English speaker ignores the phonemic nature of Chinese tones). Flege (1981) addressed the issue of foreign accents in children and adults, and categorically stated that there is no conclusive evidence adults are permanently constrained in the acquisition of
phonology by neurobiological factors. While production is important, the other side of the coin in learning pronunciation is perception, and without perception, there can be no consistent production (Leather, 1983). This has tremendous implications for the acquisition of second languages, for a non-salient or non-phonemic phone in the second language may be completely ignored by the learner, especially if there is no comparable morphological modifier demanding a sound-shift in the native language. This is the sort of phenomenon that I believe appears in the disparities of competence shown by Dulay-Burt's studies. What caused the Chinese children, all at a prime age for language acquisition (well within the Critical Period) to fall so far behind their Hispanic counterparts in some ways?

Raymond Baird's study (1973) indicates that morphophonemic competence in children learning English as a first language doesn't transfer across morphological boundaries. In other words, just because a child can handle the /s/, /z/, and /Iz/ morphophonemic rules for the plural, does not grant the child immediate competence with the identical rules for possessives. While the Dulay-Burt study did not address pronunciation, this might explain why the Chinese children showed less difference in competence in [+ morphological areas, even with [- phonological features, such as contractible copulas.

My question at this point is why do some students seem to have so much difficulty acquiring sibilant-final English morphemes? Surprisingly, the Chinese Ss' in Dulay and Burt's study showed contractible copula, past irregular, and contractible auxiliary competence levels that reached closer to those of the Hispanic Ss (see Figure One). Of the Asian languages, Korean, Japanese, Chinese, Thai, Vietnamese, and Laotian all lack final sibilants. If the issue of phonological filtering is addressed as significant in reinforcing transfer in the acquisition of grammatical morphemes, a two level hypothesis is possible:

1) If the learner's native language is [+ morphological and [+ phonological in relation to the second language morpheme being learned, it will be easier to acquire the structure than for a learner whose language is [+ morphological and [- phonological (or vice-versa).

2) If the learner's native language is [+ morphological and [- phonological in relation to the second language morpheme being learned, it will be easier for that learner to acquire the structure than for a learner whose language is [- morphological and [- phonological.
If the above hypotheses are accepted, this would appear to indicate that if the learners don't have a phonological "hook" upon which to hang a morphological "tag," they may never acquire the structure unless it is repeatedly reinforced so that the phonological filtering is overcome.

Methodology

The Ss in this study numbered twenty-two, all from the fourth level of instruction at the English Language Center at Brigham Young University. All were within the eighteen to twenty-five age category. Ten were native speakers of Japanese; twelve were native speakers of Spanish. The testing instrument (Appendix A) was a listening comprehension test, with one contextual /s/ differentiation, and six plural contextual differentiations. These consisted of three final /s/, two final /z/, and two final /zl/. The Ss took the test by listening to the sentences read aloud, then chose a correct answer from three written choices. The native-speaker instructors from each class took the test along with the Ss as a control measure; if one question had been missed by a native speaker, it would have to have been deleted from consideration. This did not occur.

Besides the answers, basic scholastic data about the Ss were elicited, such as years of English in their native country, English in the U.S.A., and native language background. These were included as independent variables in the analysis. The answers were scored according to perceptual salience, with /s/ being least salient (devoiced) counting three points, /z/ being next most salient (voiced) counting two points, and /zl/ being most salient (voiced and vowel reinforced) counting one point. The scoring hierarchy was determined by level of audibility, with the idea that voicing was louder than devoicing, and an added vowel added duration (and thus greater noticeability) to the sound. This accorded a possible total score of fifteen.

Analysis

Three one-way analyses of variance were performed to determine whether or not significant differences separated the groups of Ss when grouped according to the independent variables. The Ss were analyzed according to native language background, English in the U.S.A., and English as a foreign language. Since the groups being tested are Hispanic ([+] morphological and [+] phonological in relation to English plurals), and Japanese ([+] phonological and [-] morphological in relation to English plurals), the results were held significant if p<.01. See Table One for the results of this analysis.
# Table One

## Analyses of Variance by ESL, EFL, and Total Score

### Amount of English in the U.S.A. (years)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>DF</th>
<th>Sum/sq</th>
<th>Mean/sq</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN</td>
<td>10</td>
<td>0.645</td>
<td>.312</td>
<td>20</td>
<td>0.079</td>
<td>0.079</td>
<td>0.973</td>
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<tr>
<td>SPN</td>
<td>12</td>
<td>0.525</td>
<td>.259</td>
<td>20</td>
<td>1.615</td>
<td>0.081</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td></td>
<td></td>
<td>20</td>
<td>0.079</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>1.615</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td>1.693</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pr&gt;f</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.663</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Amount of English in Native Country (years)

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>DF</th>
<th>Sum/sq</th>
<th>Mean/sq</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN</td>
<td>10</td>
<td>6.70</td>
<td>1.16</td>
<td>20</td>
<td>104.01</td>
<td>104.01</td>
<td>38.33</td>
</tr>
<tr>
<td>SPN</td>
<td>12</td>
<td>2.33</td>
<td>1.96</td>
<td>20</td>
<td>54.27</td>
<td>2.71</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td></td>
<td></td>
<td>20</td>
<td>104.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>54.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td>158.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pr&gt;f *0.001</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Total Score on Perception Test

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Sd</th>
<th>DF</th>
<th>Sum/sq</th>
<th>Mean/sq</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>JPN</td>
<td>10</td>
<td>1.90</td>
<td>1.66</td>
<td>20</td>
<td>119.64</td>
<td>119.64</td>
<td>16.64</td>
</tr>
<tr>
<td>SPN</td>
<td>12</td>
<td>6.58</td>
<td>3.29</td>
<td>20</td>
<td>143.82</td>
<td>7.19</td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1</td>
<td></td>
<td></td>
<td>20</td>
<td>119.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
<td>143.82</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td></td>
<td></td>
<td></td>
<td>263.46</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pr&gt;f *0.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

JPN = Japanese native language group
SPN = Spanish native language group

## Findings and Discussion

As seen in the results of the analyses of variance and in Figure Two (below), there is no significant difference in the amount of English in the United States between the Japanese and Hispanic groups, while there is a significant weighting towards the Japanese Ss (p<.001) in the amount of English as a Foreign Language. It would seem reasonable that extra instruction should provide advantages for the Japanese Ss in being tested in a simple grammar task, in this case identification of the plural morpheme. This is manifestly not the case. It is apparent that the "grammar
"teaching" did not provide any benefit at all for the Japanese native language group in an integrative listening-grammar skills task.

Regardless of the greater amount of EFL for the Japanese Ss, the Hispanic native-language group did better on the final-sibilant perception test at the p < .001 significance level than did the Japanese Native-language group. The Hispanic group had a significant advantage; this seems directly attributable to phonological filtering by the Japanese group. All the Ss are from the same level of competence, and had comparable amounts of ESL instruction.

Figure Two

Japanese & Hispanic ESL Students' Perception of Final Sibilants

Mean Raw Score

<table>
<thead>
<tr>
<th>Language Group</th>
<th>Series A</th>
<th>Series B</th>
</tr>
</thead>
<tbody>
<tr>
<td>EFL</td>
<td>1.16</td>
<td>1.96</td>
</tr>
<tr>
<td>Score p &lt; .001</td>
<td>1.67</td>
<td>3.28</td>
</tr>
<tr>
<td>ESL</td>
<td>0.24</td>
<td>0.31</td>
</tr>
</tbody>
</table>

Series A = Japanese Ss
Series B = Hispanic Ss
Conclusions and Suggestions for Further Research

While the testing instrument in Appendix A needs further refinement, and other sibilant-final morphemes examples to see if this result holds true for other morphological concepts as well, this pilot study indicates that there may be a significant reinforcing phonological-morphological acquisition blocking phenomenon at work here. If this is the case, any learner from a native language that is [-] morphological and [-] phonological in relation to a given grammatical morpheme in English will have a much more difficult time with that particular structure than a student from a native language that is [+]-morphological and [+]-phonological in relation to that structure.

Further tests of this concept with a third group ([-]+ morphological and [-]-phonological or [-]-morphological and [+]-phonological group in relation to a given English morpheme) to balance the extreme [+]/[+] to [-]/[-] linguistic separation between the Japanese and Hispanic Ss should also be done. This would test all possible levels of the hypotheses simultaneously.

This type test need not be limited to English. Tone-phonemic language learners from tone non-phonemic language backgrounds (Americans learning Chinese) should be contrasted with tone-phonemic native language background learners learning a second tone-phonemic language (such as a Thai learning Chinese). If the two groups of Ss are at the same levels of competence more phonological filtering may appear for the American group.

The lower disparity of results between the Chinese and Hispanic students in Figure One (e.g. contractible copulas) even when the phonological tag is missing for the Chinese Ss may prove to be a vital clue. If the morpheme is easier to acquire when it is a shared concept, this may indicate shared morphology can overcome phonological filtering.

What factors will affect changes in this problem in relation to the teaching of grammar by using pronunciation more successfully one can only hypothesize; procedures might include the repeated stressing of perception and production of novel morphemes for students who don't have it in their morphological or phonological inventory.

Which is more important, the phonological sound or the morphological concept, is a veritable "chicken or egg" question, and as yet unanswerable; but there is one certainty. Until those learners who filter sounds hear them, they may never develop a morphological relationship to fit the phonetic occurrence, no matter how much grammar they study. Without the teaching of pronunciation to foster
perception, the language acquisition device may never be able to sort out the rules for spontaneous creative construction at a native-speaker level. For the teaching of grammar to be truly effective in modern language courses, it might be necessary to teach pronunciation and listening comprehension as an integral part of it.

REFERENCES


APPENDIX A

Test of final sibilant consonants

1. "His son was just six yesterday."
   A. His son was not ill.
   * B. His son had a birthday
   C. His son was ill only yesterday.  3 points /s/

2. "Where shall I put the books?"
   A. Put the book here.
   * B. Is it very heavy?
   C. Set them over there.  3 points /s/

3. "Get the boxes from the car."
   A. The box isn't there now.
   B. Which box do you want?
   * C. How many are in there?  1 point /z/

4. "Are you going to buy her the roses?"
   * A. Only if I can find them.  1 point /z/
   B. No, it is too much.
   C. Yes, if she wants one.

5. The boys want a to go to a movie.
   A. He can go tonight.
   B. Will he do his homework first?
   * C. What time will they come back?  2 points /z/

6. "Can I please get the gloves George has?"
   A. No, it's too big for you, isn't it?
   * B. If George says so, you can get it.
   C. Who will help you put them on?  2 points /z/

7. Our bikes should be put away at night.
   A. Don't forget to put it away tonight.
   * B. Someone might take the bikes from outside. 3 points /s/
   C. Will you help put the bike away?