

# ARE TEACHERS REALLY FOSSILIZED?

## A LOOK AT THE GRAMMATICAL COMPETENCE OF FOREIGN LANGUAGE TEACHERS

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*i*t is commonly argued, and often accepted, that foreign language teachers' proficiency does not improve much once they graduate from college. This is often referred to as the "terminal two" phenomenon and there is some empirical evidence to support the claim. The paper will present evidence that foreign language teachers' language skills do, in fact, improve over time, particularly when we focus on grammatical competence. Fossilization does not appear to be an unavoidable situation for teachers, even though they spend most of their time speaking in rather limited ways with their students.

As college students, prospective teachers may feel that their emphasis should be on language proficiency. One of the most popular courses offered at Weber State University in Spanish is Advanced Grammar. Perhaps these students are merely refugees from literature classes, but it is likely that they feel that a grammar class will have a more immediate impact on their language competence.

Lafayette (1992) argues that institutions that prepare teachers should aim for high proficiency. "If the recommended proficiency levels are to be achieved by prospective teachers, either emphasis in the major language area must focus on language itself, or all literature and other content based courses must include a language component" (p. 137). Sadly, in many

colleges and universities, most upper division courses that focus on the “language itself” are focused on understanding and describing grammar and phonology, and not on improving proficiency.

June Phillips wrote in 1998 that the *ACTFL Guidelines for Teacher Education* provisionally required that prospective teachers perform at the Advanced High level (Advanced Mid in writing). NCATE was also proposing that teacher education candidates perform at the advanced level, (Phillips, 1998). Both NCATE and ACTFL eventually set their proficiency standard at Advanced Low in both speaking and writing. The implication is that Advanced Mid or Advanced High may be too high an expectation for graduating majors. To achieve an Advanced Mid rating, prospective teachers must be able to engage in and maintain extended discourse. There should also be no obvious patterns of error. An Advanced Low rating, the one now required of NCATE and ACTFL, permits a candidate to falter from time to time or to slip occasionally into the Intermediate range, while the overall performance is at the Advanced level.

John Carroll, in his now famous 1967 study of 2,784 college language majors, found them performing consistently at an FSI (Foreign Service Institute) rating of 2+ (corresponding generally to the Advanced level on the ACTFL Scale). This finding has been replicated several times, and not-surprisingly, teachers who have been in the field for many years remain at the same “terminal two” level (Carroll, 1982). Carroll noted that residence abroad was the major factor in creating higher proficiency. Krashen (Dulay et al., 1982) interprets Carroll’s data to mean that students must learn language in a “natural” way. Others have felt that the best solution is actual time abroad. If indeed residence is one of the few ways to improve L2 proficiency, and if teachers do not get residence experience after graduating from college, we should not expect improvement after graduation. This is indeed what the research has shown.

Fossilization, however, is not the only explanation for this observation. A sociolinguistic view might argue that a teacher’s proficiency will improve when there is a need for better proficiency. Most school teachers spend their days speaking with students with much less proficiency than their own. It is only logical then, that the teachers’ proficiency will not improve in such an environment. On the other hand, if there is a need on the teachers’ part to improve their proficiency, they will find a way. This paper will argue that teachers will become more competent in their use (and understanding) of grammar for two reasons: first, grammar constitutes a significant part of what most teachers study while in college, and second, for good or for bad, most teachers spend a significant amount of time in their classrooms practicing and explaining specific grammatical usages and structures.

## Grammatical Competence

Competence is the engine that drives proficiency. Whether expressed as *langue* vs. *parole* (Saussure), as “competence” vs. “performance” (Chomsky), or as “acquisition” and “monitored output” (Krashen), models of language learning and production include a knowledge (of which a speaker may be aware or not) that underlies performance. Proficiency is an interplay between this underlying knowledge and the performance.

Canale and Swain (1980), in a seminal article, divided competence into four different components: grammatical competence, sociolinguistic competence, discourse competence and strategic competence. Proficiency, as defined by ACTFL and others, and as represented in the National Standards, must reflect competence of all four types. The OPI, depending on the level, also includes such skills as fluency and rhetorical style (i.e., argument, persuasion, etc.).

I question whether a global measure, like an OPI or other proficiency test, can give a full picture of a foreign language teacher’s competence, and more particularly to label a teacher as fossilized. The ACTFL scale values extended discourse at the Advanced levels, and at the Superior level requires such academic skills as hypothesizing, debating and defending points of view. Considering the daily classroom routine of a teacher, these skills are not likely to be practiced often, even in higher level classes, and the teacher’s OPI proficiency, given the nature of the ACTFL scale is unlikely to improve. However, fluency, grammatical competence, social and cultural understanding may improve in ways that are not detectable with the OPI.

For this study, I determined to look only at grammatical competence and compare college majors and minors in Spanish with public school teachers in Spanish. Although public school teachers may not improve in fluency over time, they should improve in their grammar skills, since they do get to practice and reflect on them—indeed, grammar is too often a main focus of classroom activities in high school.

## HYPOTHESES:

1. Experienced teachers will perform significantly better on grammar tasks than college majors and minors.
2. Students with foreign residence will perform better on grammar tasks than students without residence; however, this effect will be less pronounced among teachers.

### Survey

A survey instrument was made up of three sections to test three phenomena of Spanish grammar that are often problematic for native speakers of English: the use of *ser* and *estar*, the use of preterite vs. imperfect, and the use of the subjunctive in subordinate clauses. All three sections were made up of dichotomously scored items.

The first section contained 30 sentences with a linking verb missing; examinees were asked to indicate their preference for *ser* or *estar*. They did not need to conjugate the verb, but merely make a choice of one or the other. To illustrate, the instructions and first three items from the *ser* and *estar* test were as follows:

Ser y estar—**Para cada una de las frases a continuación, indique si mejor conviene «ser» o «estar».**

- |    | Ser                      | Estar                    |   |
|----|--------------------------|--------------------------|---|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | Apenas reconozco a Luis; _____ muy gordo.                 |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Ayer _____ el 22 de marzo.                                |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Ayer encontré una cartera y me dicen que _____ de Felipe. |

The second section was a short story, narrated in the past. All of the verbs (50 of them) were left in the infinitive form and examinees were asked to indicate whether the verb was better expressed in the preterite or the imperfect. The instructions and first paragraph of this section follow:

**El pretérito y el imperfecto**—For each unconjugated verb in the following text, indicate whether it is better expressed in the past preterite or the past imperfect.

- |     | PRET                     | IMP                      |
|-----|--------------------------|--------------------------|
| 1.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 2.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 3.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 4.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 5.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 6.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 7.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 8.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 9.  | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. | <input type="checkbox"/> | <input type="checkbox"/> |

#### La historia de Fernando por Munro Leaf

En España (1) HABER una vez un torito que se (2) LLAMAR Fernando. Todos los otros toritos con los cuales él (3) VIVIR, (4) CORRER y (5) BRINCAR y se (6) DAR topetadas, pero Fernando no. Le (7) GUSTAR sentarse en simple quietud y oler las flores. (8) TENER un lugar favorito afuera en la pradera debajo de un alcornoque. (9) SER su árbol favorito y (10) PASAR el día a la sombra oliendo las flores.

The third section of the test presented 50 sentences containing subordinate clauses. Each subordinate verb was left in the infinitive form and the examinees were asked to indicate whether the verb was better expressed in the indicative or the subjunctive. The first three of this type and the instructions follow:

**El subjuntivo**—Please indicate whether the unconjugated verbs in the following sentences are better expressed in the indicative or in the subjunctive.

- |    | Ind.                     | Subj.                    |                                       |
|----|--------------------------|--------------------------|---------------------------------------|
| 1. | <input type="checkbox"/> | <input type="checkbox"/> | ¿Con quién quiere que me CASAR yo?    |
| 2. | <input type="checkbox"/> | <input type="checkbox"/> | Me alegro que VENIR.                  |
| 3. | <input type="checkbox"/> | <input type="checkbox"/> | Si ese hombre LLEGAR, yo lo recibiré. |

It is granted that these three sections are discrete-point tests of grammatical usage and would make poor tests of general proficiency or of achievement. However, their purpose in this study is to check on grammatical or even metagrammatical competence.

In addition, there were several demographic questions (discussed below).

### Subjects

The survey was administered to 31 college Spanish majors and minors enrolled in an advanced grammar class at Weber State University (Spanish 3360—Spanish Grammar Review). The survey was administered as a “preliminary exam” and students were told that the results would not count as part of their grade in the class and they were scored anonymously.

In addition to the grammatical sections, the students were also asked to complete the following short survey:

1. Male  – Female
2. Are you a Spanish major? – Yes  No
3. Are you a Spanish minor? – Yes  No
4. Are you in teacher education? – Yes  No
5. Have you lived in an area where Spanish is the predominant language? – Yes  No
6. If so, how long? \_\_\_\_\_
7. Including this one, how many upper-division Spanish classes have you taken? \_\_\_\_\_

The survey was also sent to 55 Spanish teachers in public junior high schools and high schools in Utah. The teachers' names were collected from the language supervisor for the Weber County School District and from the membership list of the Utah Foreign Language Association. Of the 55 surveys mailed, 18 were returned (a return rate of nearly 33%).

The teachers were also asked to complete a short survey in addition to the grammatical sections. The teacher surveys were anonymous. The questions asked were the following:

1. Male  – Female
2. Do you teach Spanish full time? – Yes  No
3. What levels of Spanish do you teach? \_\_\_\_\_
4. Have you lived in an area where Spanish is the predominant language? – Yes  No
5. If so, how long? \_\_\_\_\_
6. Have you taken any Spanish classes since you began teaching?
  - a. Yes  No

Some of the demographic information for both groups is shown in Table 1. Both groups were unequally divided by sex. In the student group, most of the subjects were men and in the teacher group most were women. Given this disparity, the data were analyzed to see if this seemed to make a difference.

**TABLE 1: Demographic information for student group and teacher group.**

Student Group		Teacher Group	
N	31	N	18
Male	23 / 74%	Male	5 / 29%*
Female	8 / 26%	Female	12 / 71%
Residence	24 / 77%	Residence	13 / 72%
Average no. of months	17.6	Average no. of months	18.92
Majors	11 / 35%		
Minors	20 / 65%		
Teacher Education	4 / 13%	Classes since graduation	8 / 44%

\*one of the teachers did not indicate male or female

## Data and Analysis

Although past research has shown that teachers' oral proficiency levels do not increase significantly over time, I hypothesized that teachers' grammatical competence would indeed be higher than college majors and minors. Table 2 compares the results of the three grammatical tasks for the two groups. The hypothesis is confirmed. Teachers did indeed perform better than students on all three tasks. On two of the tasks the difference is statistically significant ( $p < .05$ ).

The statistical analysis used was the *t*-test, an operation which compares two sets of data, in this case the teachers and the students, to see if there is a significant difference between their means. A difference, no matter how large, will not be significant if it is likely due to chance, or if it is likely to be a random outcome. The result of a *t*-test is a *t*-value, and farther the *t*-value from zero, either positive or negative, the greater the difference between the means. Crucially, it is the value of *p* (for probability) that tells us whether or not the difference is random or real. If *p* is less than .05, it means that the results would have occurred by chance less than 5% of the time. Thus a *p* of less than .05 is a very good indicator that the difference between two sets of numbers is due to some characteristic of the sample from which the numbers were derived. Thus, on the *ser* and *estar* test, the teachers and the students did not perform in a statistically different way—there is a 39% chance that those same scores could have been drawn randomly. However, on both the preterite/imperfect and the subjunctive sections, the teachers and students did perform differently and in a way that was statistically significant.

TABLE 2: Students and teachers compared on three grammatical tasks.

	Students		Teachers		<i>t</i> -value	<i>p</i>
	Avg. No. Correct	Percent Correct	Avg. No. Correct	Percent Correct		
<b>Ser vs. estar</b>	23.87	80%	24.72	82%	-0.87	.388
<b>Pret. vs. imperfect</b>	37.35	75%	43.33	87%	-3.14 *	.003
<b>Subjunctive</b>	34.55	69%	37.72	75%	-2.10 *	.041

\* difference is significant:  $p < .05$

Since there were so many more men than women in the student group, and so many more women than men in the teacher group, Table 3 shows the results of a series of t-tests between the sexes. Among the students there was no statistically significant difference. Among the teachers, the males outperformed the females on all of the tasks and significantly on two of them. However, it must be noted that these comparisons are based on only 5 male teachers, and the statistics are therefore not reliable.

TABLE 3: Comparison of students and teachers by sex.

Students						
	Male		Female		<i>t</i> -value	<i>p</i>
	AVG. NO. CORRECT	PERCENT CORRECT	AVG. NO. CORRECT	PERCENT CORRECT		
<b>Ser vs. estar</b>	24.57	82%	21.88	73%	1.37	.207
<b>Pret. vs. imperfect</b>	37.13	74%	38.00	76%	-0.32	.757
<b>Subjunctive</b>	34.87	70%	33.63	67%	0.55	.598
Teachers						
	Male		Female		<i>t</i> -value	<i>p</i>
	AVG. NO. CORRECT	PERCENT CORRECT	AVG. NO. CORRECT	PERCENT CORRECT		
<b>Ser vs. estar</b>	26.80	89%	24.00	80%	1.94	.109
<b>Pret. vs. imperfect</b>	48.00	96%	42.92	86%	3.96 *	.002
<b>Subjunctive</b>	42.00	84%	36.17	72%	2.33**	.053

\* difference is significant:  $p < .01$

\*\* difference is significant:  $p < .10$

The second hypothesis was that significant residence experience would result in higher scores for college students, but that the effect would diminish in teachers. In both groups, the number of subjects without any in-language residence experience was low (7 students and only 5 teachers) making statistical analysis rather unreliable. Nevertheless, Table 4 compares the students who have spent time abroad with those who have not. On all

three tasks, students with residence experience performed better than those without: on two of the tasks the difference was statistically significant.

**TABLE 4: Students with residence experience compared to students without foreign residence.**

	Students without resident experience (N = 7)		Students with resident experience (N = 24)			
	AVG. NO. CORRECT	PERCENT CORRECT	AVG. NO. CORRECT	PERCENT CORRECT	<i>t</i> -value	<i>p</i>
<b>Ser vs. estar</b>	19.29	64%	25.21	84%	-4.10 *	.005
<b>Pret. vs. imperfect</b>	34.86	70%	38.08	76%	-1.39	.188
<b>Subjunctive</b>	31.57	63%	35.42	71%	-1.96 **	.078

\* difference is significant:  $p < .05$

\*\* difference is significant:  $p < .10$

Table 5 similarly compares teachers with residence experience and those without. Similar to the student group, on each task the teachers with in-language residence performed better than those without; however, in no case was the difference statistically significant. This is in keeping with the second hypothesis.

**TABLE 5: Teachers with residence experience compared to teachers without foreign residence.**

	Teachers without resident experience (N = 10)		Teachers with resident experience (N = 8)			
	AVG. NO. CORRECT	PERCENT CORRECT	AVG. NO. CORRECT	PERCENT CORRECT	<i>t</i> -value	<i>p</i>
<b>Ser vs. estar</b>	24	80%	25	83%	-0.65	.542
<b>Pret. vs. imperfect</b>	40.80	82%	44.31	89%	-0.79	.472
<b>Subjunctive</b>	36.40	73%	38.23	76%	-0.65	.533

The information in Tables 4 and 5 depended merely on whether or not the subject had spent time abroad, but does grammatical competence improve with the amount of time spent abroad? Table 6 shows the results of these correlations. As predicted by the hypothesis, a positive correlation existed among the students—that is, the longer they had spent in residence the better their grammatical competence. There were no significant correlations among the teachers. In fact, two of the miniscule correlations were actually negative.

**TABLE 6: Correlations with time spent in residence and grammatical tasks.**

<b>Students</b>		
Correlation between number of months in residence and:	Coefficient	Probability
<b>Ser vs. estar</b>	$r = .658^*$	$p = .000$
<b>Pret. vs. imperfect</b>	$r = .189$	$p = .309$
<b>Subjunctive</b>	$r = .304^{**}$	$p = .096$
<b>Teachers</b>		
Correlation between number of months in residence and:	Coefficient	Probability
<b>Ser vs. estar</b>	$r = -.124$	$p = .624$
<b>Pret. vs. imperfect</b>	$r = .239$	$p = .280$
<b>Subjunctive</b>	$r = -.059$	$p = .815$

\* difference is significant:  $p < .01$

\*\* difference is significant:  $p < .10$

The last comparison made was to see if teachers who had taken classes in Spanish since they graduated from college did better than teachers who had not. Again the sample is small, but the data suggest that “in-service” classes do not make a difference in grammatical competence. There was no significant difference between these two groups on any of the grammatical tasks. This data is shown in Table 7.

**TABLE 7: Teachers who have taken courses since college graduation compared with those who have not.**

	Teachers without classes (N = 10)		Teachers with classes (N = 8)		t-value	p
	AVG. NO. CORRECT	PERCENT CORRECT	AVG. NO. CORRECT	PERCENT CORRECT		
<b>Ser vs. estar</b>	25	83%	24.38	81%	0.48	.644
<b>Pret. vs. imperfect</b>	42	84%	45	90%	-1.12	.286
<b>Subjunctive</b>	38.40	77%	36.88	74%	0.60	.561

**Conclusions**

Both of the hypotheses were confirmed. The “terminal two” phenomena, so often cited to deride the abilities of teachers does not mean that teachers have fossilized. Rather, language speakers generally improve in their proficiency when there is a reason to do so. High school language teachers typically have little need for skills beyond the Advanced Low to Advanced Mid level when teaching their classes, and at the same time they have typically little opportunity to find themselves in environments that will pressure them to push their proficiency to a measurably higher level. It is therefore not reasonable to say that they have fossilized, but more precise to describe their proficiency as having reached a stable plateau corresponding to their daily needs.

Grammatical accuracy is only a component in what makes a proficient language user, but grammatical errors, and particularly patterns of error, do impact on a proficiency rating. It is my conclusion that the improvement in grammatical competence seen among in-service teachers when compared with the competence of college majors, although measurable as shown in this study, may not generally result in an improved proficiency rating.

While teachers do seem to improve their grammatical competence, they have little opportunity to strengthen or broaden their vocabulary, or to refine their abilities to argue or hypothesize in the language; these simply are not skills that are practiced when teaching lower level language classes.

At the same time, school teachers find that their understanding and

use of particular structures increases as they use, explain and practice these forms with their students. It is therefore reasonable to expect that their competence and reflected performance, respective to these specific forms, will become more precise. This improvement and precision will, of course, benefit both teachers and students.

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