A study compared the effectiveness of two antithetical approaches to teaching writing (formal grammar instruction and the process approach) on students' knowledge of grammar and writing improvement. Subjects, 70 college students randomly assigned to four sections of a first-year writing course, were divided into treatment and control groups. The diagnostic test which accompanies Houghton Mifflin's "The Riverside Handbook" was administered on a pretest-posttest basis. The same instructor taught both groups and had no knowledge of the experimental design. The treatment group was taught using the process approach. No formal grammar instruction was given to the treatment group. Both groups completed the same essay and other assignments as the treatment group. Results indicated that the treatment group scored a higher number of correct answers on the posttest than did the control group, and the treatment group attempted to answer more test questions on the posttest than the control group did. Findings suggest that the process approach to teaching writing, which deemphasizes formal grammar instruction, may be more effective in improving students' knowledge of grammar than formal grammar instruction. (Four tables of data are included. Contains 11 references.) (RS)
EFFECTIVENESS OF TWO APPROACHES TO TEACHING WRITING IN IMPROVING STUDENTS' KNOWLEDGE OF ENGLISH GRAMMAR

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English teachers have long viewed the study of grammar as a necessary component of writing instruction. Their belief is based on the assumption that the knowledge of grammar will improve the quality of student writing. Some recent studies have defended formal grammar instruction (Davis; Neuleib and Brosnahan).

However, most investigations of the effects of formal grammar instruction on student writing have found virtually no positive impact on student writing. Recent reviews of research support the view that the study of grammar has had no effect on the quality of student writing (Hillocks; Noguchi).

The present study sought to look at the question of the effects of teaching of grammar from a different perspective. It asks, What is the effect of the presence or absence of grammar instruction on students' knowledge of grammar? How would two different approaches to teaching writing--one omitting any formal grammar instruction, the other explicitly teaching grammar--affect students' knowledge of grammar as measured by a diagnostic grammar test?

To answer these questions, one group of students in a first year college writing class received no formal grammar instruction, while students in other sections of the same course were taught grammar throughout the course.

TWO APPROACHES TO TEACHING WRITING

This study uses the term, "grammar," as defined by Rei R. Noguchi:
...this type of grammar is the one most commonly taught in the classroom....I restrict the term to mean the set of categories, functions, and rules (both descriptive and prescriptive) that teachers commonly employ to describe a sentence and its parts....Teachers of traditional grammar,...employ such categories as noun, verb, phrase, and clause and such functions as subject, direct object, and predicate nominative....I use the phrase 'formal grammar instruction' to mean the direct and sustained teaching of these categories, functions, and rules through definition, drill, and exercises.

Teachers who use formal grammar instruction in their writing courses usually incorporate extensive discussion and drill in these elements of grammar in their writing classes. While the format may vary, the typical approach to grammar instruction includes lecture/discussion on grammatical elements, presentation of definitions and examples (e.g., this is what a dependent clause is, and here are examples of same), and drills which require the student to identify and/or correct grammatical mistakes.

The assumption behind this approach to teaching writing is that, once the student acquires knowledge of grammar, there will be a transfer of this knowledge to the student's writing, along with a concurrent improvement in the writing.

Yet, as Noguchi, among others, has observed, "...I tend to agree with the majority of past studies that indicate
that formal grammar instruction, as commonly conceived and practiced, has failed to produce significant writing improvement (15)."

The process approach to teaching writing eschews formal instruction in grammar, emphasizing instead the extensive production of student writing and the editing and revision of this writing by the students themselves.

Grammar is assumed to be learned during the acts of writing, revising, and editing. The student's own writing is the model from which writing and grammar are to be learned.

This approach to teaching writing avoids formal grammar instruction, instead urging the students to compose and correct themselves. Writing is seen as context-specific, differing for each student, and depending upon the particular writing situation in which the students find themselves (Belenoff and Dickson; Fulwiler; Rawlins; Smith).

Because each student's writing is idiosyncratic, each student violates different rules of grammar. Thus, no teacher can address this multiplicity of individual errors via formal grammar instruction to an entire class.

Clearly, both the formalist and the process-oriented teachers are diametrically opposed in their approaches to teaching writing and in their emphasis, or lack of it, on formal grammar instruction. Given these opposing approaches to teaching writing, the main research questions in this study are:
1) What is the effect, if any, of two, antithetical approaches to teaching writing on students' knowledge of grammar?

2) How would students receiving no formal grammar instruction compare on a diagnostic test with students who had received formal grammar instruction?

**METHOD**

**Subjects**

The subjects were 70 college students randomly assigned to four sections of a first year writing course. The treatment group was composed of two sections (N=14, N=18), collapsed for purposes of this study into one treatment group (N=32). The treatment group contained 16 males and 16 females. 17 were black; 14 were white; 1 was Asian.

The two sections (N=18, N=20) in the control group were also collapsed into one control group (N=38). 19 were male, and 19 were female. 34 students were black; 4 were white.

**Measures**

Data on the dependent variables were gathered on a pretest-posttest basis. The diagnostic test (Form A) which accompanies Houghton Mifflin's *The Riverside Handbook* was administered during the first week of the semester, and its alternate (Form B) was given in the last week of the semester.

Both Forms A and B of this diagnostic test contain 55 items and are intended to assess a first year college student's knowledge of English grammar. Each test question presents three correct sentences and one incorrect sentence. The student is
asked to identify the incorrect sentence in each test question.

Subjects were asked to identify the incorrect sentence and to write the letter of the incorrect sentence on an accompanying answer sheet. Both the pretest and the posttest allowed one hour for completion.

There are 17 sub-categories within the diagnostic test, which correspond closely to Noguchi's description of "traditional grammar," quoted above. These categories are:

PART 1, SENTENCE PARTS

1) sentence fragments, comma faults, fused sentences [7 items]
2) errors in verb form and tense [3 items]
3) errors in subject-verb agreement [2 items]
4) errors in pronoun use [6 items]
5) errors in the use of adjectives and adverbs [3 items]

PART 2, SENTENCE STRUCTURE

6) errors in sentence completeness [2 items]
7) errors in consistency (shifts in verb tense, lack of parallelism) [6 items]
8) errors in the placement of modifiers in a sentence [2 items]
9) errors involving the separation of closely related parts of a sentence [2 items]

PART 3, PUNCTUATION

10) errors in the use of commas [4 items]
11) errors in the use of semicolons and colons [3 items]
12) errors in the use of quotation marks and terminal punctuation [4 items]

PART 4, MECHANICS
13) errors in the use of italics [2 items]
14) errors in the use of hyphens [2 items]
15) errors in the use of apostrophes [2 items]
16) errors in capitalization [2 items]

PART 5, DICTION (WORD CHOICE)
17) errors in the choice of words and of idiomatic expressions [3 items]

No technical data currently exists on the alternate forms of the diagnostic tests used in this study, according to Dean Johnson, a Houghton Mifflin editor who helped develop these diagnostic instruments.

Teacher/Classroom Procedures

The same instructor taught both the treatment and control groups. The classroom instructor was given a syllabus for each group, and was conversant with the two teaching methodologies to be used. The instructor had no knowledge of the experimental design and no information about the efficacy or expectations for either approach to teaching writing used in the study.

The treatment group was taught using the process approach to teaching writing described above. No formal grammar instruction was given to the treatment group.

The control group completed the same essay and other assignments as the treatment group, but the control
group received formal grammar instruction throughout the semester.

Students in the treatment group were randomly assigned to a first year college writing course designed to teach prose composition. The instructor employed the process approach to teach writing to the treatment group. Using this approach, students wrote eight assigned essays, and they submitted a weekly journal—a minimum of 500-600 words per week—to the instructor.

Journals were read each week by the instructor and returned with comments only about the content of the writing, never about the grammar in the journals.

Student essays were read by the instructor, who highlighted, but did not name, the writing errors and/or problems in each student's essays. After receiving each essay read by the instructor, students had the option of revising the essay for resubmission.

The burden of identifying and correcting the grammatical mistakes highlighted by the instructor in the first draft of each essay rested with each student. The instructor merely noted each writing "problem" in the text by highlighting the item.

In addition, each student was required to select a minimum of three essays from all of the writing for the semester, and submit these three essays as a writing portfolio at the end of the semester.

No formal grammar instruction was given to students in the treatment group at any time during the semester. However, students engaged in extensive peer reading and editing of each
other's essays. Students also met individually with the instructor throughout the semester to review their efforts at editing, revising, and correcting their writing.

Like the treatment group, students in the control group were randomly assigned to a first year college writing course. They also wrote eight essays, submitted a weekly journal, and compiled a portfolio of three essays for submission at the end of the semester.

In addition, throughout the semester, students in the control group received regular, formal grammar instruction. Topics included the following:

1) basic sentence errors
2) commas
3) periods, question marks, colons, and semi-colons
4) eliminating excessive punctuation
5) subject/verb agreement
6) tenses of verbs
7) parallelism
8) clauses and sentence fragments

RESULTS

Pretest comparisons were made between the treatment and control groups to ascertain if there were any initial differences between the two groups. Table 1 presents means, standard deviations, and the obtained t-value for the number of test items attempted by the two groups on the pretest.
Table 1
Treatment and Control Group Scores for Items Attempted on the Pretest

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>S</th>
<th>D</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>32</td>
<td>49.03</td>
<td>8.82</td>
<td></td>
<td>-1.86</td>
</tr>
<tr>
<td>Control</td>
<td>38</td>
<td>52.42</td>
<td>6.38</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

two-tailed p = .076, non-significant

Table 2 presents means, standard deviations, and the obtained t-value for the number of items answered correctly by the two groups on the pretest. Obtained t-values for both items attempted and items correct for both groups were not significant, suggesting that initial differences between the two groups were due to chance variation.

Table 2
Treatment and Control Group Scores for Correct Answers on Pretest

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>S</th>
<th>D</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>32</td>
<td>23.15</td>
<td>7.6</td>
<td></td>
<td>1.25</td>
</tr>
<tr>
<td>Control</td>
<td>38</td>
<td>21.15</td>
<td>5.3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

two-tailed test, p = .217, non-significant

Following a 16 week interval, during which the two groups were exposed to the process or to the formal grammar approach to teaching writing, data were collected using an alternate form of the diagnostic test (Form B).

Posttest comparisons were again made using the t-test.
Table 3 summarizes the means, standard deviations, and the t-value for the treatment and control groups for the number of items attempted on the posttest, while Table 4 presents similar data for the number of items correct achieved by each group on the posttest.

**Table 3**

Treatment and Control Group Scores for Items Attempted on Posttest

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>S.D</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>32</td>
<td>54.78</td>
<td>.608</td>
<td>2.03</td>
</tr>
<tr>
<td>Control</td>
<td>38</td>
<td>52.31</td>
<td>7.451</td>
<td></td>
</tr>
</tbody>
</table>

two-tailed test, $p = .049$

Table 3 shows that the obtained t-value for the number of test items attempted was significant, $p < .05$, indicating that the greater number of items attempted on the posttest by the treatment group was a non-chance difference.

**Table 4**

Treatment and Control Group Scores for Correct Answers on Posttest

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>M</th>
<th>S.D</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>32</td>
<td>26.53</td>
<td>9.01</td>
<td>2.29</td>
</tr>
<tr>
<td>Control</td>
<td>38</td>
<td>22.26</td>
<td>5.96</td>
<td></td>
</tr>
</tbody>
</table>

two-tailed test, $p = .026$

Table 4 shows that, for the numbers of test items answered correctly on the posttest, the t-value was significant, $p < .03$, 
indicating a non-chance difference.

DISCUSSION

The purpose of this study was to determine the effects of two different approaches to teaching writing on students' knowledge of English grammar. Implications of the findings and directions for future research are discussed here.

Summary and Implications

The treatment group scored a higher number of correct answers on the posttest \( \bar{M} = 26.53 \) than did the control group \( \bar{M} = 22.26 \).

In addition, the treatment group attempted to answer more test questions on the posttest \( \bar{M} = 54.78 \) than the control group \( \bar{M} = 52.31 \) did.

Statistical analysis of both items attempted and items answered correctly indicated that the treatment group's superior posttest performance was a non-chance difference on items answered correctly, \( p < .03 \), as well as on items attempted, \( p < .05 \) (Tables 3 and 4).

Not only did the treatment group outperform the control group on the posttest, the treatment group was far less variable in the number of items attempted on the posttest, answering an average of 54.78 out of a total of 55 possible items, with a standard deviation of (.608).

Although the control group attempted nearly the same number of items \( \bar{M} = 52.31 \), there was greater variability in the number of items attempted by the control group.
The standard deviation for the control group was (7.451), and a statistical analysis of posttest items attempted showed the control group's variance was 150 times greater than the variance of the treatment group \((F = 150.183), p < .001\).

Possible explanations for this large difference in variance between the treatment and control groups are discussed below, but, for whatever reason, the treatment group was consistently more likely than the control group to attempt to answer all of the posttest questions.

Of the five subjects in the treatment group who did not answer all 55 posttest questions, four answered 54 test items, and one subject answered 52 items.

The larger variability in the number of items attempted by the control group was a function of several subjects who attempted to answer very few questions \((23, 29, 36, 40\) out of 55 items).

One implication of this study is that the process approach to teaching writing, which de-emphasizes formal grammar instruction, may be more effective in improving students' knowledge of grammar than formal grammar instruction.

If so, then this study seems to support claims by proponents of the process approach to writing instruction that writing, revising, and editing their own writing enables students to learn basic grammar concepts more effectively than through formal grammar instruction.

This study also appears to support various research on the effects of teaching grammar to writing classes, which has found that formal grammar instruction has generally failed
to improve either students' writing or their knowledge of grammar (Hartwell; Hillocks; Noguchi).

Although outside the scope of this study, the treatment group's superior performance on the posttest raises intriguing questions that could not be included in the present study.

Does the process approach to teaching writing somehow engender more confidence in students' test-taking ability, more persistence, stronger motivation to take or achieve on tests? Is there a transfer effect from the process approach to teaching writing to students' motivation to achieve on tests? More research seems warranted in these areas.

This study's results also suggest the need for further research in several other areas: (1) the efficacy of the process approach to teaching writing as a way to improve students' knowledge of grammar; (2) analysis of the impact of the process and the formalist approach to writing instruction on student writing; and (3) additional study of the causes of the treatment groups' superior performance on the diagnostic posttest, with particular attention to determining whether the process approach to teaching writing has broader consequences for enhancing students' test-taking attitudes, abilities, and motivations.

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Works Cited


Johnson, Dean. Telephone interview. 7 July, 1993.


