This paper summarizes a study conducted to determine whether sustained silent reading (SSR) can contribute to improvement in grammar and reading comprehension in university academic English as a foreign language (EFL) courses. A total of 186 beginning and intermediate students enrolled in the English for Academic Purposes program at the Universidad Nacional Pedro Henriquez Urena in Santo Domingo, Dominican Republic were divided into experimental and control groups. The control groups followed the normal course syllabus, while the experimental group engaged in SSR of relevant journal articles for 30 of the total 150 minutes of instruction each week for 10 weeks. Pre- and post-intervention tests using the Best and Ilyin English grammar exams and the Newbury House TOEFL Preparation Course exams found a noticeable improvement in English grammar and a very slight reading comprehension loss among SSR students. But given the wide range of student scores these results were not statistically significant. The paper includes 5 charts, 4 graphs, and 7 tables that highlight experimental studies on SSR and the results of the present study. (Contains 46 references.) (MDM)
Sustained Silent Reading in University Courses in EFL for Academic Purposes

Ellen Ducy-Pérez, Chair, Department of Foreign Languages, Universidad Nacional Pedro Henríquez Ureña, Santo Domingo, Dominican Republic

The original research question was: Will sustained silent reading (SSR) as an additional component of standard university English as a foreign language (EFL) courses for academic purposes result in an improved language competency? A corollary question that arose during research was: Does SSR result in a positive attitude towards EFL?

This study, apparently the first in its field (SSR in EFL or in EAP), was an attempt to determine whether or not sustained silent reading can contribute to improvement in grammar and reading comprehension in university academic English foreign language courses.

One hundred eighty six (186) beginning and intermediate level students, (as determined by the University of Michigan structure exam) who were enrolled in English for Academic Purposes (EAP) in English as a Foreign Language (EFL) at the Universidad Nacional Pedro Henríquez Ureña (UNPHU) in Santo Domingo, the Dominican Republic, were divided by class sections into control and experimental groups. Both controls and experimental groups followed their usual syllabi, but during ten weeks within the January-April 1991 semester, the experimental groups also were engaged for 30 of 150 minutes weekly in sustained silent reading of articles selected by previous students from recent technological journals in their fields of study: computer programming, health sciences, psychology and chemistry. All students were subjected both to Best and Ilyin English grammar structure exams (STEL forms 2 and 1) and Newbury House TOEFL Preparation Course reading comprehension exams (forms 1 and 2) as pre- and post-tests of achievement.

The results of controls and experimental groups were analyzed statistically as to over-all and control and experimental aggregate increases or decreases in scores; controls and experimental groups were focused on by areas of study for each group's aggregate gain or loss, and analyses were performed with measures of statistical significance for increase or decrease in grammar structure and reading comprehension after taking into account the variables of teachers involved, student ages, sex and English level.

With the SSR treatment there was a noticeable mathematical improvement in English grammar and a very slight reading comprehension loss, but given the wide range of student scores, they were not statistically significant. These findings parallel those of Petrimoulx (1988); let us recall that Everett (1987) and Manning-Dowd (1985) obtained mixed results among their subjects for reading comprehension and achievement. On the other hand, Farrell (1982) and Kefford (1981) each reported dramatic increases in reading achievement, but it must be pointed out that their studies covered one year and six months, respectively.
The UNPHU students had been as randomized as possible, their class sections depending only on university scheduling hours. There was an average “superiority” on the part of the experimental students of 5.1 points in both pre- and post-test grammar, and 3.3 and 2.4 points, respectively, for the pre- and post test in reading comprehension. The data show that both control and experimental students showed the same change over time, so our first tentative conclusion was that the SSR treatment did not contribute to more language competency than the usual program of grammar work and intensive reading. However, SSR as a substitute for this classroom practice did not result in less competency for the treatment group! We expect that the use of more sensitive reading comprehension instruments or a longer treatment period might yield more significant results.

Sixty-two percent (62%) of experimental studies in SSR had shown a positive attitude towards reading after treatment; the others did not report it. The UNPHU experiment included a questionnaire on the students’ previous English and subject matter knowledge before and after the SSR treatment. 92 of the 99 experimental students felt that SSR had helped their English vocabulary, grammar, reading and comprehension.

This UNPHU study then, also showed positive acceptance of the SSR treatment and positive mathematical improvement, even if not statistically significant results. In view of the fact that the SSR treatment gave no negative effects, and since, to quote Krashen (1989) “nearly everyone in the language teaching profession agrees that reading is beneficial”, and since the SSR materials made available to the UNPHU students are directly concerned with their professional studies, and because SSR may lead to continued individual reading and increased understanding and even enjoyment of technical reading, it is the opinion of the researcher that SSR should be continued as part of the EAP courses.

As far as further research is concerned, one may wish to replicate or vary this work in order to do a longer term study, include more students, program longer or additional periods of SSR per week, complement them with other metacognitive activities immediately afterward, or experiment with SSR as an additional period of class. If we were to do this study again we would recommend that teachers always read while the students are reading, that there be both pre- and post questionnaires regarding habits and attitudes for both control and experimental students; that the questionnaire cover previous reading and the amount of time spent on reading in English before and after the experiment. As the TOEFL exams are not meant for beginning or intermediate students, and simply may have not been sensitive to slight differences among these students’ progress across a relatively short period of time, we recommend that another instrument, perhaps the Gates MacGinitie Reading Test, which was unavailable to us, be utilized. Obviously, if larger groups of students were available who could receive the SSR treatment over a year, with follow up of their reading habits in English, we would have an almost ideal experimental situation.

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<td>Burley</td>
<td>SSR better than programmed textbooks, cassettes or skill developmental kits</td>
<td>Upward Bound</td>
<td>+ literal and + speed</td>
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</tr>
<tr>
<td>Einholt</td>
<td>15 min/day 10 wks</td>
<td>SSR or reading kits</td>
<td>no sig diff betw C and E betw boys + girls</td>
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<tr>
<td>Group No.</td>
<td>LEX Dept. Course No.</td>
<td>Control or Experiment</td>
<td>English Level</td>
<td>Area of Studies</td>
<td>Day or Night</td>
<td>Professor</td>
<td>Final No. Ss</td>
<td>Length of Time</td>
<td></td>
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</tr>
<tr>
<td>1</td>
<td>LEX-125-01</td>
<td>control</td>
<td>beginning</td>
<td>comp. prog.</td>
<td>day</td>
<td>M.M</td>
<td>40</td>
<td>30/150 min</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>LEX-125-02</td>
<td>experiment</td>
<td>beginning</td>
<td>comp. prog.</td>
<td>day</td>
<td>M.M</td>
<td>36</td>
<td>30/150 min</td>
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</tr>
<tr>
<td>3</td>
<td>LEX-126-01</td>
<td>experiment</td>
<td>intermediate</td>
<td>comp. prog.</td>
<td>day</td>
<td>M.M</td>
<td>34</td>
<td>30/150 min</td>
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</tr>
<tr>
<td>4</td>
<td>LEX-126-02</td>
<td>control</td>
<td>intermediate</td>
<td>comp. prog.</td>
<td>day</td>
<td>M.M</td>
<td>19</td>
<td>30/150 min</td>
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</tr>
<tr>
<td>5</td>
<td>LEX-126-03</td>
<td>experiment</td>
<td>intermediate</td>
<td>comp. prog.</td>
<td>night</td>
<td>M.M</td>
<td>18</td>
<td>30/150 min</td>
<td></td>
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</tr>
<tr>
<td>6</td>
<td>LEX-113-71</td>
<td>control</td>
<td>beginning</td>
<td>health sciences</td>
<td>day</td>
<td>I.U</td>
<td>10</td>
<td>30/150 min</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td>LEX-113-72</td>
<td>experiment</td>
<td>beginning</td>
<td>health sciences</td>
<td>day</td>
<td>I.U</td>
<td>9</td>
<td>30/150 min</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>LEX-128-01</td>
<td>experiment</td>
<td>intermediate</td>
<td>health sciences</td>
<td>day</td>
<td>E.D</td>
<td>7</td>
<td>30/150 min</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>9</td>
<td>LEX-124-01</td>
<td>control</td>
<td>intermediate</td>
<td>psychology</td>
<td>day</td>
<td>E.D</td>
<td>6</td>
<td>30/150 min</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>10</td>
<td>LEX-115-01</td>
<td>experiment</td>
<td>intermediate</td>
<td>chemistry</td>
<td>day</td>
<td>E.D</td>
<td>7</td>
<td>60/200 min</td>
<td></td>
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</tr>
</tbody>
</table>

Totals: 10 sections

4 C
6 X
4 B
6 I
U = 5
H = 3
N = 1
Y = 1
D = 9
M = 5
I = 2
C = 75
J = 9
K = 1

106
111
11
10
10
10
10
10
10
10

186
111
11
10
10
10
10
10
10
10

14

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### Chart 3

Difference between pre + post test scores:

\[
\text{total of scores/number of students = average gain (+) or loss (-)}
\]

<table>
<thead>
<tr>
<th>Professor</th>
<th>Language Area: 2=Health 3=Ps 4=Chem</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 = prog 2=novice 3=beginning 4=intermediate 5=advanced</td>
</tr>
<tr>
<td></td>
<td>day=0 night=1 control=0 experiment=1</td>
</tr>
<tr>
<td>PALDU</td>
<td></td>
</tr>
<tr>
<td>1 1 0 0 0 (LEX-125-01)</td>
<td>474/41= +11.56</td>
</tr>
<tr>
<td>1 1 0 0 1 (LEX-125-02)</td>
<td>434/36= +12.05</td>
</tr>
<tr>
<td>1 1 1 0 0 (LEX-126-01)</td>
<td>584/34= +17.17</td>
</tr>
<tr>
<td>1 1 1 0 1 (LEX-126-02)</td>
<td>348/20= +17.4</td>
</tr>
<tr>
<td>1 1 1 1 0 (LEX-126-03)</td>
<td>218/18= +12.11</td>
</tr>
<tr>
<td>2 2 0 0 0 (LEX-113-71)</td>
<td>124/10= +12.4</td>
</tr>
<tr>
<td>2 2 0 0 1 (LEX-113-72)</td>
<td>132/10= +13.2</td>
</tr>
<tr>
<td>3 2 1 0 1 (LEX-128-01)</td>
<td>88/7 = +12.57</td>
</tr>
<tr>
<td>3 3 1 0 0 (LEX-124-01)</td>
<td>64/6 = +10.66</td>
</tr>
<tr>
<td>3 4 1 0 1 (LEX-115-01)</td>
<td>30/7 = +4.285</td>
</tr>
</tbody>
</table>
## Chart 1
### Totals of Experimental Students' Responses on Evaluation Sheets

<table>
<thead>
<tr>
<th>No of Respondents</th>
<th>General Total</th>
<th>125-02</th>
<th>126-01</th>
<th>126-03</th>
<th>113-72</th>
<th>128-01</th>
<th>115-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of Missing Respondents</td>
<td>12</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>

**Question #1**

<table>
<thead>
<tr>
<th>Vocab</th>
<th>Gram</th>
<th>Reading</th>
<th>Speaking</th>
<th>Writing</th>
<th>Speed</th>
<th>Comprehension</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>39</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td>0</td>
<td>20</td>
</tr>
</tbody>
</table>

**Area of Studies**

| 18 |

**Question #2**

<table>
<thead>
<tr>
<th>0%</th>
<th>15%</th>
<th>25%</th>
<th>50%</th>
<th>75%</th>
<th>95%</th>
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</thead>
<tbody>
<tr>
<td>12</td>
<td>1</td>
<td>35</td>
<td>26</td>
<td>23</td>
<td>2</td>
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</tbody>
</table>

**Question #3**

<table>
<thead>
<tr>
<th>A little</th>
<th>Pretty Much</th>
<th>A Lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>43</td>
<td>42</td>
<td>13</td>
</tr>
</tbody>
</table>

**Question #4**

<table>
<thead>
<tr>
<th>Area Journals</th>
<th>Area Books</th>
<th>General Magazines</th>
<th>General Books</th>
<th>Newspapers</th>
<th>Games</th>
<th>Songs</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>5</td>
<td>20</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

### ERIC
Range of student increase/decrease scores ($E = g + r$) presented by class groups.
Graph 2

Range of student scores ($E = g + r$) as increase or decrease between pre- and post tests presented as control groups and experimental groups.
Graph 3
LEX 125 -01
CONTROL S' FREQUENCY DISTRIBUTION
COMPUTER STUDENTS

NUMBER OF STUDENTS

-22 -20 -18 -16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18 20 22 24 26
POINT CHANGE IN GRADES
Graph 4
LEX 125 - 02
EXPERIMENTAL STUDENTS' FREQUENCY DISTRIBUTION
COMPUTER STUDENTS

POINT CHANGE IN GRADES

NUMBER OF STUDENTS

-18 -16 -14 -12 -10 -8 -6 -4 -2 0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

1 2 3 4 5 6 7 8
### Table 1
Mathematical Differences between Pre. and Post. Test Scores

<table>
<thead>
<tr>
<th></th>
<th>C. Ss</th>
<th>X Ss</th>
<th>All Ss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar Pre</td>
<td>40.0</td>
<td>45.1</td>
<td>43.0</td>
</tr>
<tr>
<td>Post</td>
<td>53.3</td>
<td>58.4</td>
<td>56.0</td>
</tr>
<tr>
<td>Reading Pre</td>
<td>31.6</td>
<td>34.9</td>
<td>33.6</td>
</tr>
<tr>
<td>Post</td>
<td>31.5</td>
<td>33.9</td>
<td>32.9</td>
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</tbody>
</table>

### Table 2
"Superiority" difference between Experimentals and Controls

<table>
<thead>
<tr>
<th></th>
<th>C. Ss</th>
<th>X Ss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar pre</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>Grammar post</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>Reading pre</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Reading post</td>
<td>2.4</td>
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</tr>
</tbody>
</table>

### Table 3
Improvement/Loss between pre and post tests

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<th>C. Ss</th>
<th>X Ss</th>
<th>All Ss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grammar</td>
<td>13.3</td>
<td>13.3</td>
<td>13.2</td>
</tr>
<tr>
<td>Reading</td>
<td>-0.10</td>
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<td>-0.79</td>
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<tr>
<td>E (g + r)</td>
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<td>+7.04</td>
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</table>

### Table 4
Standard Deviations for Control and Experimental Students in pre- and post Tests

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<thead>
<tr>
<th></th>
<th>C. Ss</th>
<th>X.Ss</th>
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</thead>
<tbody>
<tr>
<td>Grammar pre-</td>
<td>SD⁺ 15</td>
<td>SD⁺ 16</td>
</tr>
<tr>
<td>post</td>
<td>SD⁺ 15</td>
<td>SD⁺ 17</td>
</tr>
<tr>
<td>Reading pre</td>
<td>SD⁺ 11</td>
<td>SD⁺ 13</td>
</tr>
<tr>
<td>post</td>
<td>SD⁺ 9</td>
<td>SD⁺ 13</td>
</tr>
</tbody>
</table>
Table 5

Results of R squared tests for each variable

\[
X = E \\
E = f \text{ (variable)} \\
y = f
\]

Y  year of birth  = 0.008494
S  sex  = 0.013
M  professor M  = 0.0011
I  professor I  = 0.0032
D  professor D  = 0.0042
N  day/night  = 0.0019
L  60/60 minutes  = 0.0004
U  programing Ss  = 0.000056
H  health Sciences  = 0.002105
Y  psychology  = 0.0084
Q  chemistry  = 0.000207
B  beginning  
I  intermediate  = 0.00015
C  control  
X  experimental  = 0.000772
  grammar re level  = 0.000496
  reading re level  = 0.0007616
  grammar re treatment  = 0.000008
  reading re treatment  = 0.001342
Table 6

R Squared and Student T Values for Control and Experimental Computer Programming Students in Grammar and Reading

<table>
<thead>
<tr>
<th></th>
<th>R Squared</th>
<th>Student T</th>
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<tbody>
<tr>
<td>U.C. Ss Grammar</td>
<td>.3170</td>
<td>4.20</td>
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<tr>
<td>U.C. Ss Reading</td>
<td>.01384</td>
<td>0.73</td>
</tr>
<tr>
<td>U.X. Ss Grammar</td>
<td>.4435</td>
<td>7.36</td>
</tr>
<tr>
<td>U.X. Ss Reading</td>
<td>.1405</td>
<td>3.34</td>
</tr>
</tbody>
</table>

Table 7

R Squared Values

Overall Statistical differences between pre- and post tests

Grammar  R Square = 0.497808
Reading   R Square = 0.181666

Table 8

Mean scores of two Computer Programming groups (E = g + r) increase or decrease between pre- and post tests

LEX 125-01 (1 1 0 0 0) mean = 7
LEX 125-02 (1 1 0 0 1) mean = 6

N.B. See Graphs 3 and 4 for Frequency Distributions of these groups.