A study (the first of two studies) examined the effects that training in annotation writing had on college students' comprehension and summary writing abilities as compared with students who received a more traditional type of instruction. One half of the 144 university students enrolled in a college reading and study skills course received a treatment which consisted of training in annotation writing. The other half received a more traditional type of college reading instruction. Students completed pretests and posttests measuring comprehension and measuring summary writing. Results indicated that: (1) students in the annotation training group had scores which were statistically significantly greater for length, combined indexes, and efficiency ratios, but not for time, key ideas, comprehension, and peer evaluations. Findings of the first study suggest that students who received annotation training were able to produce succinct summaries. The second study determined the effects that training in annotation writing had on college students' critical and evaluative thinking. The subjects were 100 university students enrolled in a college reading and study skills course. Three of six classes received instruction in annotation writing. The three remaining classes received a more traditional type of college reading and study skills instruction. A critical judgments test was used as a pretest and posttest. Results indicated no statistically significant differences between the experimental and control groups. Findings suggest that annotation training did not appear to improve critical and evaluative thinking skills. (Two figures and one table of data are included.) (RS)
Two Studies of the Effects of Annotation Training on College Students

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Two Studies of the Effects of Annotation Training on College Students

The purpose of the first research study which was done by Strode, was to determine the effects that training in annotation writing had on college students' comprehension and summary writing abilities as compared with students who received a more traditional type instruction. Furthermore, this study attempted to clarify mixed findings regarding the hypothesis that this type of training would result in improved reading comprehension and summary writing abilities. The assumption underlying this hypothesis was that the early measures of summary writing were responsible for the inconsistent findings.

Annotation writing involves summarizing written information, as well as commenting or reacting to a piece of writing. The annotation training procedure used in this study allows for practice, revising and sharing. It simultaneously illustrates aspects of the reading process in terms of how the print is interpreted.

The subjects in this study were 144 university students enrolled in a College Reading and Study Skills course. The students were primarily freshmen and since the course was not remedial, there were few poor readers.
One half of the students received a treatment which consisted of training in annotation writing. The other half received a more traditional type of college reading instruction.

The students received both pretests and posttests for two tests, one measured comprehension and the other measured summary writing. The variables considered by the summary writing measure included time, length, key ideas, a combined index, and efficiency ratios. The last variable in the summary writing measure was peer evaluations and it followed a posttest only design.

The analysis showed that students in the annotation training group had scores which were statistically significantly greater for length, combined indexes, and efficiency ratios, but not for time, key ideas, comprehension, and peer evaluations.

It appears that students produce summaries with the same amount of key ideas regardless of the type of instruction they receive. The students that received annotation training, however, produced summaries with significantly fewer words when compared to themselves prior to the training and to the other group. The combined index and the efficiency ratios further illustrate this finding. The analysis also showed that the
students who received annotation training used more words to express fewer key ideas and fewer words to express more key ideas.

This finding suggests that, as hypothesized, students who received annotation training were able to produce succinct summaries. Being succinct does not appear to speed up the summary writing process. This finding, however, may be a result of the deeper processing that may result from annotation training.

In terms of implications, this research suggests that training in annotation writing is a justified strategy. This type of training clearly leads to succinct writing, which in turn, may lead to improved comprehension. Unfortunately, the comprehension measure used in this study was not strong enough to reveal any difference between groups.

One purpose of the second research study which was done by Walters, was to determine the effects that training in annotation writing had on college students' critical and evaluative thinking skills as compared with students who received a more traditional type instruction. The annotation training procedure used in the second study was the same one used in the first study and was conducted approximately one year after the first study.
The subjects were 100 university students enrolled in a College Reading and Study Skills course. The students were primarily freshmen and the mean reading level was almost 13th grade.

Three of the six classes received a treatment of training in annotation writing. The three remaining classes received a more traditional type of college reading and study skills instruction.

Since the first study revealed no statistically significant differences between the two groups on a traditional standardized reading test, a measure that focused only on evaluative thinking skills rather than general comprehension was chosen.

The measure used was a Critical Judgments Test which is part of the Assessment of Language and Reading Maturity battery developed by Manzo. This test, which attempts to measure evaluative thinking, was administered as a pretest and posttest. One part of this test asks students to rate statements from 1 to 5 as to reasonability of information. Another part asks students to rate statements according to usefulness of information.

The results revealed no statistically significant differences between the experimental and control groups. In fact the mean score for both groups declined slightly. The pretest
and posttest means for the experimental and control groups are all less than one point apart.

The annotation training did not appear to improve critical and evaluative thinking skills. Perhaps the training period was not long enough to produce results. Another possibility is that there was no increase because the annotation strategy does not directly address critical thinking skills such as usefulness and reasonability of information.

These research studies seem to suggest that annotation writing promotes succinct writing but does little to promote critical thinking skills.
Figure 1

Means for Length to Key Ideas

Experimental Group = ___

Control Group = ___

Figure 2

Pre and Post Means for Length

Experimental Group = ___

Control Group = ___
Table 1

Means and Standard Deviations for the Pretest and Posttest Critical Judgments Test Scores by Group

<table>
<thead>
<tr>
<th>Variables</th>
<th>Pretest Mean</th>
<th>Pretest SD</th>
<th>Posttest Mean</th>
<th>Posttest SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Experimental</td>
<td>63.36</td>
<td>8.66</td>
<td>63.26</td>
<td>9.65</td>
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<td>(N = 50)</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2. Control</td>
<td>63.34</td>
<td>7.19</td>
<td>62.12</td>
<td>9.15</td>
</tr>
<tr>
<td>(N = 50)</td>
<td></td>
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