

Increasing Reading Speed in English as a Foreign Language

“Between 6,000 and 7,000 scientific articles are written each day”
(Naisbitt, 1984, p. 16)

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We live in the information age. In contrast to the industrial society, which depends on dwindling natural resources, we are being crushed by an ever growing amount of information. And the rate of growth continues to increase. In this mountain of information, approximately 80% of scientific publications appear first in English, more than half of the world's scientific and technical journals are published in English, about 80% of all the information stored in the world's computers as well as 75% of the world's mail, telexes and cables are in English, and nearly half of all business deals in Europe are conducted in English(Naisbitt, 1990; McCrum et al., 1986).

English is used by at least 750 million people throughout the world, less than half of whom speak it as a mother tongue (McCrum et al., 1986). For many of these people, the ability to read English efficiently means being able to keep up to date with the latest developments in business, science and technology. In fact, their success as professionals in today's world may be directly affected by their ability to read efficiently in English.

Scientists have been studying reading speed in English as a native language for almost a century. The possibility of increasing reading speed among readers of English as a foreign language has received

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relatively little attention. This paper will therefore address the following questions: Is it possible to increase the reading speed of readers of English as a foreign language? How can this be done?

1 . HISTORICAL AND THEORETICAL BACKGROUND

The first study concerning the factors which contribute to faster reading was conducted in 1897 by Quantz, followed by Huey's study in 1908 (Fry, 1970; Guthrie, 1984). By the 1920's, numerous papers began to appear in the journals describing studies which had produced increases in both reading speed and level of comprehension.

By the 1950's the use of various instruments to control eye movements became widespread. These instruments fall into two basic categories, according to the purpose for which they were used. Those in the first group were used to increase the amount of text the eye captured with each fixation, and those in the second group were used to reduce the amount of time spent on each fixation. The tachistoscope falls into the first group, since it was used to gradually increase the number of words projected onto a screen, while reading machines and films exemplify the second group, since they were used to project the text onto a screen in a rhythmic succession of movements, thereby imitating what were considered ideal eye movements and preventing regression. Unfortunately, these machines do not take into account the fact that seeing is not necessarily reading. After about ten years, a series of studies began to appear which basically agreed with Tinker (1967)(Karlin, 1958; Spache, 1963; Berger, 1969):

“...The improvement obtained by eye—movement training, with or without elaborate apparatus, is no greater than that resulting from motivated reading alone...The tachistoscope is without value for increasing speed of reading.”

By the 1960's most scientists had returned to the idea proposed by Quantz and others, that reading speed is determined largely by the speed with which the mind processes the information. Carver (1992)

calls this cognitive velocity. Readers learn to move their eyes to match the velocity of their thought processes, not the other way around, as the machine proponents had claimed a decade before. The eyes see, the mind reads.

The most appropriate reading theory to explain how to increase reading speed is that proposed by LaBerge and Samuels in 1974, modified in 1977 to add the concept of feedback from the semantic memory to earlier stages, thereby including the idea that reading is interactive. This model introduces the concept of automaticity. According to LaBerge and Samuels, attention is basic and necessary for information processing to occur. But attention can only be focused on one thing at a time. If attention is used exclusively for word recognition, comprehension will be difficult. A person learning to read focuses first on word recognition, and then tries to comprehend. But if the reader can recognize words *automatically*, attention can be focused on global comprehension of the text. The reader can process many things simultaneously, as long as only one requires attention.

This concept of automaticity has been supported by research. Just and Carpenter (1980; 1987) found that the eye fixates on short, common words for about 50 milliseconds, whereas it may take up to 1,566 milliseconds to recognize long, less common words. The common words are recognized automatically. Studies on brain hemisphere dominance also support the idea that one difference between slow and fast readers may be automaticity of perception. Opler (1981) found that in beginning readers, the right hemisphere of the brain (that which processes perceptual operations) was dominant, among intermediate students neither hemisphere dominated, and among advanced students the left hemisphere (which processes language, and deals with logic and analysis in general) dominated. Bakker (1981) presents evidence to demonstrate that the dominance of the right hemisphere among slow readers is due to the fact that they are concentrating on the perceptual form of the words, while the dominance of the left hemisphere among fast readers shows that they

are concentrating on meaning.

Another series of studies demonstrated the importance of automaticity in efficient reading. Stanovich (1980), van Dijk and Kintsch (1983) and Perfetti (1985) showed that it is possible to distinguish between good and bad readers simply by comparing their ability to quickly recognize individual words out of context. Good readers recognize more words, faster and with fewer errors.

In order to discover how to increase automaticity, LaBerge and Samuels (1974) studied 16 university students for five days. During this time, the subjects were presented with groups of familiar letters and groups of unfamiliar letters. With practice, response time decreased with the unfamiliar letters but remained the same for the familiar letters. The results of these and other studies (Carver, 1990) indicate that practice leads to automaticity. Regarding practice, some researchers have proposed the idea of repeated readings, i.e. reading the same text several times. After reviewing studies using this technique (Rashotte and Torgesen, 1985), Carver concludes that repeated reading of the same text results in increased reading speed only with texts containing the same words as the original reading. He suggests that this technique might benefit readers at a very elementary level, but that more advanced readers would profit more from reading large amounts of different and relatively easy texts, thereby maintaining a maximum level of automaticity for a large number of words.

Although the above mentioned studies were all performed with readers of English as a native language, several studies have compared the eye movements of native language readers and foreign language readers. Oller (1972), Tullius (1971) and MacNamara (1970) found that the number of eye fixations and regressions do not differ among the two types of readers. The differences are found in the time used for each fixation. Readers of a foreign language are not taking more samples of a text, but taking more time to process each sample. This can be explained by the theory of automaticity. A foreign language reader has had less practice in the recognition of words in the foreign

language and therefore has not yet reached an appropriate level of automatic recognition.

Before continuing, it is important to clarify the difference between increasing one's "normal" reading speed, speed reading and skimming. Spache (1962) and Raynor (1975) both studied eye movements among "normal" readers and skimmers, but the most complete comparison of the three types of readers was done by Just and Carpenter (1980 and 1987). They found that eye movements differ among the three types of reading. Among even the most advanced "normal" readers, the eye captures almost all of the words in a text (an average of about 65%), while "skimmers" capture only 40% of the words and "speed-readers" only 33%. Comprehension levels among "normal" readers were also far higher than among speed-readers and skimmers. Since it seems impossible to increase the number of words captured by the eye with each fixation, Just and Carpenter conclude that speed-readers and skimmers are depending more on conceptual processes than perceptual processes. They are taking samples from the text and using their mental schemata to infer the relationship among these samples. Since acceptable comprehension levels are very important, the purpose of the studies in this paper was to increase normal reading speed, not to teach speed-reading.

What is considered "normal" reading speed? While there are those who claim to "read" at a speed of 50,000 wpm (words per minute) (Witty, 1969), the general consensus seems to be that a native speaker of English of average intelligence and education generally reads at about 300 wpm, though reading rates may vary from about 140 wpm to 800 wpm. The same person will also read different material at different speeds. Several authors suggest that 200 wpm is an average for advanced students of English as a foreign language (Nuttall, 1982; Eskey, 1973). According to Nuttall, high school EFL students generally read at about 120 to 150 wpm. The average beginning level of the students who participated in these studies was between 110 and 120 wpm, with almost half reading below 100 wpm.

The past three decades have witnessed the appearance of numerous courses claiming to increase reading speed and numerous studies demonstrating that this is indeed possible. In most of these courses, the reader practices reading large quantities of relatively easy material in several weekly sessions. The studies generally report increases in reading rate from about 50% (Witty, 1969) to 100% (Fry, 1963; Carpenter and Jones 1975) or more (Belcher, 1971). Most of these studies also report that comprehension remained the same or increased.

Regarding the possibility of increasing reading speed among readers of English as a foreign language, much less work has been done. Fry (1963) and Narayanaswamy (1973) describe a study performed among university students in Uganda. The students' high school education had been carried out in English, so their level in the language was quite advanced. Their reading speed increased about 100% (from 186 wpm to 383 wpm), while their comprehension increased 12% (from 61% to 73%) after an eight week course. Hill (1981) describes a study performed with 67 university students from Belgium taking a three week summer course in England. They were all advanced language students. Their reading speed increased 57%, from 200 wpm to 314 wpm, while their comprehension level remained stable (78%). Carsello and Bartell (1970) report that 5 Portuguese students increased their reading speed in Portuguese about 40% after a trimester of participation in a reading lab.

As can be seen from the above review of the literature, very few studies of reading speed have been carried out with students of English as a foreign language, and those few have dealt with advanced students. The studies presented in this paper will deal with the possibility of increasing reading speed among intermediate level students whose native language is Spanish.

2. GENERAL METHODOLOGY

2. 1. Subjects:

The subjects who participated in this study were first year university

students enrolled in a required three trimester English course designed to help students read technical and scientific materials. Each trimester, classes meet four hours a week for 12 weeks. English is a required subject in Venezuelan high schools, so all students study English for five years before entering the university.

The tests were applied to ten groups of students over a period of four years. The sizes of the groups varied from 11 to 29 students, for a total of 199 subjects. Given the nature of the exercises, a random sample of all first year students was not possible, so intact groups were used.

2. 2. Instruments:

After revising numerous text books used in this type of exercise, it was decided that motivation could best be maintained by using recent articles from newspapers and magazines. Two groups of short, original articles were prepared. Each group consisted of 15 articles, a number which could be incorporated into a 12 week trimester. Some authors suggest that the ideal length for paced readings is 400 words, while timed readings should be about 1000 words (Jensen, 1986; Spargo and Williston, 1980). Since these articles were to be used under both conditions, it was decided to vary the length, beginning with shorter articles and gradually increasing the length. This would also help train readers to maintain their concentration for longer periods of time. The lengths of the articles therefore varied from 176 to 636 words in the first group, which was used with second trimester students, and from 351 to 713 words in the second group, which was used with third trimester students. Ten true/false questions were prepared for each article to test comprehension.

In some of the studies, the pre- and posttests were taken from *Reading and Study Skills, third edition* by John Langan (1987). The readings selected appear in the section dealing with increasing reading speed. Both are similar in length, subject matter, and level of difficulty according to the Fry readability formula. In other studies,

original newspaper or magazine articles were used. Care was taken to match the pre- and posttests on length, subject matter and readability level. It is also important to note that in these cases, the results of two pre or post readings were generally averaged to control for possible extraneous factors. T-tests comparing the two pre or post readings showed no significant differences.

2. 3. Procedure:

In order to increase reading speed, reading exercises may be administered in two different ways, as paced readings or as timed readings. When administered as paced readings, the teacher controls the time allowed for each text. When used as timed readings, the reader controls his own pace and then calculates his reading speed.

Since the purpose of these exercises is to encourage the reader to increase his speed, the time allowed in paced readings should be slightly less than the reader would normally take. To control this, marks were placed in the margins of the texts indicating each hundred words. Since the students were generally paced at a rate of 150 wpm (slightly higher than the average rate of the pretests), students were notified by means of a low sound after each 40 seconds that their eyes should be at the next mark. After the allotted time had passed, they were told to turn their sheets over and answer the true/false questions on the reverse side, without referring back to the text.

When timed readings were administered, the students were told to try to read at a slightly faster speed than they normally would. After reading the text, they copied their time from the board. Since the readings varied in length, reading speed had to be calculated separately for each reading. After recording their reading speed, they were told to answer the comprehension questions.

At the beginning of each course, students were given an answer sheet on which to record the results of all the exercises throughout the trimester. A pretest was administered at the beginning of the term. During the following weeks, between ten and fifteen reading

exercises were administered, followed by a posttest at the end of the trimester. The purpose of the exercises was explained at the beginning of the course and it was emphasized that students were competing only with themselves, not with other students. It was also emphasized that these were only exercises and would have no direct influence on their grades, so that students would feel free to experiment and make mistakes. The purpose was to create a slight pressure to increase reading speed, bearing in mind that too much pressure would create anxiety, while not enough would produce no change.

It should be pointed out that these exercises occupied a maximum of 30 minutes per week in a course dedicated to developing general reading comprehension skills. The rest of the time was devoted to other activities such as building vocabulary, critical reading, skimming and scanning techniques, outlining principal and subordinate ideas, etc.

3 . STUDY 1

The purpose of the first study was twofold: (1) to find out if it was possible to increase reading speed among intermediate level students of English as a foreign language (EFL) (2) to explore the attitudes of the students toward this type of exercise.

3 . 1 . Method:

The subjects were 18 students enrolled in the second trimester of the first year course. A pretest was applied to measure initial reading speed. This was followed by fifteen readings paced at 150 words per minute. A posttest was applied at the end of the term. A questionnaire was also administered to measure the opinions of the students regarding these exercises.

One year later, the same procedure was repeated with a different group in order to confirm the results. This time, the subjects were 24 students enrolled in the same course (the second trimester of the first year course). The same pre- and posttests were used. Only 13

paced readings were used instead of 15, due to lack of time. They were paced at 150 words per minute.

3. 2. Results:

The average reading speed of the first group at the beginning of the course was 120 wpm. At the end of the course, the average was 170 wpm, an increase of 42%. This increase was statistically significant, $t(17) = -9.80$, $p < .001$. Comprehension decreased from 78% to 69%, but remained within generally acceptable levels. It is interesting to note that at the beginning of the course, none of the students read at the paced speed (150 wpm). By the end of the course, 15 of the 18 students were reading faster than 150 wpm.

The average reading speed of the second group at the beginning of the course was 108 wpm. By the end of the course, the average had increased to 159 wpm, an increase of 47%. This increase was statistically significant, $t(23) = -12.04$, $p < .001$. All students showed an increase in speed, some increasing by as much as 91%. Once more, comprehension declined about 10%, from 72% to 62%.

The opinions of the students, as shown by the questionnaires and comments, were very positive. When compared to other exercises and activities carried out in the course, the reading speed exercises received the highest rating. The students found them not only very useful, but also highly motivating. The exercises helped them to increase vocabulary, break the habit of translating, and read for concepts rather than words.

4. STUDY 2

The first study demonstrated both the possibility of increasing reading speed among intermediate level students of EFL and the positive attitude of these students towards this type of exercise. However, since no control group was used, it did not confirm the relationship between the exercises and the increase in speed. The increase could have been due to other factors inherent in the course. In this study,

therefore, a control group was included.

4. 1. Method:

This study included two groups of subjects, an experimental group and a control group. The experimental group was composed of 29 students enrolled in the second course of the first year program. This group received a pretest, 15 readings paced at 150 words per minute, and a posttest. The control group was composed of 17 students enrolled in another section of the same course. The control group received only the pretest and the posttest.

4. 2. Results:

The average reading speed of the experimental group at the beginning of the course was 114 wpm. By the end of the course, the average had increased to 143 wpm, an increase of 25%. This increase was statistically significant, $t(28) = -6.43$, $p < .001$. Though the increase in reading speed was somewhat less than in the previous groups, the level of comprehension increased for the first time, from 68% to 79%, indicating that perhaps this group was concentrating more on comprehension than speed.

The average reading speed of the control group at the beginning of the course was 138 wpm. At the end of the course, the average speed remained 138 wpm. The level of comprehension increased from 51% to 74%. There was no increase in reading speed in the control group, and at the end of the course, both speed and comprehension were below that of the experimental group, in spite of the fact that they had begun with a higher reading speed than that of the experimental group.

5. STUDY 3

Study two seemed to demonstrate a relationship between the reading exercises and an increase in reading speed. Study three begins to explore the best way to administer these exercises. The question

addressed in this study is the following: Is simple exposure to the additional reading implied in the administration of these exercises sufficient to produce an increase in speed, or is the external pressure applied in the controlled pacing necessary?

5. 1. Method:

Two groups were used in this study, an experimental group and a control group. The experimental group consisted of 28 students enrolled in the second course of the first year program. This group was administered a pretest, followed by 15 reading exercises. The exercises were paced at rates starting at 150 words per minute and gradually increasing to 200 words per minute by the end of the term. A posttest was administered at the end of the trimester.

The control group consisted of 22 students enrolled in another section of the same course. The students in this section were administered the pretest, after which they simply used the 15 texts as additional reading comprehension exercises. At no time was reading speed emphasized, controlled or measured. At the end of the trimester, they took a posttest.

5. 2. Results:

The average reading speed of the experimental group at the beginning of the trimester was 124 wpm. At the end of the term, the average had increased to 162 wpm, an increase of 31%. This increase was statistically significant, $t_{(27)} = -7.86$, $p < .001$. Comprehension level remained almost the same (79% and 78%).

The control group began the trimester with an average speed of 103 wpm which increased to 122 wpm by the end of the term, an increase of 19%. This increase was also statistically significant, $t_{(21)} = -5.43$, $p < .001$. However, the comprehension level of the control group experienced a significant decrease, from 84% to 70%.

Both applications of the reading exercises produced a significant increase in reading speed. To determine whether one way of applying

the exercises produced a significantly greater increase in speed than the other, the results of the pretest were subtracted from the results of the posttest in each group. The means of these differences were then compared by means of a t -test for independent samples. The results were statistically significant, $t_{(48)}=3.03$, $p<.01$. The application of the exercises under conditions which emphasize reading rate produces a greater increase in speed than simple exposure to the texts in the form of additional readings.

6. STUDY 4

Results from the first three studies support the hypothesis that the administration of paced readings to intermediate level EFL students produces an increase in reading speed. Paced readings were used because they tend to take up less class time and because they have been used successfully in many commercial courses to increase the reading speed of native speakers. However, some authors affirm that timed readings may produce even greater increases in reading speed. Brandt (1975) compared five groups of university students whose native language was English. Two groups received timed reading exercises, two groups received paced reading exercises, and the fifth group served as the control. The students in both of the groups which received timed readings increased their reading speed significantly more than the students in the other three groups.

Study four was designed to find out if Brandt's results would hold true for EFL students. The question addressed here was the following: Do timed readings produce greater increases in reading speed than paced readings? A second objective of this study was to test this type of exercise on students with a higher level of English. This study was therefore carried out with third trimester students.

6. 1. Method:

The study included two groups of students enrolled in the third trimester of the first year course. The first group, consisting of 20

students, received a pretest, 11 reading exercises paced at 150 words per minute, and a posttest. The second group, consisting of 19 students, received a pretest, 11 timed reading exercises, and a posttest. None of these students had worked with this type of reading exercise in the previous course. The readings used were similar to those used in the previous studies, but slightly longer due to the more advanced level of the students. Students were also asked to give their opinions of these exercises at the end of the term.

6. 2. Results:

The average reading speed of the students in group one was 119 wpm at the beginning of the term and 148 wpm at the end, an increase of 24%. This increase was statistically significant, $t_{(19)} = -7.10$, $p < .001$. The level of comprehension also increased from 70% to 77%.

In the second group, the average speed at the beginning of the term was 106 wpm. By the end of the term, the average had increased to 151 wpm, an increase of 42%. This increase was statistically significant, $t_{(18)} = -6.39$, $p < .001$. Comprehension increased from 60% to 77%. As can be seen, the second group (timed readings) began with lower levels of both speed and comprehension, but finished equal to or higher than the first group in both areas.

Although both applications of the exercises produced significant increases in reading speed, thereby confirming the results of the previous studies, the objective of this study was to determine if one type of administration produced significantly greater increases than the other. The results of the pretest were subtracted from the results of the posttest to determine each student's increase in speed. The means of the differences of each group were then compared by means of a t-test for independent samples. The results were statistically significant, $t_{(37)} = 2.04$, $p < .05$. Timed exercises are more effective in producing increases in reading speed than paced exercises.

Regarding the students' opinions, all of the participants in the study

found the exercises to be very beneficial and motivating. Even the slowest reader in the class admitted that, though he was not yet thinking in English, he was at least now translating more rapidly. His speed increased from 78 wpm to 112 wpm (44%).

7. STUDY 5

In the first four studies, the subjects were students enrolled in the regular first year courses. On analysis of this data, it was noted that students who began with the lowest reading speeds frequently increased much more than those who began with higher speeds. In the first study, for example, the lowest third of the group increased their reading speed by 70 wpm (70%), while the highest third increased 38 wpm (27%). It was therefore decided to administer the exercises to students enrolled in parallel courses. These courses include students who, for one reason or another, are not taking the course in the appropriate trimester of the first year of their studies. Many of them have failed English or other courses. Their reading levels in English tend to be inferior to those of students enrolled in the regular courses. This can be confirmed by noting that their initial reading speeds were the lowest of all but one of the groups which participated in these studies.

The objective of this study was therefore to investigate whether this type of exercise is effective with students enrolled in parallel courses. A further objective was to reconfirm the results obtained in Study four regarding the most effective method of administration of these exercises.

7. 1. Method:

The study included two groups of students enrolled in parallel sections of the second trimester of the first year course. Group 1 consisted of 12 students who received a pretest at the beginning of the course. During the trimester they were administered ten reading exercises, paced first at 100 wpm, then 125 wpm and finally at 150 wpm. At the end of the course they received a posttest. Group 2,

consisting of 11 students, received a pretest, ten timed readings and a posttest.

7. 2. Results:

The average reading speed of the students in the first group was 104 wpm at the beginning of the term and 133 wpm at the end, an increase of 28%. This increase was statistically significant, $t_{(11)}=5.36$, $p<.001$. Their level of comprehension decreased slightly, from 69% to 65%.

In the second group, the average reading speed increased from 98 wpm at the beginning of the trimester to 150 wpm at the end, an increase of 52%. This increase was statistically significant, $t_{(10)}=9.56$, $p<.001$. This was the largest increase demonstrated by any of the ten groups studied, in spite of the fact that only ten reading exercises were administered. Comprehension increased slightly, from 70% to 71%.

To confirm whether one type of administration had produced larger increases than the other, the pretest results were subtracted from the posttest results of each group and the means of these differences were compared by means of a t -test for independent samples. The results were statistically significant, $t_{(21)}=2.85$, $p<.01$. The results of Study four were therefore confirmed. Timed readings produce greater increases in reading speed than paced readings. The exercises were also shown to be effective with students whose initial reading speeds are very low.

8. DISCUSSION

Ten groups of students were studied in five separate experiments. Of these groups, nine received the reading exercises. All nine of these groups showed statistically significant increases in reading speed, while maintaining acceptable levels of comprehension. The control group, which did not receive the exercises, showed no difference in reading speed from the beginning to the end of the trimester.

A comparison of the initial reading speeds of the two groups which participated in Study four with the initial speeds of the other groups also produces interesting results. The students in Study four were enrolled in the third trimester course, while the other students were enrolled in the second trimester. In spite of being one trimester more advanced than the other students, their initial reading speeds were very similar.

When we look at individual results, we see that of the 160 students who did the exercises as either timed or paced readings, 151 increased their reading speed. Only nine decreased their speed slightly. At the beginning of the trimester, 71 students were reading below 100 wpm. After doing the exercises, only six were still reading below 100 wpm, and of these six, four had increased their reading rate. It is interesting to note that some of these students began with initial speeds as low as 53 wpm. In fact, some of the greatest gains were made by precisely these initially slow readers. This indicates that if there is a threshold below which these exercises would not be effective, this threshold must be quite low.

Since classroom time is always at a premium, one of the objectives of these studies was to determine the most effective way of administering the exercises. Both Study four and Study five indicate that allowing students to control the time they need for a particular reading produces greater gains in speed than having the time limit imposed by a teacher.

Based on these findings, four conclusions can be reached: (1) It is possible to increase the reading speed of intermediate level university EFL students through the use of specific reading exercises. (2) The use of specific exercises is necessary in order to increase reading speed, since students enrolled in reading courses who did not use these exercises did not increase their reading speed. (3) All intermediate level students can benefit from this type of exercise, since even very slow readers showed substantial gains in speed. (4) Timed reading exercises produce greater gains in speed than paced reading exercises.

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Table 1 : Means and standard deviations for speed and comprehension scores of pretest and posttest

Group	n	Speed				Comprehension			
		Pretest		Posttest		Pretest		Posttest	
		M	SD	M	SD	M	SD	M	SD
1.1.	18	119.78	18.75	169.61	20.49	77.78	1.17	68.89	1.53
1.2.	24	108.21	24.65	158.67	29.07	72.92	1.71	62.50	1.62
2.1.	29	114.07	26.80	143.10	26.68	67.93	2.11	78.97	1.14
2.2.	17	137.59	28.15	137.82	32.00	50.59	2.11	74.12	1.58
3.1.	28	123.82	34.39	162.00	46.22	78.93	1.73	77.86	1.75
3.2.	22	102.59	26.42	121.64	23.94	83.64	1.22	69.55	2.24
4.1.	20	118.85	19.82	147.50	17.46	69.75	1.32	77.25	1.09
4.2.	19	106.11	23.12	151.05	45.34	60.00	1.28	77.11	1.11
5.1.	12	103.67	26.23	133.08	22.90	69.17	1.33	65.00	2.32
5.2.	11	98.36	22.29	149.73	25.33	70.00	1.03	70.91	2.02

Note: 1.1.=Study 1, Group 1