

The Effectiveness of Davis Dyslexia Correction Re-examined in Iran

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Abstract

The effectiveness of Davis Dyslexia Correction Method (DDCM) in improving reading skills has been shown elsewhere many times. To show its effectiveness here in Iran, four dyslexic fourth graders, matched on intelligence, dyslexia problems, parents' level of education, and family's socio-economic status, were selected from among students at the "Orumieh Special Learning Disabilities Center". Of these, two were randomly selected to form the experimental group and receive reading instructions for three months using the ODCM (orientation counseling and symbol mastery). The other two continued learning with the method customarily used at the Center. Pre- and post- tests in reading were given to both groups.

Results show a significant improvement in the reading skills of the experimental group.

Keywords: Special Learning Disabilities; Dyslexia; Davis Dyslexia Correction Method

Introduction

“What makes a human being human is civility, and civility, in origin and nature, cannot be accomplished but by learning. Humans do almost everything by learning. They learn how to move, how to walk, how to talk, how to read, and...”

By Sayyed Jamaloddin Asadabadi (Rakhshan and Faryar, 2000).

One of the issues concerning *learning*, which has been a topic of interest among researchers for a long time, is the problem of children with learning disabilities. In 1869, an English eye doctor, named Morgan, reported a condition that he called “Word Blindness.” (Rakhshan and Faryar, 2000). Since then, there has been extensive studies done on this topic and professionals in various fields, such as education, medicine, psychology, and linguistics have contributed to these studies.

The comprehensive definition of children with learning disabilities, which was given in 1997 (IDEA) [Individuals with Disabilities Education Act, USA] is as follows:

The term “children with learning disabilities” refers to children who have a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. However, learning disabilities do not include, “...learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage. (Shapiro & Rich, 1999).

According to Bradley, the most important educational challenge that children with learning disabilities face is **reading**, because a child that cannot read has very little chance of success in school. (Babapoor and Sobhi Gharamaleki, 2002).

Kaplan defines dyslexia as follows:

“Dyslexia is characterized by the child’s inability to recognize words, slow and poor reading, low comprehension, with the absence of low IQ or significantly low intellect. This disorder [*41] seems relatively common, runs in families, and is often accompanied by difficulty with writing, math, or one of the communication disorders.” (Bahamin, 2003).

A group of researchers believe that more than 25 percent of children’s failures in elementary school are due to reading disabilities. (Monshi Toosi, 1999) As stated by Naderi and Saif Naraghi (1979), according to researchers’ findings in different countries, the prevalence of dyslexia has been reported to be somewhere between 2% and 25% (Bahamin, 2003). This rate has been reported as 5% in the county of Orumieh

(Amani,1998). The research that has been performed on dyslexic individuals indicates that it is indeed true that they are more likely to suffer from psychological and social problems, such as excessive anxiety, low self-esteem, poor metacognitive abilities and poor social judgment. Also, dyslexia is considered one of the major burdens in the education systems of most countries, in terms of people's lives (time) and financial and monetary resources spent.

In order to solve this problem, a lot of methods have been developed and implemented, the most common and effective of which is Fernald's Multisensory Method. This method was presented by Grace Fernald (1943 and 1988) which requires excellence and balance of the senses of sight, hearing, touch, and it is widely used in organizations that specialize in the instruction and rehabilitation of children with learning disabilities. (Naderi and Saif Naraghi, 1986). The way this method is performed at such organizations as the Center for Students with Learning Disabilities in the County of Orumieh, is as follows: Many of the words that present a challenge for dyslexic students are cut in colored cardboard and glued on white cardboard. In the first step, the student learns to pronounce each sound of new words as he traces over them with his fingers. Also, the student practices writing out the words in salt or sand, pronouncing them at the same time. After a series of repeated practice using these methods, the student writes out the words with pen on paper. In the next step, with the help of his teacher, the student makes sentences with the new words. In this process, many educational aids are used as well. However, despite the use of these traditional methods, the problems that these students have are not fully solved. Therefore, due to the importance and sensitivity of this issue, in this investigation, a new method called Davis' Method has been tested.

[*42]

Ronald Davis was a dyslexic man who was able to overcome his disability at the age of 38 and after two years, in 1982, he founded a research and rehabilitation center for dyslexia in California with his colleague, Dr. Fatima Ali. Claiming a 97 percent success rate in the correction of learning difficulties, he began to treat the learning-disabled. By authoring the books "*The Gift of Dyslexia*" and "*The Gift of Learning*" he described ways in which these disabilities develop, and methods to overcome them. There are currently more than 255 experienced experts around the world who are treating people with learning disabilities using Davis' Methods. (Davis, 2002, Wier 2002, Hodge 2002)

There are two reasons that Davis considers his point of view to be unique. First, he emphasizes perception. Second, since he was a dyslexic himself, he had direct and first-hand experience with the condition. He believes that dyslexia is not the result of factors such as deficits of the brain, the inner ears, or brain damage, but it is a result of distorted perceptions and reactions to the sense of confusion (disorientation).

As Davis put it, "dyslexia is a type of disorientation caused by natural cognitive ability that can replace normal sensory perceptions with conceptualizations; Disorientation can be triggered by confusions regarding symbols". Also, the causes of dyslexia are affected by sensory inputs and perceptions. (Ibid)

The Davis method has two stages:

1. **Orientation counseling**, which carries the same connotation as what teachers and psychologists know as “**concentration**”. In this stage, which usually takes about five days, by focusing and increasing his ability to control his attention span, the student can avoid the sense of disorientation when faced with tasks that require working with symbols (reading, writing, math, etc.) The main exercises in this state are carried out by mental imagery.
2. **Symbol Mastery**, which is a method in which the student uses clay to make the letters of the alphabet, and punctuation marks (question mark, exclamation mark, period, etc.) to make abstract words and creates a model to put meaning on these words and practice with them. The philosophy behind this stage is that the student can create a three dimensional image of the word that is incomprehensible to him. This way, the student initially makes the shape and pattern of the word using clay, and then [*43] he creates a mental picture of the meaning of the word, and he turns that picture into a three dimensional, visual image using clay. After the student becomes aware of the word and its meaning, he pronounces the word aloud and uses it in different sentences. This way, the dyslexic individual obtains the ability to understand the meaning of the word in both verbal and non-verbal forms. (Davis, 2002).

Since no investigation regarding Davis’ Methods has been observed from the available research that has been done in Iran, we will inevitably have to settle for similar research that has been performed on this topic.

In an experiment that was designed to study the effects of mental imagery on the measure of learning in fifth-graders, the results showed that mental imagery significantly increases the students’ learning. (Khajvand,1996)

In a scientific experiment that was performed on 20 students, ages 11 to 12, to study the efficacy of Delacato’s neurological-psychological method in the treatment of dyslexia, it was found that Delacato’s method had no effect on the ability to read for dyslexic people. (Bahamin, 2003).

Sue Hall is a dyslexic who, using Davis methods, was able to overcome her reading problems and now she is one of the rehabilitation therapists in the Davis Counseling Center located in West Canada. Daniel Scott and Ed Kaiser, both 14 years of age, are also dyslexic individuals who, with the help of Hall, were able to overcome their reading disabilities. (Dedyna, 2000, Stainsby, 2001)

Bill Allen is a dyslexic, who, at the Reading Research Council in Burlingame, California, using Davis methods was able to overcome his reading disability at the age of 42. (Allen, 1999.)

Pfeiffer (1994) performed a five year long study to investigate the effectiveness of Davis’ Methods in preventing students’ learning disabilities. This study was performed on 30

students in kindergarten. After the five-year long study, Pfeiffer concluded that Davis' **Symbol Mastery** method in the early years of schooling can help in preventing students' learning disabilities. (Pfeiffer, 2001).

Considering what has been said so far, the following questions are raised:

1. Does implementing Davis' Method increase the level of reading skills of dyslexic students?
2. Is Davis' Method more effective than other traditional methods (Fernald Method), at increasing the reading skills of dyslexic students?

[*44]

3. Does Davis' method increase the levels of academic achievement of dyslexic students?

Methods

A pre-test and post-test controlled experimental design.

Subjects

Four fourth-graders who were suffering from dyslexia, from the Center for Students with Learning Disabilities from the County of Orumieh. To control for interfering variables as much as possible, two girls and two boys who were similar in terms of age, IQ, level of dyslexia, parents' completed education levels, and social and economic backgrounds were chosen from this group.

Procedure

From the group of four students (two girls and two boys), one boy and one girl were randomly assigned to the experimental group. The other boy and girl were assigned to the control group, and they continued to study under Fernald's method and methods of practice with repetition which was common at the center. Before the administration of the Davis Methods, all students were subject to a reading pretest. Then, the experimental group studied under Davis Methods for a period of three months (25 sessions) while the control group continued to study under traditional methods. Then, to measure each group's progress in reading, each subject underwent a reading post-test, and the results were analyzed using plots and bar graphs.

Data collection Methods & Techniques

To collect data, tests that are administered at the Training and Rehabilitation Center for Special Learning Disabilities for the diagnosis of reading disabilities were used. These

tests contain short passages from lessons in the fourth grade Farsi book. The test measurements were determined based on the following criteria:

A. Difficulties

1. Difficulty in Structural analysis of words
2. Non-recognition of silent sounds
3. Non-recognition of vowel sounds
4. Inability to combine sounds
5. Inverting part of a word or an entire word
6. Replacing a word
7. Guessing a word
8. The addition of irrelevant words
9. Non-recognition of visual words
10. Omission of words
11. Incorrect reading of statements and lack of understanding of subject matter

[*45]

B. Skills

1. Observing the rules of punctuation
2. Correlation between reading speed and difficulty of context
3. Skills in using a dictionary
4. Interest in reading non-academic books
5. Interest in referring to Centers for Training and Rehabilitation

The validity of these tests were confirmed by experienced fourth grade teachers and the obtained reliability coefficient for this test for normal fourth graders was 0.92.

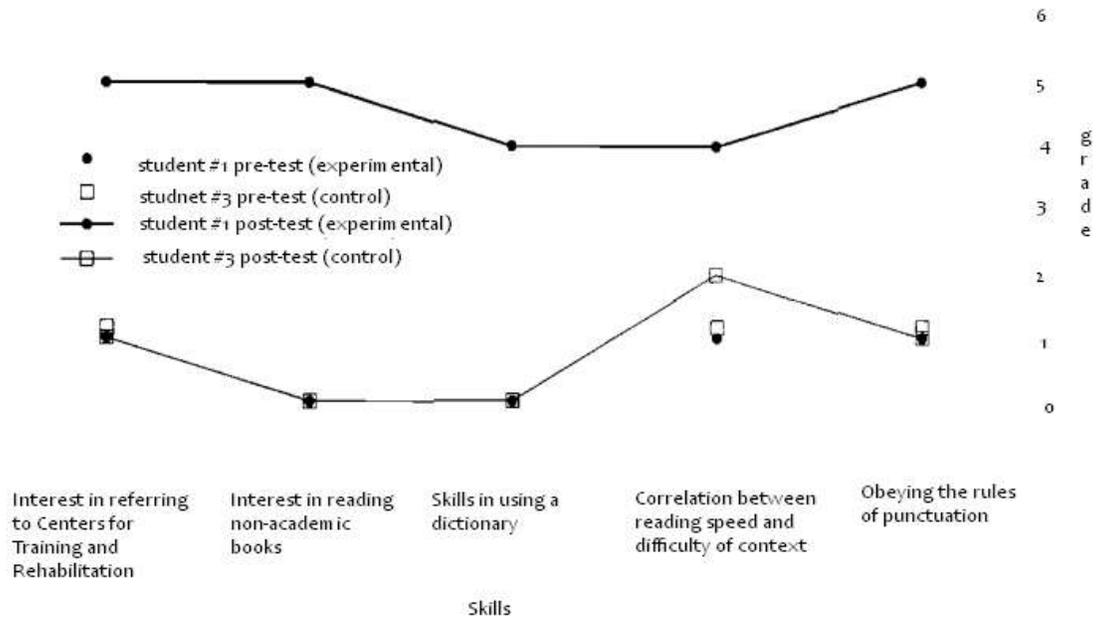
Due to the small sample size, in this research report, the results are presented with scatter plots and bar graphs.

Results

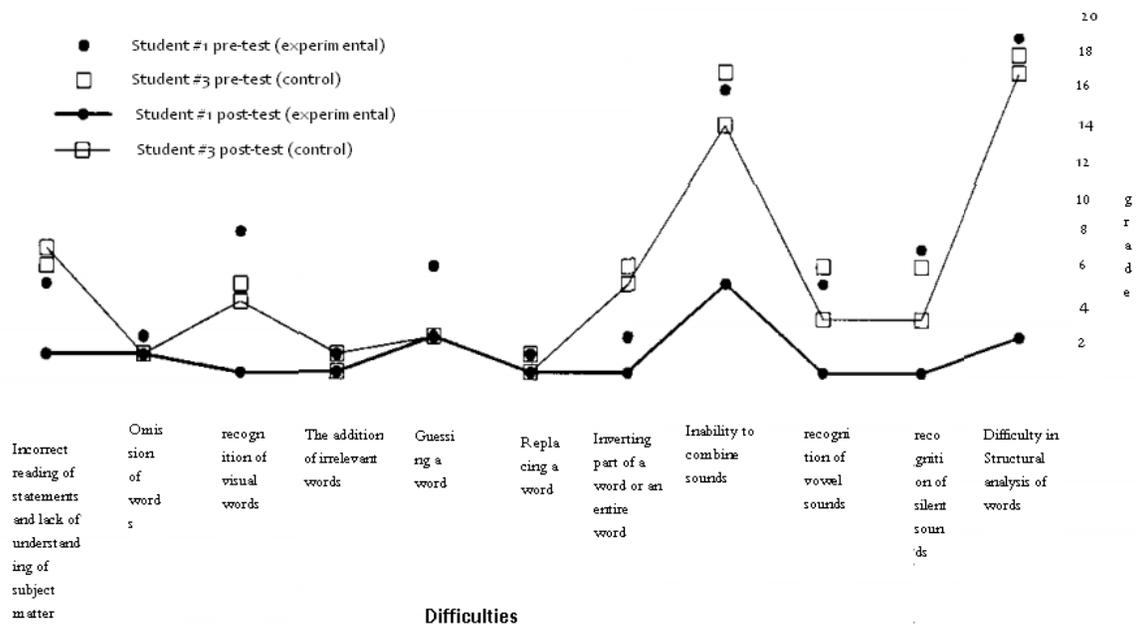
Comparison of results indicates that Davis methods increased the reading levels of the two students who were subject to it (**figs 1 to 4**). And relative to more common rehabilitative methods used at the Training and Rehabilitation Center for Special Learning Disabilities (particularly Fernald's Methods), it was more effective at improving the students' reading skills.

Also, by comparing the students' reading-related course grades for two terms (first term being the term before the students were exposed to reading methods, second term being after the students were exposed to reading methods), it can be concluded that Davis methods increased the experimental group's level of academic progress more compared both to the first term and to the control group. (**fig 5**).

[*46]

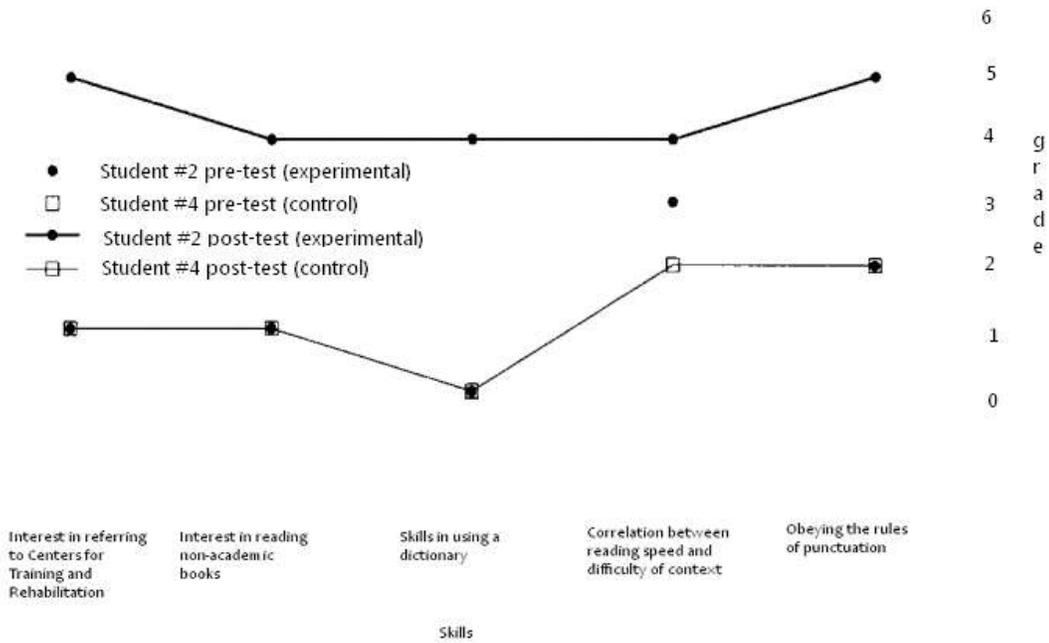


Plot 1 - Obtained results from student #1's (experimental) and #3's (control) skills pre-test and post-test

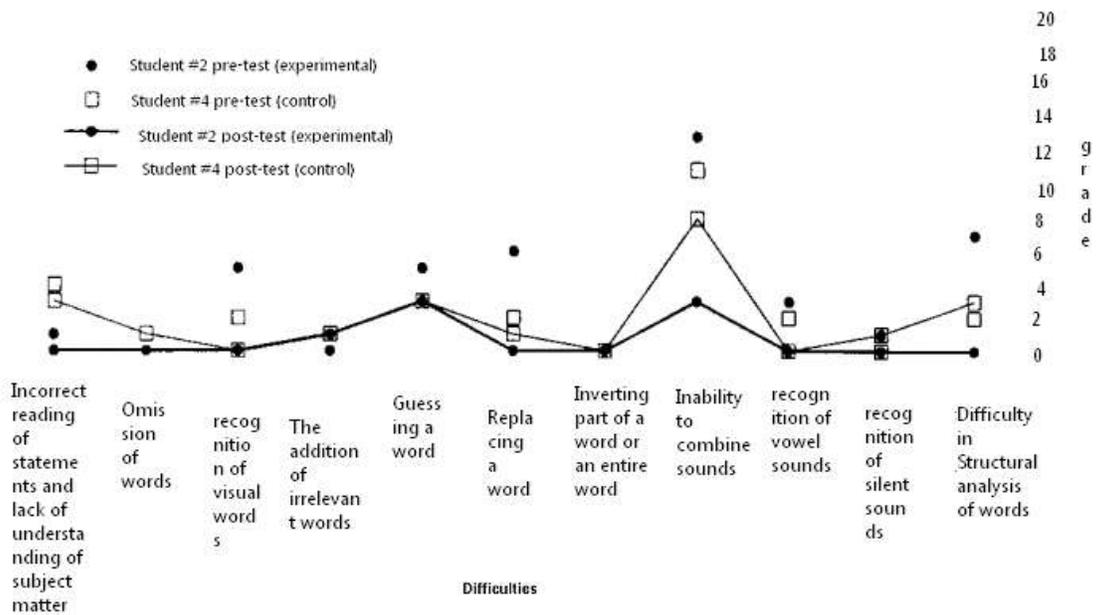


Plot 2 - Obtained results from student #1's (experimental) and #3's (control) difficulties pre-test and post-test

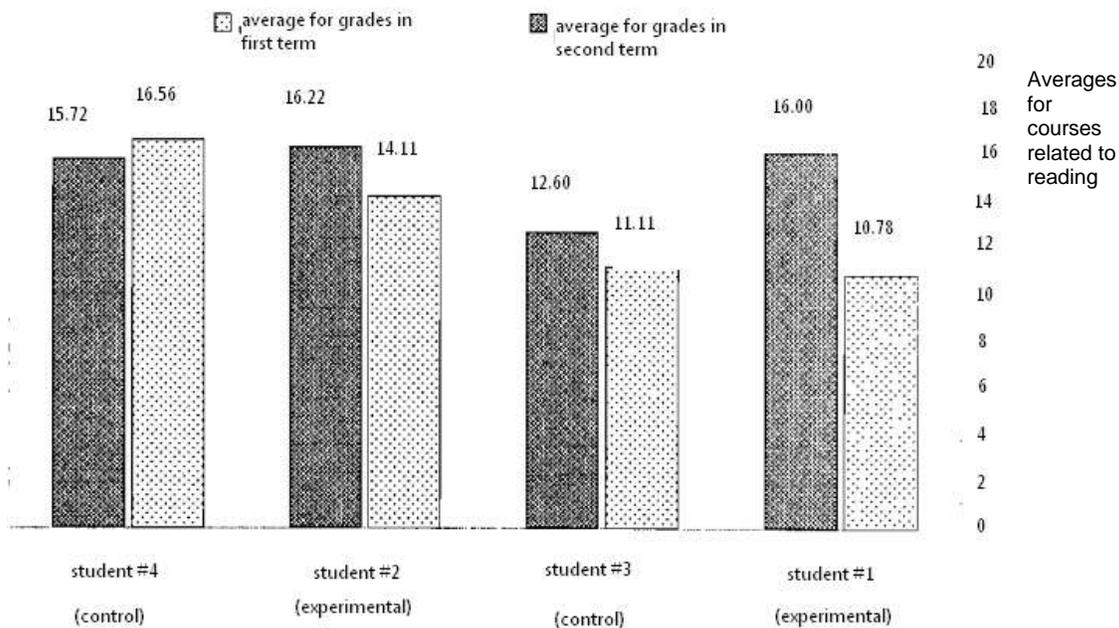
[*47]



Plot 3 - Obtained results from student #2' (experimental) and #4's (control) skills pre-test and post-test



Plot 4- Obtained results from student #2's (experimental) and #4's (control) difficulties pre-test and post-test



Quran, the study of religion, composition, spelling, Farsi literature, history and sociology, geography, math and science

Plot 5- The effectiveness of Davis Methods at improving the experimental group's educational progress (students #1 and #2) relative to the control group (students #3 and #4)

Results and Discussion

The results of this investigation indicate that the Davis Training and Rehabilitative Methods increase the reading skills of dyslexic individuals. These results are consistent with the findings of Stainsby (2003), Dedyana (2001), Allen (1999), Pfeiffer (2001), and Davis (2002).

Also, comparing the effectiveness of Davis Methods with more traditional and common methods, the findings of this research indicate that Davis' teaching and training method is by far more effective at increasing students' reading skills and reading levels and academic achievements than traditional methods (Fernald's methods), which is the main method used in training and rehabilitative programs for the special learning disabilities. No other scientific investigation was found regarding this topic.

In addition, it can be emphasized or stressed that Davis's training and rehabilitative methods has a positive and high impact on the academic progress of students with learning disabilities. In this regard, too, no other investigation was found for the purpose of comparing results.

Utilizing the student's creativity, using the "mental imagery" teaching strategy, emphasizing on teaching punctuation marks which is often overlooked, appeal, and being student-centered, are all features of the Symbol Mastery phase in Davis' Methods. The "**Orientation**" phase in Davis' Method also covers unique exercises that are not seen in any of the traditional methods, not even in Fernald's Methods. In the final steps of this phase the student balances himself on one foot and this stage has also been recorded with a camera. After performing this phase, the students become able to balance themselves on one foot without too much stumbling, and by moving their minds' eyes, they can exit the sense of balance. They can easily catch a ball that is thrown at them while balancing themselves on one foot, although they were not able to perform any of these tasks before this. These results are consistent with the findings of Davis (2002).

To document this research as much as possible, in addition to filming, the students' voices and the way they read the school texts before, while, and after exercising Davis' Methods, have been recorded.

The limitations of this research: Time limitations, the small size of the sample (few cases) makes it inappropriate to generalize the results. Lack of access to all research that has been done across Iran, the administration of research on a confined group of people (fourth graders), and the non-existence of previous experiences with Davis' Methods since this was the first time this method was tried in the country.

In conclusion, it is recommended that colleagues at least become familiar with Davis' Methods and this method be administered on more and larger groups in several centers so that, in case of observing positive results, not only can it help in solving the problems of people who are currently having learning disabilities, but also prevent learning disabilities in case its symptoms appear, and this method of learning the alphabet and the numbers, be taught in kindergartens and also be used for the first grade in normal schools.

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