

An Intervention to Improve the Writing Skills of Students With Learning Disabilities: Stop & List Strategy

Ahmet Bilal Özbek

Dokuz Eylül University, Turkey

Burcu Kılıç Tülü

Cevriye Ergül

Ankara University, Turkey

The aim of this study is to examine the effectiveness of the Stop & List strategy instruction on the descriptive text writing performances of students with learning disabilities. The intervention was planned according to the Self-Regulation Strategies Development instructional framework. Three Turkish-speaking fourth-grade students who were diagnosed with learning disabilities participated in the study. Intervention sessions took place once a week for 45 minutes for a total of nine weeks for all participants. The planning and writing scaffoldings that were used in the intervention sessions were prepared by the researchers. Monitoring assessments were held seven and 14 days after the last intervention session of all participants. Students were evaluated in terms of planning time, length and holistic quality of texts and use of transition words. Findings showed that holistic quality and length of texts written by students increased, they used more transition words and used more time for planning. The Stop & List Strategy was found to be effective in improving students' written expression performances. The findings are discussed further within the framework of the literature.

Keywords: Strategy Instruction, Expository Writing, SRSD, Single-Subject Design, Stop & List Strategy.

INTRODUCTION

Written expression is an indispensable multifunctional tool which ensures the continuity of communication between people. Writing affects people's thoughts and is used to learn and achieve many goals (Bangert-Drowns, Hurley & Wilkinson, 2004). Students can use their written expression skills to reflect their thoughts and experiences, and to construct, organize and remember the information that they learn (Graham, Gillespie & McKeown, 2013). Written expression involves using different skills such as basic writing, writing fluency, reading fluency and comprehension, and generating and organizing ideas (Graham, 2006).

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The written expression process consists of three stages: planning, writing and revising the text (Wong, 2000). The planning stage includes determining the topic and purpose of writing and generating and organizing ideas (Graham & Harris, 2003). Completing this stage effectively helps the writer create higher quality texts. In the writing stage, it is important to create paragraphs to reflect relationships and to use transition words that reflect the characteristics of the type of text being written. When creating paragraphs, the ideas and information units related to each other should be in the same paragraph and transition words should be used to ensure the semantic integrity. In the revising stage, which is the last one, the text should be read again and corrections made if necessary.

Unlike their normally developing peers, students with learning disabilities experience difficulties in completing written expression tasks (MacArthur, 2007; Reid & Lienemann, 2006). For example, it is stated that students with learning disabilities either do not plan for writing at all or spend less than a minute doing so. Moreover, when they plan, their plans are usually inadequate and they have difficulty organizing their ideas (MacArthur & Graham, 1987). Since they usually start writing without a strong plan, their written expressions are short and disorganized, and the general quality of the texts is quite low (Montague, Graves & Leavell, 1991). Furthermore, simple sentences are often used and they do not employ strategies in the writing process (Graham, Harris & Fink, 2000). Mostly, they fail to revise the text that they write, and when they do revise it, they often attempt to correct only grammatical errors (Reid & Lienemann, 2006). These difficulties experienced by students with learning disabilities in turn decrease their motivation for writing and they develop negative attitudes towards it. As a result, they often do not attempt to improve their writing skills and avoid the learning opportunities that are offered. To reverse this cycle, it is very important to conduct intervention studies to improve students' written expression performances. When intervention studies in the literature are examined, it can be seen that strategy instruction for developing written expression is widely employed (Berry & Mason, 2010; De La Paz, 2001; Ennis, Jolivet & Boden, 2013; Welch, 1992).

Current Study

In this study, the Stop & List strategy is used for intervention. This strategy aims to enable students to produce ideas by planning, to organize these ideas in a writing plan and to then effectively use these plans to create a meaningful text. In Turkish, creating mnemonics for strategies can be hard and because of this we used a modified version of the Stop & List strategy that became "Stop-Think-List". This strategy still includes the same steps as the original strategy, but in this version, the planning stage is supported with scaffolding. Students are encouraged to produce ideas by asking important questions and then guided to organize these ideas in graphic organizers. It is thought that following this will

make it easier for students to develop planning skills, the quality of the texts they produce will improve and the texts created will have an appropriate structure. Scaffoldings are used in the writing stage to remind them to use transition words such as “for example” or “although”. The Stop & List strategy had a positive effect on the performances of the students who have difficulty in written expression, and it was found that students tended to spend more time planning before writing, used transition words more frequently and the length and quality of the texts they wrote increased (Grünke & Hatton, 2017; Troia & Graham, 2002; Troia, Graham & Harris, 1999).

As in many strategy instruction studies for written expression skills, it is seen that the Stop & List strategy is also taught based on the Self-Regulating Strategies Development-SRSD instructional framework (Graham & Harris, 2003). This framework has six stages: developing prior knowledge, discussion, modeling, memorization, guided practice and independent practice (Reid & Lienemann, 2006). Positive results are obtained in many studies aiming to develop written expression skills in which teaching is carried out according to the SRSD model (Berry & Mason, 2010; Harris, Graham & Mason, 2006; Graham, Fishman, Reid & Hebert, 2016; Taft & Mason, 2011).

As can be seen, there are many studies in international literature which examine the effectiveness of strategy instruction towards the written expression skills of students with learning disabilities, but it is noteworthy that such studies for Turkish-speaking students are quite limited. It is seen that most of the studies in the special education field took place with mentally disabled students (Güzel-Özmen, 2006; Özmen, Gürel-Selimoğlu & Şimşek-Gürel, 2015). In those studies, it was found that adaptive cognitive strategy instruction is effective on the written expression performances of students with mental disabilities. In national literature, we couldn't find any experimental study for improving written expression skills of students with learning disabilities.

Although there are many studies in international literature, little is known about the effectiveness of these strategies with Turkish-speaking students. This study aims to determine the effect of the Stop & List strategy instruction on students' descriptive text writing performance. It is thought that its findings will help those teachers who work with students who have learning difficulties and will prepare the groundwork for new studies.

METHOD

Participants

Students who attend Ankara University special education research center screened three students out of seven chosen through preliminary evaluations. For screening, direct assessments of reading and writing skills were conducted and information was gathered from parents and teachers through interviews. All

participants met the following criteria: they had been diagnosed with a learning disability, they had had no previous training in written expression, they had no additional disability and they had had no grade repetition. In addition, they could read a 4th grade level descriptive text with 90% accuracy, were able to answer at least seven of the 10 multiple choice questions (6 literal, 4 inferential) related to the text correctly and could write the dictated text fluently. Pseudonyms given to students and their real names were not used in this paper.

Three fourth-grade Turkish-speaking students diagnosed with learning disabilities took part in this study. The students are enrolled in different schools and they are receiving supportive education from the Ankara University research center. All the participants were diagnosed with learning disability when they were in the second grade and have been receiving support from special education services since then. Their socioeconomic statuses are similar to one another, they do not come from disadvantaged groups, and their first language is Turkish. In preliminary evaluations conducted with the students, the first participant, Selim (nine years and one month old), read with 97% accuracy and answered eight out of the 10 comprehension questions correctly. The second participant, Buse (10 years and one month old), read with 93% accuracy and gave nine correct answers and the last participant Kaan (10 years and three months old), read the text with 98% accuracy and achieved seven correct answers.

Experimental Design

In this study, a design with multiple probes across participants was used to determine the effectiveness of the Stop & List strategy instruction on the descriptive text writing performances of students with learning disabilities. In this model, the baseline data are collected simultaneously from all participants. When the data are stable at the baseline, the implementation of the independent variable is initiated with the first participant. In the meantime, baseline data continue to be collected from the other subjects. When the criterion is met for the first subject, an intervention is implemented for the second subject and this process is then repeated for the third subject (Alberto & Troutman, 2009). The experimental process of this study was planned according to the quality indicators for single subject studies presented by Gersten et al. (2005).

Independent Variable

The independent variable of the study is the instruction of the Stop & List strategy, which is planned based on the SRSD instructional framework for descriptive text writing skills. The instruction of this strategy is explained in the intervention section.

Dependent Variables: Definitions and Administration Procedures

Dependent variables of this study are the planning time taken before writing, the length of texts, the holistic quality of texts and the use of transition words in the text. The time allocated for planning was calculated by recording

the time spent by the student in planning before writing. It is the time that the student used between choosing the topic and beginning to write. Text lengths are obtained by counting the total words written without considering misspellings. The quality of the texts was evaluated with the Descriptive Text Holistic Quality Rubric. This rubric consists of seven dimensions, including paragraph creation, the content of the text, spelling accuracy and grammar, the concluding sentence, the sentence structure, the meaning integrity of the text and readability of the handwriting. A minimum of one and a maximum of four points can be obtained from each dimension. The lowest possible score from the rubric is seven and the highest is 28. The rubric is presented in the appendix section. The transition words, which are another dependent variable, were determined by examining the texts written by the students in terms of the existence of words that connect sentences and ensure the integrity of meaning. A list of Turkish words which create relations between sentences (e.g. for example, but, nevertheless, however) was used for this.

In the baseline, probes and monitoring session evaluations were made to determine the written expression performance of the students. Students were asked to write a descriptive text by selecting a topic from the list prepared before the study. Initially, the researcher explained the study to students. *“Today I want you to write about something you want. Let’s pick a topic from this list now – yes, lions! Now you’re going to write a descriptive text about lions. People who read this text will get to know about lions, and you will introduce lions to them. There are papers and colored pencils here. You can use all of them and use your time for planning. There is no hurry. You can start.”* In the process of writing, no support or clue was given to the student by the researcher. Students’ planning time was evaluated by the practitioner by using a stopwatch. The length, holistic quality and transition word usage were determined and recorded as baseline data. Selim and Buse had four and Kaan had five baseline evaluations. After the intervention sessions, on the same day probes took place and participants were asked to write a descriptive text. Probe assessments were completed as explained above.

Participants’ Routine School Education: Researchers interviewed participants’ teachers and learned about their literacy lessons. None of the participants received any additional expressive writing strategy instruction while the experimental procedure took place. After the study, researchers informed the teachers about the intervention and the results.

Intervention. The intervention phase lasted a total of nine weeks and was held once a week. While the first session was devoted to the development and activation of preliminary knowledge of writing skills, the second session was about the work to be done and the strategy to be learned. After these two sessions were completed, intervention data was gathered from modeling, guided practice and independent practice sessions (seven probes). In the next three ses-

Monitoring sessions. Following the completion of the intervention sessions, monitoring evaluations were obtained with each student seven and 14 days later. As in the baseline and probe assessments, students were asked to choose a topic from the list and write a descriptive text. The written expressions of students were examined in terms of the dependent variables and data were recorded.

Data Analyses

The time spent by students on planning before writing, the length and holistic quality scores of their texts, and the number of transition words used was calculated. Descriptive statistics for the students' baseline, intervention and monitoring sessions are given in Table 1. The time that they devoted to planning, the length of written products, holistic quality scores and the usage of transition words was determined and displayed using graphics. Non-overlapping data percentages were calculated for the graphs.

Treatment Integrity

A total of 30% of voice recordings from the sessions were randomly selected and the procedural fidelity of the study was evaluated by independent observers by using a control list and calculated as being 89.6%. To assess the reliability of the data obtained, reliability among observers was calculated. Regarding the work produced, 30% of the pieces were evaluated by independent observers and inter-observer reliability was calculated as being 92%.

Social Validity: At the end of the study, parents were informed about the experimental process and the texts written by the students were shown to them. To determine their opinions about the study, families were asked questions on the Social Validity Interview Form and their responses were recorded.

Results

In this study, the effectiveness of the Stop & List strategy instruction on students' expressive writing skills was investigated. Descriptive statistics of participants' planning time, the length of the texts they wrote, the use of transition words and the total quality of the texts are given in Table 1.

Table 1. Planning time, length, transition words and holistic quality scores

Student	Sessions	Planning Time		Length		Transition Words		Holistic Quality	
		M	SD	M	SD	M	SD	M	SD
Selim	Baseline	0.00	0.00	33.25	4.99	0.00	0.00	9.25	.95
	Intervention	10.00	2.38	93.28	9.55	8.28	3.03	24.00	1.82
	Monitoring	7.00	1.41	77.50	2.12	4.50	.70	22	0
Buse	Baseline	0.00	0.00	29.75	5.56	0.00	0.00	10.25	.95
	Intervention	8.42	2.63	69.85	11.29	4.42	1.27	24.42	1.27
	Monitoring	3.50	.70	57.50	14.84	1.50	.70	21	1.41
Kaan	Baseline	0.00	0.00	26.20	4.43	0.00	0.00	11.60	.54
	Intervention	3.55	.89	42.85	5.01	3.00	1.91	21.42	.97
	Monitoring	4.00	1.41	44.5	2.12	2.50	.70	20.50	.70

When the averages given in Table 1 are examined, it can be observed that the intervention had a positive effect on the writing skills of participants. Students spent more time planning in intervention and monitoring sessions. There was also an increase in the length of the texts they wrote, the transition words they used and the overall quality of the writing. Although there was a decrease during monitoring sessions compared to the intervention sessions, it was observed that they performed above baseline levels in all dependent variables. In other words, all students greatly preserved their performance in monitoring sessions. The performance levels of the students are shown in Figure 3 and 4.

As seen in Figure 3, students started writing without planning in baseline assessments. However, it was observed that there was a significant increase in the time students spent planning in the intervention sessions. In these sessions, it was also noticeable that Selim’s time spent planning was higher than the other participants. Although the average planning time of Buse and Kaan was the same, it is noteworthy that Buse’s varied from session to session. Although there was a decrease in planning during the monitoring sessions, between three and eight minutes were still spent doing this. While Selim’s planning time was maintained with just a small decline, Buse’s planning period decreased to three minutes and 50 seconds. Kaan, on the other hand, preserved his planning time performance from the intervention sessions.

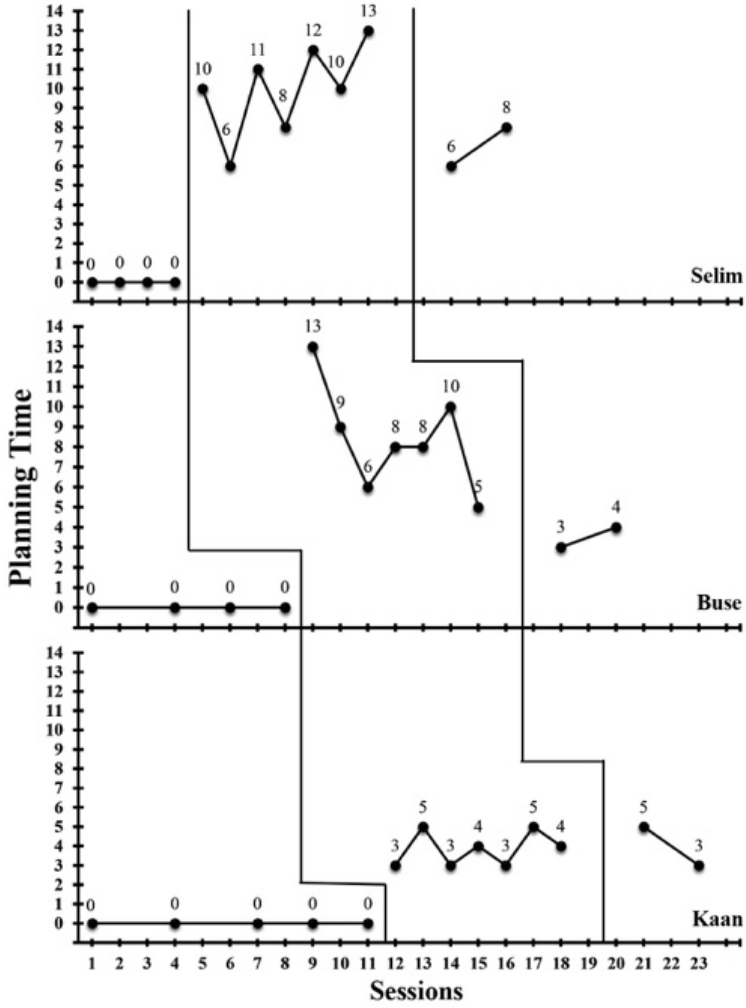


Figure 3. Graph of planning time used by participants

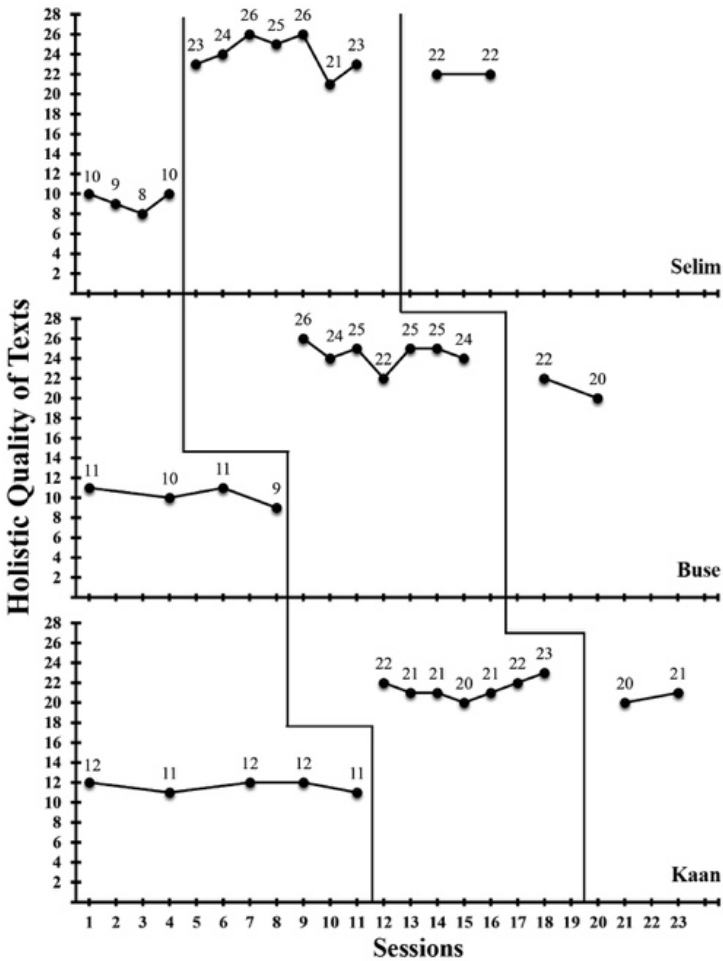


Figure 4. Graph of holistic quality of texts written by participants

The holistic quality scores of the texts written by the students are presented in Figure 4. It can be seen that the holistic quality scores of all participants at the baseline are fairly low. In the intervention sessions, the holistic quality of the texts written by all students increased by more than 100% (see Table 1). This increase in the holistic quality scores was maintained with just a slight decrease being observed during the monitoring sessions. In the monitoring sessions, Selim had the highest holistic quality score and Kaan continued to increase this score (see Figure 4). Buse maintained his holistic quality score with just a minor decrease.

The findings were evaluated in terms of the percentage of non-overlapping data, which was calculated at 100% in all subjects for all dependent variables. All participants performed better than their best performances in baseline sessions. Considering the immediacy effect of strategy instruction, it is clear that intervention had an effect on their performances and data patterns across similar phases are consistent (See Figure 3 and Figure 4). In summary, all participants improved their written expression skills as a result of the intervention.

Social Validity

All parents expressed that they were satisfied with the results of study and said that they liked the writing examples very much. They indicated that their children had improved their writing skills. All parents stated that it was very important to receive such instruction before beginning secondary school the following year.

DISCUSSION

The aim of this study was to examine the effectiveness of the Stop & List strategy instruction on the descriptive text writing performances of students with learning difficulties. Findings revealed that intervention has a positive effect on students' writing skills. It was observed that students spent more time planning, increased the length of their texts, used more transition words and the holistic quality of their texts increased. These results are consistent with the results of previous studies on strategy instruction for developing the writing skills of students with learning difficulties (Grünke & Hatton, 2017; Saddler, Moran, Graham & Harris, 2004; Troia & Graham, 2002). It was observed that the students generally maintained their performance in the monitoring sessions, with some minor reductions.

The increase in students' planning skills was the most remarkable finding of the study. When the baseline was examined, it was noted that all participants started writing without planning. During the intervention phase, there was a significant increase in the planning times of the three participants and students then went on to apply the planning skills they had gained in the intervention phase to the monitoring phase. Stop & List is a strategy to improve the skills of planning (Graham & Harris, 2005) and the employment of this strategy contributed to the development of students' planning skills. Planning sheets with reminders also helped students learn how to create and organize their ideas and the researcher gave guidance with this. The increase in planning time was an important finding that showed that the Stop & List strategy contributes to students' planning skills (Graham & Harris, 1997; Lienemann, Graham, Leader-Janssen & Reid, 2006). Similarly, several studies have shown that strategies focused on the planning stage have a positive effect on students' written expression performances (Grünke & Hatton, 2017; Troia, Graham & Harris, 1999, Troia & Graham, 2002).

Planning is an important component that enables students to create ideas about the text they write and this influences the quality of their written products (Hayes & Gradwohl-Nash, 1996). However, in literature it is stated that the quality of the written products of students with learning disabilities is low because they either do not plan or spend very little time doing so. They also often fail to organize their ideas and struggle to then recall them (Troia, Graham & Harris, 1999). Starting to write without first planning results in low quality written products with no semantic integrity. On the other hand, it is known that when students plan what they write, they organize their thoughts better and create much higher quality texts (Troia & Graham, 2002). At the baseline of this study, students started to write their texts without planning and the texts they wrote were limited in terms of their length and holistic quality. At the intervention phase, students used planning papers to record their ideas and they organized them better and did not have to remember them. Indeed, it is stated that students' ability to recall their ideas has an impact on the quality of the written product (Olive, 2004; Swanson & Berninger, 1996). Using these papers, students did not skip any ideas they produced at the planning stage. They grouped these ideas together and wrote them all with semantic integrity. In other words, the use of planning sheets led to an increase in the length and overall quality of the texts written by students. When planning and working papers were not provided during the monitoring stage, it was noted that, although planning time decreased, ideas were better planned than at the baseline and the holistic quality of their written products was preserved. It can be seen that quality can be preserved even when there is a significant decrease in the lengths of the texts. This finding is important and shows that the planning-oriented Stop & List strategy contributes to students' written expression skills (Graham & Harris, 1997; Lienemann, Graham, Leader-Janssen & Reid, 2006). In this context, it is thought that the use of interventions to improve students' planning skills, such as the Stop & List strategy, will be an effective practice.

In this study, one aim was to increase the transition words used by students in their texts. Students did not use any transition words in baseline assessments, but after intervention sessions they began to use them. When the texts of the three students' texts from the intervention and monitoring sessions were examined, it was observed that they used at least one transition word in each paragraph. In addition, it was noticed that all three students completed the text in the last paragraph using a transitional word or phrase such as "finally" or "as a result". This use contributed to the semantic integrity and holistic quality of the texts and this continued in the monitoring sessions. In accordance with other, similar studies, it was observed that students often used transition words in intervention sessions with the presence of a clue, but less frequently in the absence of such guidance during the monitoring sessions (Graham & Harris, 2003). It

may be advisable to have more practice, more explicit intervention sessions and frequent repetitions in order to make use of these transition words more active.

Although planning skills are of great importance for written expression, it is understood that language skills, memory capacity, pre-knowledge and the attitude of students toward writing could differentiate the effects of interventions for each student. In fact, it was observed that there were differences in the language performances of students and that these differences reflected the students' written expression skills. Although there was no formal evaluation of the language performances of the students, according to the observations of the researchers in the context of conversation, Selim expressed himself with longer and more complex sentences. Buse and Kaan's written expression skills also increased with intervention but Selim was the best performing student considering all dependent variables. In summary, with the intervention, improvements were observed for all students, but they benefited from the intervention according to their levels of language skills. Because of this, it is considered that it would be beneficial to conduct interventions for language skills alongside interventions for students' written expression skills.

Writing is a difficult skill requiring a lot of effort. Consequently, negative attitudes affecting students' ability to remain focused can ensue (Schultz & Switzky, 1993). In turn, this leads to shorter texts, lower text quality and creates problems for the semantic integrity of texts (Bruning & Horn, 2000; Gottfried, 1990). In baseline assessments of this study, it was observed that students were very anxious about what to write. The texts they produced were usually as short as possible and completed as rapidly as possible. After intervention, all the students began to enjoy writing, wrote longer texts, and became more motivated as their knowledge and experience grew; there was a particular increase in this study in Selim and Kaan's motivation and desire to write.

In Turkey, most teachers consider written expression a talent and it is a neglected literacy skill. Students are asked to write essays without any instruction and this causes repetitive failures and eventually creates negative attitudes towards writing. Students are lacking in motivation for writing because they don't receive any instruction or explanation. The findings of this study prove that writing is a skill that we can develop with effective instruction and support. First, teachers should explain to students that they can write good essays if they follow the steps of the writing process. Activating background knowledge and discussion steps of SRSD instructional framework have great importance for overcoming these problems. Second, it is thought that using visuals or technology can attract the attention of students. As much as the writing process requires cognitive processing, it takes physical effort too. Handwriting may be very hard for some students and this could be the reason why they are so reluctant to write. Using keyboards and screens would be an effective solution to this problem.

In addition, in this study, sessions were held once a week for an average of 45 minutes and a text was written each time in its entirety. Although there were no problems with Selim and Kaan, it is believed that studying the planning and writing processes separately and in shorter sessions would solve the motivation problems experienced by students like Buse.

In summary, it has been observed that the Stop & List strategy instruction according to the SRSD model has a positive effect on the descriptive text writing performances of Turkish-speaking students with learning difficulties. However, considering the limitations discussed, it is felt that more intervention research should be designed to probe further.

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AUTHORS' NOTE

Correspondence concerning this article should be addressed to Ahmet Bilal Özbek, Phd, Dokuz Eylül University, Buca Faculty of Education, Special Education Department, Uğur Mumcu Cad. 135. Sk. No: 5 35380, İzmir, Buca, 35380, Turkey, Email: bilal.ozbek@deu.edu.tr.

APPENDIX 1

Descriptive Text Holistic Quality Rubric

	4	3	2	1	Points
Creating Paragraphs	Creates three properly separated paragraphs	Creates two properly separated paragraphs	Creates two paragraphs without separating properly	Writes text in a single paragraph	
Content	Expresses the topic and writes at least 6 features of it	Expresses the topic and writes 4-5 features of it	Expresses the topic and writes 2 or 3 features of it	Expresses the topic and writes 0 or 1 feature of it	
Grammar and Spelling Accuracy	No mistake	1 or 2 mistake	3 or 5 mistakes	6 or more mistakes	
Conclusion Sentence	Sufficiently writes a conclusion sentence suitable for the topic	Writes partially sufficient conclusion sentence and its suitable for the topic	Conclusion sentence is not suitable for the text	No conclusion sentence	
Sentence Structure	Writes comprehensive, and complete sentences that describes the topic	Writes complete sentences that describes the topic	Writes complete sentences that doesn't describe topic	Writes incomplete sentences	
Integrity of Meaning	Uses at least 5 transition words and sentences are related with each other	Uses 3-4 transition words and sentences are related with each other	Uses 3-4 transition words and sentences are related with each other	Doesn't use transition words	
Readability of Handwriting	Easy to read and understandable	Despite some problems its understandable	Takes effort to read	Nearly impossible to read	