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Impact of Intervention Program on Enhancing Spelling and Writing Skills among Saudi Primary School Pupils with Learning Disabilities*

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Abstract

Learning disabilities (LD) include difficulties in learning the basic language skills including speaking, reading, spelling and writing. Moreover, the pupils at schools can achieve better through proper support and intervention than conventional methods. In the Saudi context, the Ministry of Education (MoE) incorporated LD in its educational system in 1996 to facilitate the learning of pupils with LD nationwide. This study is an attempt to explore the impact of the intervention program on enhancing the basic skills in spelling and writing of the Arabic language among Saudi primary school pupils with LD studying between first and third grades. The study sample comprised of 38 male pupils with LD, aged between 6-8 years, and were selected from four primary schools in Rafha Province. The study adopted the quasi-experimental research design including control and experimental groups. The results of the study revealed that there was a significant and positive impact of the program on enhancing the performance of the participants in both spelling and writing skills. It is thought that pupils can achieve better through appropriate intervention. Future studies on examining the performances of spelling and writing independently are recommended.

Keywords: Learning disabilities, spelling, writing, intervention program, primary school, Saudi Arabia.

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Learning Disabilities (LD) becomes a widespread term which refers to a set of disorders that cause serious difficulties that learners face in listening, speaking, reading, writing, reasoning, or math (Akhondi, 2011). Fletcher, Morris, and Lyon (2003) also point out that LD refers to particular difficulties in specific abilities that include reading, speaking, listening, writing, reasoning, and solving mathematical problems. More specifically, the students with LD experience problems in oral and written language. As a result, Al-Hano (2006) urges for conducting effective interventions for children with LD, especially the interventions that are holistic, interagency, and interdisciplinary. According to Berninger and May (2011), there are three types of LD: The first is *dysgraphia* which affects writing. The second is *dyslexia* that affects learners' reading ability. The last type of LD is *dyscalculia* which involves difficulties in mathematics as well as visual and spatial ordering (Hutchinson, 2007). The majority of children with LD has *dyslexia* (Candace & Sheldon, 2014) which is reported to affect between 5-17% of school-age children. Candace and Sheldon (2014) add that dyslexia affects 40% of the population in the US. In the Kingdom of Saudi Arabia (KSA), it is estimated that approximately 15-20% of the students have LD (Hussain, 2009). However, this percentage might not be true due to inadequate statistical information. It is the responsibility of the class teachers to identify those with special education needs (Hussain, 2009). Afterwards, special education professionals are assigned to apply appropriate teaching methods. LD is considered as a mild difficulty. Therefore, students with LD receive education together with their peers in the same classroom. However, they are offered additional assistance in the Learning Disabilities Resources Room (LDRR) (Al-Ajmi, 2006).

Few studies were conducted to examine the spelling mistakes of Arabic students with LD. For example, Azzam (1993) investigated the spelling mistakes of Arabic speaking students between 6 and 11 years of age. These mistakes were grouped according to the orthographic features of Arabic language such as misreading of diacritics, misspelling of letters, etc. Abu-Rabia and Taha (2004) compared the spelling mistakes of children with LD in the fifth grade with their typically developing peers. These mistakes were related to *phonetic*, *semi-phonetic*, *dysphonic*, *letter confusion*, *inconsistent spelling rules*, and *function word omission*. The *phonetic errors* were the most notable among others, the major source of which was *Arabic orthography*. Abu-Rabia and Taha (2006) examined the spelling errors made by Arabic-speaking students between first and ninth grades. The study found that phonetic spelling mistakes were more dominant than other errors since they represented half of the errors. Accordingly, the study concluded that *phonetic spelling mistakes* occurring across all the grades showed the difficulty primary school pupils encountered when they started to learn Arabic orthography. Arabic reading and spelling skills are reported to be difficult for Arabic-speaking students. This difficulty is related to linguistic and orthographic features of the Arabic language. According to Taha (2013), the problems in orthography are facilitated through morpho-orthographic procedures and writing conventions. He mentions that specific visible and orthographic cues are already available in Arabic are helpful for the students with LD. Abu-Rabia and Sammour (2013) assessed spelling error types among typically developing students and students with dyslexia in Arabic as a first language (L1) and English as a foreign language (FL). They revealed that the origins of spelling mistakes among Arabic-speaking students were due to comprehension of spelling forms, replacement of the emphatic consonants with plain consonants, particularly when these consonants were assimilated into one syllable.

Concerning the writing difficulties, Al-Hano (2006) mentions that if the learners reach grade three and they have difficulties in writing, then they are lacking the foundational skills that were supposed to be acquired in the first grade. He adds that failure to learning the foundational skills could be due to the teaching method of the teacher, the carelessness at home or because of some other factors. Elnaggar (2019) diagnosed the difficulties faced in writing by non-native Arabic learners and showed that from their writing there is a lack of quality of Arabic calligraphy, some Arabic letters are not written correctly, some letters are not connected properly and learners sometimes do not make a distinction between the silent sounds and the sounds that should be uttered. In a study carried out by Therrien, Hughes, Kapelski, and Mokhtari (2009), the researchers examined the writing skills of sixth and seventh grades students with LD and compared it with other students without LD (control group). Study results revealed that though students with LD have gone through a training program, they performed below the level of the control group. They added that poor writing skills do not only slow the performance of school

students, but also have long-range effects for post-school setting and the workplace. This is an indication that writing is a highly complex activity and requires more attention from teachers and researchers in developing effective training materials, especially for children with LD. Nashaat et al. (2016) conducted a study on 50 Egyptian native Arabic speaking children with the aim to find out the linguistic abilities related to writing skills. Participants were children with LD and their mean age was eight years. The results revealed that the most common deficit observed among the participants is the disorder in speed of writing. They recommended that there should be given special attention to the abilities related to writing performance when it comes to the design of remediation programs for children with LD.

In KSA, the last ten years of the 20th century mark the starting point of LD teaching since the inauguration of the Special Education Department at King Saud University in 1992, which awards a bachelor's degree in LD (Sheaha, 2004). In 1996, the Ministry of Education (MoE) officially incorporated LD in the educational system (Al-Mosa, 1999). The division of LD within MoE was established. Al-Mosa (1999) points out that the aim of this division was to offer, generate and expand the LD courses in public primary schools nationwide. After a trial period in three towns, the MoE asked some instructors to locate LD children and teach them reading, writing, and mathematics using special content for each child. Then, LD was termed as a separate category for the children with disabilities. Moreover, the MoE approved that the children with disabilities have the right to receive special education services (Al-Mosa, 1999). Essential modifications within curriculum, instruction techniques, subject matter, methods, and teacher training are required as far as the current state of LD in KSA is concerned. Given the increasing number of LD pupils in Rafha Province, and in KSA as a whole, it becomes a necessity to carry out this research with the aim to find a solution and support for pupils with LD by providing an appropriate approach in learning spelling and writing skills. Thus, pupils can be successful and have equal opportunity in their educational life as their typically developing peers. The LD schools in Rafha Province are managed by the office of the MoE in the Province. There are three educational levels in KSA, namely primary level for six years, intermediate for three years and secondary for three years (Alyami, 2014). The language of instruction in Saudi schools is Arabic, but English language is introduced starting from the fourth grade in primary school. It is worth noting that in KSA male and female pupils are taught separately. Given that those pupils with LD are in a dire need for developing their spelling and writing skills to keep going in their study with their normal peers, this research aimed to explore the effect of an intervention program that is based on direct instruction of the most common features of Arabic orthography on developing spelling and writing skills of pupils with LD.

Arabic belongs to the Semitic language family. Its writing system begins from right to left (Ryding, 2005). In terms of spelling and morphology, modern Arabic employs both short and long vowels. /a/, /i/, and /u/ represent short, and /a:/, /i:/, and /u:/ represent the long ones. Only the long vowels can appear in writing while the short vowels are marked by diacritic marks placed over or beneath the consonants preceding the vowels.

According to Algamal (2018), the diacritic marks are represented in various ways. First, the three short vowels are Fatah, Damma, and Kasra and they are represented by (َ), (ِ) and (ِ), respectively. Phonetically, the transcriptions of these marks in Latin are /a/, /u/, and /i/, respectively. Second, the marks are doubled in what is called Tanwi:n. Thus, firstly, Tanwi:nfath is represented as (ً) ā, and transcribed as /an/. Third, Tanwi:n Dam which is represented as (ً) ū, and transcribed as /un/. Finally, there is Tanwi:n Kasr that is represented as (ِ) with the symbol ĩ and transcribed as /in/. The other two vowels are called šadda and Suku:n, (ّ) and (ُ), respectively. The former affects the word by doubling the preceding consonant while the latter has no vowel.

In addition, the above-mentioned characters are used in Arabic texts. They are called Tashkīl or ḥarakāt. The purpose is to show more details related to proper pronunciation. They are considered useful for native speakers since they allow them to identify words in Arabic texts when they start to learn reading (Haddad & Roitfarb, 2014). Hudson (2002) and Ferguson (1959) agree that some features in Arabic such as diacritical marks, vocalization, and vowelisation make Arabic an example of diglossia. Therefore, these interactions of linguistic complexities might result in an LD for some primary school pupils. Felimban (2013) conducted a study to compare the

awareness of LD among the primary school pupils living in Canada and KSA. The study concluded that Canadian pupils did not report any writing obstacles while diacritics (Tashkīl) caused Saudi pupils to write slowly.

Another feature of Arabic writing is that the letters are formed differently based on their position in words. They have various shapes in the initial, medial, or final positions. Mohamed, Landerl, and Elbert (2014) propose that the process of learning is slowed down as a result of similarity in the shapes of the letters that can be distinguished by the location of dots and diacritic marks. Consequently, letter placement errors occur, which causes diglossia among Arab pupils (Friedmann & Haddad-Hanna, 2014). Several letters in Arabic have the same shape, but the placement and number of dots change the letter into another one. For example, a single dot over the shape produce ن /n/ and below it makes ب /b/, two dots above the shape make ت /t/ and below it gives us ي /j/, three dots over the shape produce ث and ش transcribed as /θ and /ʃ/, respectively. This is a complex orthographic system that causes difficulty to Arabic learners. A third source of complexity in Arabic orthography is in connection with letters that show a variety of forms based on their position in words.

These characteristics of Arabic may lead to LD among primary school pupils. Therefore, it is necessary to investigate the problems of these pupils in KSA and therefore find proper solutions. Little research has been conducted on the field of LD in Arabic. Thus, a course was proposed in this study to primarily to meet the needs of primary school children with LD in KSA.

As the aim of this study is to investigate the impact of the intervention program on developing spelling and writing skills of primary school students with LD in Rafha Province, the following research questions are proposed:

- What is the impact of the intervention program on enhancing the spelling skills of primary school pupils with LD in the Rafha Province?
- What is the impact of the intervention program on enhancing the writing skills of primary school pupils with LD in the Rafha Province?

Method

Design

This study adopted the quasi-experimental design with two groups, namely, the pretest-posttest control group design. In this design, the researchers randomly assigned participants into the experimental and control groups, administered a pre-test to both groups, conducted the experimental intervention with the experimental group only, and administered a post-test to assess whether differences exist between these groups (Creswell, 2014).

Participants

The participants in the study were 38 pupils with LD, half of them were assigned to experimental ($N = 19$) and control ($N = 19$) groups respectively. The sample was selected from students among four male-only primary schools between first and third grades in Rafha province, KSA in the year 2017. Rafha province is located in the north of KSA, close to the border with Iraq. This province was chosen by the researchers being far from the center of the Kingdom and did not receive the attention of many researchers. The age range of the students was between 6 to 8 ($\bar{X} = 7.78$, $SD = 3.05$). Consent forms were obtained from the parents seeking their permission for their children's participation. The training course took place in the Learning Disabilities Resources Room (LDRR). Only the experimental group received the proposed program training sessions. The educational system in KSA separates male students from female ones. Consequently, this study did not include female students. In other words, all the participants in the study were male.

Instruments

The study utilized two tests, spelling and writing tests, for data collection besides the course developed by the researchers. The dependent variables consisted of spelling and writing skills.

Spelling test. The spelling test aimed at testing pupils' spelling. It covered Arabic diacritic markers (such as tashkīl and ḥarakāt). The test contained 10 questions, namely, reading the Arabic alphabet according to the different three diacritics (1), segmenting words into their letters with diacritics (2 & 3) and reading them (2, 3, & 4a), analyzing words into their phonetic syllables (4b, 5b, 6b, 7b, 8b, 9b, & 10b), reading words with long vowels (5a), reading words with *Hamzatwaṣl* followed by *lam* / *alqamaria* (noon *lam*) (6), identifying hamzatu-lwaṣl followed by *lam* / *shamsiyya* (sun *lam*) (7a), tanween words with the three diacritics (8a), reading words with *Shaddah* (9a), and identifying words that end in *Taamarbuta* and *Taamaftuha*. The total scores of the test were 129; each right response was scored as one. The average time as calculated in the pilot administration of the test was 50 minutes.

Writing test. The purpose of the writing test was to evaluate the articulation of graphemes and words in spelling task. The test contained 10 questions based on the main skills targeted in the study. Each question contained some words that were dictated to the pupils. These words were taught during the training. The total score of the test was 66. Each right response was scored as one. The average time as calculated in the pilot administration of the test was 50 minutes.

Validity and reliability. Concerning validity analyses, the spelling and writing tests were distributed to a panel of specialists in Arabic language and education. The committee checked the test content and proposed some modifications. The research team conducted the suggested changes to make the tests more relevant. The reliability of the tests was determined by using Cronbach's Alpha. The result showed that the tests were reliable as they were .73 for the spelling test and .76 for the writing test. These values indicated that the two tests are reliable and can be used to measure the target skills (Nunnally, 1978).

Procedures

The participants of this study were tested using the spelling and writing tests (pre-test) and then they were given special training session (treatment), by teachers, who were experts in LD, from September to December 2017. The control group did not receive the training. The implementation took place within the school day in the LDRR. Afterwards, the participants re-joined their usual class with their peers. After the intervention program implemented the two groups as the experimental and control were tested using the spelling and writing test again (post-test). Then within and inter-group comparisons were made on these two tests. Additionally, the differences between the two groups were examined by taking into consideration the covariate variables in the pre-test. This indicates the equal rate between the two study groups in terms of their age, spelling and writing skills. The SPSS statistical package was employed in the analysis of the results.

The Proposed Course

The course was designed by three professors, the researchers, who were specialized in LD. It included teaching materials to be used at public schools in Rafah Province as a trail and then it might be applied in the other provinces in KSA. It involved 25 lessons, each lesson lasted between 40 and 50 minutes. These lessons contained instructions targeting spelling and writing skills. They adopted direct teaching method. The course was implemented in four primary schools in Rafah within a period of 13 weeks.

Each unit in the syllabus contained specific aims, spelling procedures, learning and teaching aids and a guide for teaching. In addition, some spelling/writing strategies covering Arabic diacritic characters (such as ḥarakāt) were presented as shown in the following:

- *Fatha* (open lips) and its mark is located over the letter (ﺃ) to produce a short vowel /a/
- *Kasrah* (lips partially open) with its character below the letter (ﺏ) to produce a short front vowel /I/
- *Dammah* (pressed lips) and its mark is located over the letter (ﺕ) producing a short back vowel /u/

- *Sukun* (silent or neutral lips) with its mark (ْ)
- Words containing letters with *fataha*, as in the vowel belonging to the word ‘bet’ in English.
- Words with letters with *dammah or kasrah*, as in the vowel belonging to the words ‘moon’ and ‘mean’, respectively.
- Letters with *madd* (long vowel) represented by the character (َ) pronounced as /:/ (*alif mamdu:da*) or long *alif*, as in the vowel belonging to the word ‘bat’ in English.
- Words covering *hamzatwaşl* (connector).
- *Hamzatwaşl* followed by *lam /l/ alqamaria* (noon *lam*) and *shamsiyya* (sun *lam*). for example, the ‘l’ in the Arabic word ‘alshams’ meaning ‘the sun’ is not pronounced. However, the ‘l’ in the Arabic word ‘alqamar’ meaning ‘the moon’ is pronounced.
- *Tanween* ‘nunation’ symbolized by two diacritic marks. This happens in some Semitic languages when the alveolar nasal is added without writing down the letter ‘n’.
- *Shaddah*. This is called germination.
- Distinction between *Taamarbuta* and *Taamaftuha*, as seen in the last letters in the Arabic words ‘قصة’ and ‘قصت’ meaning ‘story’ and ‘told’, respectively.

Course implementation using the direct teaching method. Direct teaching method is one of the behavioral methods which asserts that learning is a change in behavior. This behavior can be learned, and therefore, can be influenced by external factors (Abu-Nian, 2014). Rosenshine (1978) states that the direct teaching method focuses on academic tasks with clear goals and content tailored for the needs of the student. The teacher provides feedback and selects the appropriate material that matches with student's abilities. It is teacher-centered. Below is a detailed account on the steps implemented while teaching the experimental group of the current study:

1. *Preliminary clarification*: This step includes setting the scene to teach the skills as shown in the following:
 - Provide background about the subject or skill before starting the lesson.
 - Introduce pupils to the vocabulary to be used and that are necessary for understanding the lesson.
 - Clarify the skills that will be learned by the pupils.
 - Explain the components of the skill, if any.
 - Checking the expected outcomes from the pupils at the end of the lesson through their feedback.
2. *Modeling*: The teacher in this step models the skill and asks the pupil to imitate him/her.
3. *Exercises directed by the teacher*: Each pupil in this step performs the task under the supervision of the teacher who gives direct feedback.
4. *Independent exercises*: In this step, the pupil practices the new skill independently until the mastery criterion is met (80% or more).
5. *Generalization*: In this step, the pupil practices the learned skill with the researchers in new situations. At this stage the role of the class teacher is important. The pupils with LD spend part of the school day in the resource room learning through the direct teaching method to develop spelling and writing skills, and the rest of the school day is spent with their regular classmates. They study the curriculum entitled as ‘My Language’ assigned by the MoE in Saudi Arabia.

These steps and procedures were implemented according to an individual educational plan based on their strengths and weaknesses that were identified following the results of the diagnostic test which identified the strengths and weaknesses of the students in both spelling and writing skills. These steps and procedures were not applicable or practiced in the regular classroom, and the regular class teacher did not pay close attention to spelling skills in particular. The regular class teacher's plan was based on the content of the curriculum (My Language) developed and assigned by the MoE. The lesson plan above did not take the individual differences of the students into account. The plan was given in the following:

- The teacher reads the lesson aloud.
- The teacher assigns some pupils to read the lesson again while their peers listen.
- The student is asked to find out the meanings of words.
- The student is asked to find out the antonyms of words
- The student is asked to change the singular form of the word into dual and plural.
- The student is expected to develop literal understanding skills.
- The teacher dictating words.
- The student writes a number of words to be studied at home.

Learning Disabilities Resources Room (LDRR)

LDRR is the place where students with disabilities, including those in the present study, spend part of their school day and resume their usual class schedule with their peers. It provides a natural context for learning. In KSA, resource rooms are used to give lessons to students. These rooms, as Al-Zoubi (2011) suggests, allow instructors to provide various services. Instructors prepare courses that meet the needs of individual students. They provide education to students with LD to equip them with the necessary academic skills. LDRR assists teachers to be in close contact with class teachers who teach pupils with LD. Finally, teachers keep in touch with the parental members of the students who are informed of the activities carried out in LDRR. There are some limitations regarding LDRR in KSA such as shortage in well-trained teachers in LD, lack of teaching materials and teacher's guide (Al-Ahmary, 2010; Al-Hiary, Almakani, & Tabbal, 2015; Theeb, Muhaidat, & Al-Zboon, 2014; Youssefi, 2014). Furthermore, Al-Zoubi and Abdel Rahman (2016) mentioned that the lack of LDRR teacher guide was the major problem that primary school teachers in KSA faced. Due to the current situation of LD management in Rafha and KSA, the researchers of the study developed a specialised content to be used as an intervention for the children with LD.

Data Analysis

Firstly, the data obtained from the pre-testing stage of the study instruments were descriptively and inferentially analyzed to find out the normality and homogeneity between the study groups as well as whether there were any statistical differences between the study groups before administering the training program which might contaminate the interpretation of the post-test results.

For normality testing of the pre-test data, Shapiro-Wilk test revealed statistically insignificant values at $p = .45$ for the spelling test and $.50$ for the writing test. Hence, the data were normally distributed, and the t-test can be used to test the differences between the groups.

Testing the homogeneity of variances between the two groups in the pre-test, the Levene Statistics based on mean scores yielded $.07$ ($p = .78$) for the spelling test and $.34$ ($p = .56$) for the writing test. These results revealed insignificant differences between the two groups according to Levene test that refer to the homogeneity between the two groups so that the two groups can be compared based on the proposed treatment.

As for the statistical differences between the groups in the pre-tests of spelling and writing skills, means, Standard Deviations (*SD*) and independent sample t-test were used to analyze such data.

Table 1

The Results of The Spelling and Writing Skills Pre-Test (df = 36)

Tests	Groups	Mean	<i>SD</i>	<i>t</i>	Sig. (2-tailed)
Spelling skills	Experimental	32.74	6.51	.10	.92
	control	32.95	6.10		
Writing skills	Experimental	18.84	4.79	.54	.59
	control	19.84	6.41		

The results of the data analysis for pre-test data on Table 1 revealed that there were no statistically significant differences between the two groups in the pre-test of both spelling and writing tests. As such, any enhancement of these skills in the post-test could be attributed to the training program.

Results

1. What is the Impact of the Intervention Program on Enhancing the Spelling Skills of Primary School Pupils with LD in the Rafha Province?

As for the first research question that targeted the impact of the intervention program on enhancing the spelling skills among the participants, both paired sample t-test and independent sample t-test were used. Independent samples t-test was used to compare the post-test results of the experimental and control group, whereas paired sample t-test was used to compare the pre-test - post-test results of the experimental group.

Table 2

The Impact of the Intervention Program on Enhancing the Spelling Skills

Tests	Groups	\bar{X}	<i>SD</i>	<i>df</i>	<i>t</i>	Sig. (2-tailed)
Independent sample t-test	Experimental post-test	74.16	5.21	36	11.23	.00
	Control post-test	47.32	9.02			
Paired sample t-test	Experimental Pre-test	32.74	6.505	18	24.17	.00
	Experimental Post-test	74.16	5.210			

The Table 2 shows that there was a statistically significant difference between the mean scores obtained by the experimental group pupils and those of the control group in the post-test of spelling skills ($t_{(36)} = 11.23, p = .00$) at .01 level in favor of the experimental group pupils ($\bar{X} = 74.16, SD = 5.21$). The paired sample t-test also revealed that there was a statistically significant difference between the mean scores obtained by the experimental group pupils in the pre-test and post-test of the spelling skills ($t_{(18)} = 24.17, p = .00$) at 0.01 level in favor of the post-test mean scores ($\bar{X} = 74.16, SD = 5.21$). Hence, the results revealed that the intervention program has largely impacted the spelling skills of primary school pupils with LD in the Rafha Province. To find out the effect size of the program on the pupils' spelling skills Squared Eta² ($\eta^2 = \frac{t^2}{t^2 + df}$) and Cohen *d* ($d = \frac{t}{\sqrt{n}}$) were calculated. The squared eta calculated .97 whereas Cohen *d* was 5.54 which mean that the effect size of the intervention program was very large on enhancing the pupils' spelling skills.

2. What is the Impact of the Intervention Program on Enhancing the Writing Skills of Primary School Pupils with LD in the Rafha Province?

Regarding the second research question aimed to find out the impact of the intervention program on enhancing the spelling skills among the participants, both paired sample t-test and independent sample t-test were also used to statistically analyze the data which are shown in Table 3.

Table 3

The Impact of the Intervention Program on Enhancing the Writing Skills

Tests	Groups	\bar{X}	SD	df	t	Sig. (2-tailed)
Independent sample t-test	Experimental post-test	35.32	4.35	36	8.33	.00
	Control post-test	23.53	4.38			
Paired sample t-test	Experimental Pre-test	19.37	4.15	18	12.63	.00
	Experimental Post-test	35.32	4.35			

Table 3 shows that there was a statistically significant difference between the mean scores obtained by the experimental group pupils and those of the control group in the post-test of writing skills ($t_{(36)} = 8.33, p = .00$) at .01 level in favor of the experimental group pupils ($\bar{X} = 35.32, SD = 4.35$). The paired sample t-test also revealed that there was a statistically significant difference between the mean scores obtained by the experimental group pupils in the pre-test and post-test of the writing skills ($t_{(18)} = 12.63, p = .00$) at .01 level in favor of the post-test mean scores ($\bar{X} = 35.32, SD = 4.35$). Hence, the results revealed that the intervention program has largely impacted the writing skills of primary school pupils with LD in the Rafha Province. The squared eta calculated 0.90 whereas Cohen d was 2.90 which mean that the effect size of the intervention program was very large on enhancing the pupils' writing skills.

Discussion

The current study investigated the impact of an intervention program on enhancing spelling and writing skills in Arabic among primary school pupils with LD in Rafha Province, KSA. The results indicated that early training in LDRRs was beneficial for pupils with spelling/writing difficulties. The results of spelling and writing skills tests showed a significant difference between the experimental group pupils and the those of the control group in favor of the experimental ones as a result of the training they received. Moreover, the level of spelling and writing skills of the experimental group pupils was affected by the treatment with a large effect size that referred that the early direct intervention to pupils with LD has significantly improved their recognition and production of Arabic orthography and the target spelling and writing skills. These results support the results revealed by Graham, Harris, and Larsen (2001) who found that early intervention courses on spelling or writing could have a positive impact on students with LD. The experimental group exhibited significant progress during the implementation period, while the control group did not. This could be attributed to the fact that the participants in the experimental group were introduced to the essential components of Arabic language which assisted them to master spelling and writing skills. This improvement might be attributed to the instructional sessions provided to the group members, namely, common phoneme-spelling associations, practicing new spellings by pointing to each letter from left to right order while simultaneously pronouncing the sound. Therefore, early intervention is advantageous to pupils with LD who struggle with Arabic spelling and writing. The study results go also along with the findings of Wanzek et al. (2006) in which they synthesized and compared the results of 19 previous studies and found out that there are positive and promising effects of spelling intervention studies that employed between the comparison groups and highest rates of spelling improvement were observed. Therefore, this provides an evidence that the intervention programs can yield good improvement in the spelling and writing outcomes of students with LD.

The results of the study also support the use of specific course for teaching writing strategies and supports the findings of previous studies in which they concluded that the intervention program helped learners achieve better in writing (Azzam, 1993; Mohamed, Elbert, & Landerl, 2010; Saddler, Moran, Graham, & Harris, 2004). Furthermore, the results of the writing test revealed that the experimental group significantly differed positively from those students in the control group. For example, Cihak and Castle (2011) concluded that pupils with LD showed significant improvement in writing skills after they received the training that involved expository essays and sentence production. Walker, Shippen, Alberto, Houchins, and Cihak (2005) noted that teaching writing directly to students with LD resulted in better writing abilities of pupils. Graham, Harris, and Hebert (2011)

confirmed that the use of direct instruction with students with LD was influential in assisting pupils to improve their writing performance.

The results also revealed that although there is a specific course designed for pupils with LD in KSA, adopting the direct instruction approach to redesign the course lessons and in delivering the content of the intervention program had a large effect on developing pupils' spelling and writing skills. This result goes in accordance with the results of the previous studies (Jensen, Wilson, Jordine, & Sakpal, 2012; Lazarus & Oguniola, 2016; Parker, 2014; Ulring, McLaughlin, Neyman, & Waco, 2012). They revealed that direct instruction results in better achievement and performance of both writing and spelling skills due to its unique features, namely, (i) using explicit, systematic instruction based on scripted lesson plans. (ii) placing emphasis on pace and efficiency of instruction. (iii) use of simple instructions to ensure clear communication. (iv) conducting frequent assessments to help place students in ability groups and identify students who require additional intervention. (v) teaching skills in sequence until students have fully internalized them and are able to generalize them. (vi) use either group instruction or a one-to-one instructional setting (Texas Statewide Leadership for Autism, 2011).

Limitations and Suggestions for Further Studies

There were some limitations to this study that might limit the generalization of its results. The first and major limitation was that participants were all male pupils. Due to cultural and conservative nature of the educational system in KSA where girls are educated in separate schools. This did not allow for comparing the impact of the intervention program between male and female pupils with LD. As such, further studies are suggested to implement the intervention program with female pupils to find out the differences based on participant gender. The second limitation was the scope of the study being confined to pupils at the Northern Borders Area of KSA, in which the case might be different from that of other regions. Hence, a further study is needed to use the same intervention program with students from other regions in KSA to be compared with the present study. The final limitation was the design of the study that compared the direct instruction approach of Arabic spelling and writing skills with the regular method of teaching and not with other different strategies that are centered to pupils' activity rather than teacher's instruction. Therefore, it is suggested that further studies deal with the impact of direct instruction and pupil-centered instruction approaches on developing the spelling and writing skills of primary school pupils with LD using the same content of the intervention program. Future studies on spelling and writing can be also conducted independently. The effectiveness of the proposed course in developing the skills of reading recognition among pupils with LD in the initial grades of primary school can be examined. In addition, a comparative study between typically-developing pupils and those with LD in acquiring spelling and writing skills can be designed.

Conclusion

The present study reported the impact of a course that aimed to assist students with learning disabilities. The findings have important implications for the intervention of spelling and writing problems, in favor of novel approaches in contrast to traditional ones as evidenced by the findings of the study. Similarly, the results are relevant to teachers, learners, researchers, syllabus designers and policy makers. The limited available body of research about LD intervention in Arabic language has repeatedly shown that more research is needed in this area. Hence, this study contributes to literature by developing a course to develop spelling and writing skills of students with LD. The findings of the study suggest an urgent call for the officials to conduct studies in the field of LD comparing the males and females in various areas of learning disabilities (i.e., academic and developmental difficulties).

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İmla ve Yazma Becerilerini Geliştirmeye Yönelik Bir Müdahale Programının Öğrenme Güçlüğü Olan Suudi İlkokul Öğrencilerinin Becerilerine Etkisi*

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Öz

Öğrenme güçlükleri (ÖG) konuşma, okuma, imla ve yazma gibi temel dil becerilerini öğrenmede güçlükleri içerir. ÖG olan öğrenciler, geleneksel yöntemlere oranla daha uygun destek ve müdahale ile daha başarılı olabilirler. Suudi Arabistan'da Eğitim Bakanlığı, ülke çapında ÖG olan öğrencilerin öğrenmesini kolaylaştırmak için ÖG'yi 1996 yılında eğitim sistemine dahil etmiştir. Bu çalışmanın amacı, geliştirilen bir müdahale programının, birinci, ikinci ve üçüncü sınıflarda öğrenim gören ÖG Suudi ilköğretim öğrencilerinin Arapça imla ve yazmadaki temel becerileri üzerindeki etkisini incelemektir. Araştırmanın örneklemini Rafha Eyaletindeki 4 ilköğretim okulundan 6-8 yaşları arasında ÖG olan 38 erkek öğrenci oluşturmuştur. Çalışma, deney ve kontrol gruplarını içeren yarı deneysel araştırma deseniyle gerçekleştirilmiştir. Deney grubunun son test sonuçları, müdahalenin hem imla hem de yazma becerileri üzerinde anlamlı ve olumlu bir etkisi olduğunu ortaya koymuştur. Bu nedenle öğrencilerin uygun müdahale ile başarılarının artırılabilirliği düşünülmektedir. İleride yapılacak araştırmalarda imla ve yazma performanslarının bağımsız olarak incelenmesi önerilebilir.

Anahtar Sözcükler: Öğrenme güçlükleri, imla, yazma, müdahale programı, ilkokul, Suudi Arabistan.

Önerilen Atıf Şekli

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Öğrenme güçlüğü (ÖG) dinleme, konuşma, okuma, yazma, muhakeme etme ve matematikte zorluklara yol açan bir bozukluktur (Akhondi, 2011). Al-Hano (2006) ÖG olan çocuklar için etkili müdahaleler geliştirilmesi gerektiğini vurgulamış özellikle bütüncül, kuruluşlar arası ve disiplinler arası müdahalelerin önemini vurgulamıştır. Berninger ve May'e (2011) göre üç tür ÖG bulunmaktadır: Birincisi, yazıyı etkileyen *disgrafi*dir. İkincisi, öğrencilerin okuma becerisini etkileyen *disleksidir*. En son ÖG türü ise görsel ve mekansal düzlemenin yanı sıra matematikteki zorlukları da içeren *disalkulidir* (Hutchinson, 2007). Suudi Arabistan Krallığı'nda (SAK) özel gereksinimli olan öğrencilerin yaklaşık %15-17'sinin ÖG olduğu belirtilmektedir. SAK'ta özel gereksinimli öğrencilerin belirlenmesi amacıyla değerlendirmeye gönderme sınıf öğretmenlerinin sorumluluğudur (Hussain, 2009). Hafif düzeyde yetersizlik tanısı alan öğrenciler normal gelişim gösteren akranlarıyla aynı sınıflarda eğitim alırlar, ancak bu öğrencilere Öğrenme Güçlüğü Kaynak Odası'nda (ÖGKO) ek destekler de sağlanır (Al Ajmi, 2006).

Azzam (1993) 6-11 yaş arası Arapça konuşan öğrencilerin imla hatalarını araştırmıştır. Araştırma grubundaki öğrencilerin genel hatalarının bağlamla ilişkili şekillerdeki hatalar, harf ekleme ve harf atlama olduğunu belirtmiştir. Abu-Rabia ve Taha (2004), beşinci sınıftaki ÖG olan çocukların yazım hatalarını tipik gelişen akranlarıyla karşılaştırmışlardır. Araştırmacılar imla hatalarının; fonetik, yarı fonetik, disfonik hatalar ile harf karmaşası, tutarsız imla kuralları ve işlevsel sözcük atılması olduğunu bulmuşlardır. Başlıca kaynağı Arapça ortografisi olan hatalar arasında en dikkat çekici olanın fonetik hatalar olduğu görülmüştür. Abu-Rabia ve Taha (2006) birinci ve dokuzuncu sınıf arasındaki Arap öğrencilerin imla hatalarının 2004'teki çalışmalarındakine benzer olduğunu belirlemişlerdir. Birinci ve dokuzuncu sınıflar arasında okuyan öğrencilerin en fazla fonetik imla hataları yaptıkları belirlenmiş araştırmacılar bu hataların tüm gruplarda görülen hataların %50'sini oluşturduğunu belirtmişlerdir.

Taha'ya (2013) göre, ortografi; morfo-ortografinin anlaşılması ve yazım kuralları ile kolaylaştırılmaktadır. Abu-Rabia ve Sammour (2013), anadili Arapça ve İngilizceyi yabancı dil olarak öğrenen normal gelişim gösteren ve disleksili öğrencilerin imla hata türlerini değerlendirmişlerdir. Araştırmacılar Arapça konuşan öğrencilerin imla hatalarının, imla şekillerinin anlaşılmasındaki zorluklar ile tek bir hecede birleştirildiğinde koyu yazılan ünsüzlerle normal yazılan ünsüzlerin birbiriyle karıştırılmasından kaynaklandığını belirtmişlerdir.

Yazma güçlükleri ile ilgili olarak, Al-Hano (2006) eğer üçüncü sınıfa gelmiş bir öğrenci yazma güçlükleri yaşıyorsa bunun nedeninin birinci sınıfta kazanılması gereken temel becerilerden yoksunluk olabileceğini belirtmiştir. Araştırmacı ayrıca temel becerilerdeki yetersizliklerin öğretmenin öğretim yöntemi, evde bu konuya dikkat edilmemesi gibi faktörlerden de kaynaklanabileceğini belirtmiştir. Therrien, Hughes, Kapelski ve Mokhtari (2009), ÖG olan altıncı ve yedinci sınıf öğrencilerinin yazma becerilerini incelemişler ve ÖG olmayan (kontrol grubu) diğer öğrencilerle karşılaştırmışlardır. Çalışma sonuçları, müdahale programına katılan ÖG olan öğrencilerin kontrol grubuna göre yazma performanslarının düşük olduğunu göstermiştir. Araştırmacılar yazma becerilerindeki bu yetersizliklerin hem okul performanslarını azalttığını hem de okul sonrası ortamlar ve işyerindeki beceriler gibi performans üzerinde de uzun vadeli etkileri olduğunu belirtmişlerdir. Bu durum, yazmanın oldukça karmaşık bir etkinlik olduğunu ve özellikle ÖG olan çocuklar için etkili eğitim materyallerinin geliştirilmesi için öğretmenlerin ve araştırmacıların daha fazla çaba sarf etmesi gerektirdiğini göstermektedir. Nashaat ve diğerleri (2016) yazma becerisiyle ilişkili dilsel becerileri belirlemek amacıyla Mısırlı anadili Arapça olan 50 çocuk üzerinde bir çalışma yürütmüşlerdir. Araştırmanın katılımcıları yaş ortalaması sekiz olan ÖG olan çocuklardan oluşmuştur. Araştırma sonuçları, katılımcıların en sık sergilediği yetersizliğin yazma hızındaki düşüklük olduğunu ortaya koymuştur. Araştırmacılar ÖG olan çocuklar için müdahale programlarının tasarlanması söz konusu olduğunda yazma performansına özellikle dikkat edilmesi gerektiğini öne sürmüşlerdir.

SAK'ta üç eğitim seviyesi bulunmaktadır; bunlar altı yıllık ilköğretim seviyesi, üç yıllık orta okul ve üç yıllık lisedir (Alyami, 2014). 1992 yılında Kral Saud Üniversitesi'nde Özel Eğitim Bölümü'nün açılması ve ÖG alanında lisans eğitimi vermeye başlamasıyla birlikte 20. Yüzyılın son on yılı, KSA'da ÖG alanının başlangıç noktası olarak kabul edilmiştir (Sheaha, 2004). Al-Mosa (1999), bu bölümün ülke çapında devlet ilköğretim

okullarında ÖG'ye ilişkin dersler vermeyi, program oluşturmayı ve programları güncellemeyi hedeflediğine dikkat çekmiştir. Üç şehirde pilot uygulamalardan sonra, Milli Eğitim Bakanlığı (MEB) ÖG çocukları belirlemeleri ve onlar için geliştirilmiş içeriğe sahip programlarla öğretim yapmaları için bazı öğretmenleri görevlendirmiştir. Sonrasında ÖG, özel gereksinimli çocuklar arasında farklı bir kategori olarak sınıflandırılmaya başlanmıştır (Arapça'da karşılığı alatfal almueaqin'dir). Buna ek olarak MEB özel gereksinimli çocukların özel eğitim alma hakkına sahip olduğunu onaylamıştır (Al-Mosa, 1999). Buradan hareketle ve Rafha Eyaletindeki ÖG olan öğrenci sayısının artmasıyla uygun öğrenme yaklaşımları sağlayarak çözüm üretmek ve öğrencileri desteklemek bir gereklilik haline gelmiştir.

Arapça yazı sistemi sağdan sola yazılır ve basılı ya da elle yazılmış metinler birbirinden farklı değildir (Ryding 2005). Algamal'a (2018) göre, aksan karakterleri çeşitli şekillerde temsil edilmektedir. İlk olarak, üç kısa sesli harf sırasıyla (,) ve () ile temsil edilen Fetih, Damma ve Kasra'dır. Fonetik olarak, sırasıyla / a /, / u / ve / i / Latin sembolleri ile aynıdır. İkincisi, karakterler Tanwi:n'de iki kez yazılır. Bu nedenle, öncelikle, Tanwi:nfath () â olarak temsil edilir ve / an / olarak çevrilir. Üçüncüsü, Tanwi:n Dam () ü olarak temsil edilir ve / un / olarak çevrilir. Son olarak, Tanwi:n Kasr, (,), vardır i sembolü ile temsil edilir ve /in/ olarak çevrilir. Bu sembollere (Tashkîl veya hârakât) denir ve anadili konuşanlara okumayı öğrenmeye başladıklarında yardımcı olurlar (Haddad & Roitfarb, 2014). Hudson (2002) ve Ferguson (1959) Arapçada ayırıcı karakterler ile seslendirme ve sesletim gibi bazı özelliklerin Arapçanın, iki değişkenli dil örneği olmasına neden olduğu konusunda hemfikirlerdir. Dolayısıyla bu durum, bazı ilkokul öğrencileri için ÖG ile sonuçlanabilmektedir. Felimban (2013), Kanada ve SAK'ta yaşayan ilkokul öğrencileri arasında ÖG'ye ilişkin bir araştırma gerçekleştirmiştir. Araştırma sonuçlarına göre Kanadalı öğrenciler yazmaya ilişkin güçlük belirtmezken aksanlar (Tashkîl) Suudi öğrencilerin çok yavaş yazmasına neden olmuştur. Mohamed, Landerl ve Elbert (2014), noktalar ve aksan karakterlerinin konumu ile aralarındaki farkların ayırt edilebildiği harflerin şekilleri birbirine benzediğinden öğrenme sürecinin yavaşladığını öne sürmektedirler. Sonuç olarak, Arap öğrenciler arasında "iki değişkenliliğe" neden olduğu belirtilen harf yerleştirme hataları ortaya çıkmaktadır (Friedmann & Haddad-Hanna, 2014).

Araştırmalarda ortaya çıkan gereklilikler ve MEB'in önerilerine göre ÖG olan çocuklara yönelik eğitim programlarının geliştirilmesi SAK'ta giderek daha fazla önem kazanmaya başlamıştır. Bu gerekliliklerden hareketle bu araştırmanın amacı imla ve yazım için ilkokula devam etmekte olan ÖG olan öğrenciler için geliştirilmiş bir müdahale programının Rafha Eyaletindeki ÖG öğrencilerin becerileri üzerindeki etkilerini incelemektir. Bu amaç doğrultusunda aşağıdaki sorulara yanıt aranmıştır:

- Geliştirilen müdahale programının Rafha Eyaleti'nde ilkokula devam etmekte olan ÖG öğrencilerin imla becerileri üzerindeki etkisi nedir?
- Geliştirilen müdahale programının Rafha Eyaleti'nde ilkokula devam etmekte olan ÖG öğrencilerin yazma becerileri üzerindeki etkisi nedir?

Yöntem

Desen

Bu çalışma, deney ve kontrol grubunu içeren yarı deneysel desenle yürütülmüştür. Bu desende, araştırmacı katılımcıları deney ve kontrol gruplarına atar, her iki gruba da bir ön test uygular, sadece deney grubu ile deneysel müdahaleleri gerçekleştirir ve bu gruplar arasında farklılık olup olmadığını değerlendirmek için son testi gerçekleştirir (Creswell, 2014).

Katılımcılar

Çalışmanın katılımcıları 38 ÖG olan öğrencidir. Öğrencilerin yarısı ($N = 19$) deney grubuna diğer yarısı ($N = 19$) da kontrol grubuna atanmıştır. Araştırma örneklemini, 2017 yılında SAK'ta Rafha Eyaletinde yalnızca erkek öğrencilerin devam ettiği 4 ilköğretim okulundan birinci, ikinci ve üçüncü sınıflarda okuyan öğrenciler arasından seçilmiştir. Öğrencilerin yaşları 6 ila 8 arasında değişmiştir ($\bar{X} = 7.78$, $SS = 3.05$). Çocuklarının bu

çalışmaya katılabilmeleri için ailelerinden onam formları alınmıştır. Müdahale programı Öğrenme Güçlüğü Kaynak Odasında (ÖGKO) gerçekleştirilmiştir. Müdahale programı yalnızca deney grubuna uygulanmıştır. SAK'taki eğitim sistemi erkek öğrencileri kız öğrencilerden ayırmaktadır. Sonuç olarak, bu çalışmaya kız öğrenciler dahil edilmemiştir. Başka bir deyişle, çalışmanın tüm katılımcıları erkektir.

Araçlar

Bu çalışmada geliştirilen müdahale programının etkilerini belirleyebilmek için ölçme aracı olarak imla testi ve yazım testi olmak üzere araştırmacılar tarafından geliştirilen iki test kullanılmıştır. Araştırmanın bağımsız değişkeni geliştirilen müdahale programıyken bağımlı değişkenler bu testlerle ölçülen imla ve yazım becerileridir.

İmla testi. İmla testi öğrencilerin imla becerilerini değerlendirmek için geliştirilmiştir. Bu test Arapça aksanları (örn., tashkīl and ḥarakāt) içermiştir. Bu testte 10 sözcük yer almıştır. Bu testte öğrencilerin testte yer alan sözcükleri okuyarak fonemlerine ayırmaları beklenmektedir. Testten en yüksek 129 puan alınabilmektedir, her bir doğru yanıt 1 olarak puanlanmaktadır. Bu testin öğrencilere uygulanması yaklaşık 50 dakika sürmüştür.

Yazma testi. Yazma testi, testte yer alan sözcüklerin ve grafemlerin artikülasyonunu değerlendirmeyi amaçlamaktadır. Bu testte öğrencilere müdahale programı kapsamında öğrenmeleri hedeflenen sözcükler okunmakta ve öğrencilerin sözcükleri yazmaları istenmektedir. Testten alınabilecek en yüksek puan 66'dır ve her bir doğru yanıt 1 olarak puanlanmaktadır. Bu testin öğrencilere uygulanması yaklaşık 50 dakika sürmüştür.

Geçerlik ve güvenilirlik. Bu çalışmada geliştirilen testlerin geçerliği için araçlar Arapça dil ve eğitiminde uzman olarak bir grup araştırmacıya dağıtılmış ve testlerin kapsamını değerlendirmeleri istenmiştir. Uzmanların görüşleri doğrultusunda testlerde değişiklikler gerçekleştirilmiş ve araçlara son hali verilmiştir. Araçların güvenilirliği için Cronbach Alfa güvenilirlik katsayıları hesaplanmıştır. İmla testi için güvenilirlik katsayısı .73, yazım testi için ise güvenilirlik katsayısı .76 bulunmuştur. Güvenirlik katsayıları her iki test için de .70'in üzerinde olduğundan testler güvenilir olarak kabul edilmiştir (Nunnally, 1978).

Prosedür

Araştırmaya katılan ÖG olan öğrenciler ön testte imla ve yazım testine alınmışlardır. Sonrasında deney grubuna ÖG alanında uzman öğretmenler tarafından müdahale programı uygulanmış ancak kontrol grubuna hiçbir uygulama yapılmamıştır. Müdahale programı Eylül-Aralık 2017 arasında tamamlanmıştır. Müdahale programı tamamlandıktan sonra iki gruba da imla ve yazım testleri tekrar uygulanarak son testte gruplar arasında karşılaştırmalar gerçekleştirilmiştir.

Verilerin Analizi

Araştırmada elde edilen veriler için öncelikle normal dağılım varsayımını karşılayıp karşılamadığı incelenmiştir. Bu amaçla deney ve kontrol grubundan elde edilen veriler için Shapiro Wilk testi sonuçları verilerin normal dağılım gösterdiğine işaret etmiştir ($p > .05$). Varyansların homojenliği için ise Levene İstatistiği sonuçları incelenmiştir ve test sonuçları varyansların homojenliğine işaret etmiştir ($p > .05$). Ön ve son test grupların imla ve yazım testlerinden aldıkları puanlar bağımsız örneklem ve bağımlı örneklem t-testi ile analiz edilmiştir.

Ön testte deney ve kontrol grupları arasında imla becerileri ve yazma becerileri açısından fark olup olmadığı bağımsız örneklem t-testi ile incelenmiş imla becerilerinde de (deney grubu $\bar{X} = 32.74$; kontrol grubu $\bar{X} = 32.95$; $t = -.103$, $p = .92$) yazma becerilerinde de (deney grubu $\bar{X} = 18.84$; kontrol grubu $\bar{X} = 19.84$; $t = -.545$, $p = .59$) gruplar arasında anlamlı fark olmadığı belirlenmiştir.

Bulgular

1. Geliştirilen Müdahale Programının Rafha Eyaleti'nde İlkokula Devam Etmekte Olan ÖG Öğrencilerin İmla Becerileri Üzerindeki Etkisi Nedir?

Geliştirilen müdahale programının ÖG olan deney grubu öğrencilerinin imla becerilerine etkisinin belirlenebilmesi için deney ve kontrol grubunun son test puanları bağımsız örneklem t-testi ile; deney grubunun ön-son test puanları arasındaki farklar ise bağımlı örneklem t testi ile karşılaştırılarak incelenmiştir. Bağımsız örneklem t-testi sonuçlarına göre deney grubunun imla testinden aldıkları ortalama puanlar ($\bar{X} = 74.16$) ile kontrol grubunun ortalama puanları ($\bar{X} = 47.32$) arasında anlamlı farklılık olduğu belirlenmiştir, $t_{(36)} = 11.23$, $p < .01$. Bağımlı örneklem t testi de deney grubunun ön testten ($\bar{X} = 32.74$) son teste ($\bar{X} = 74.16$) puan ortalamalarında istatistiksel olarak anlamlı farklılık oluştuğunu göstermiştir, $t_{(18)} = 24.17$, $p < .01$. Bağımlı örneklem için gerçekleştirilen etki büyüklüğü hesaplamaları da müdahalenin deney grubu öğrencilerinin imla becerileri üzerindeki etkisinin büyük olduğunu göstermiştir ($\eta^2 = .97$, Cohen $d = 5.54$).

2. Geliştirilen Müdahale Programının Rafha Eyaleti'nde İlkokula Devam Etmekte Olan ÖG Öğrencilerin Yazım Becerileri Üzerindeki Etkisi Nedir?

Araştırmanın birinci sorusu için gerçekleştirilen analizlere benzer şekilde müdahale programının ÖG olan deney grubu öğrencilerinin yazma becerilerine etkisinin belirlenebilmesi için deney ve kontrol grubunun son test puanları bağımsız örneklem t-testi ile; deney grubunun ön-son test puanları arasındaki farklar ise bağımlı örneklem t testi ile karşılaştırılarak incelenmiştir. Bağımsız örneklem t-testi sonuçlarına göre deney grubunun yazma testinden aldıkları ortalama puanlar ($\bar{X} = 35.32$) ile kontrol grubunun ortalama puanları ($\bar{X} = 23.53$) arasında anlamlı farklılık olduğu belirlenmiştir, $t_{(36)} = 8.33$, $p < .01$. Bağımlı örneklem t testi de deney grubunun ön testten ($\bar{X} = 19.37$) son teste ($\bar{X} = 35.32$) puan ortalamalarında istatistiksel olarak anlamlı farklılık oluştuğunu göstermiştir, $t_{(18)} = 12.63$, $p < .01$. Bağımlı örneklem için gerçekleştirilen etki büyüklüğü hesaplamaları da müdahalenin deney grubu öğrencilerinin imla becerileri üzerindeki etkisinin büyük olduğunu göstermiştir ($\eta^2 = .90$, Cohen $d = 2.90$).

Tartışma

Bu çalışma, bir müdahale programının SAK'ta Rafha Eyaleti'nde ÖG olan ilkokul öğrencilerinin Arapça yazım ve imla performansını artırma üzerindeki etkisini araştırmıştır. Araştırmanın sonuçları, ÖGKO'larda erken eğitimin imla/yazma gücünü olan öğrenciler için etkili olduğunu göstermiştir. Müdahale programına katılan deney grubunun sonuçları istenilen yönde anlamlı şekilde farklılaşmıştır. Bu sonuçlar, Graham, Harris ve Larsen'in (2001) de belirttiği gibi imla veya yazım üzerine erken müdahale programlarının ÖG olan öğrenciler üzerinde olumlu etkisi olabileceğini göstermiştir. Deney grubundaki katılımcıların, imlaya ilişkin son teste puanları anlamlı şekilde artış göstermiştir. Son test sonuçlarına göre deney grubundaki öğrencilerin imla testinden aldıkları puanlar kontrol grubundaki öğrencilerden anlamlı şekilde yüksektir. Deney grubu katıldığı müdahalenin etkisiyle anlamlı şekilde yazım ve imla becerilerinde gelişme gösterirken kontrol grubunda bu durum gözlenmemiştir. Bu durumun nedeni deney grubundaki katılımcılara sağlanan müdahale programı ile Arapçanın temel bileşenleri tanıtılmış olması böylece imla becerilerinde olumlu gelişme görülmüş olmasıdır. Bu gelişme, deney grubundaki öğrencilere sağlanan öğretim oturumlarının içeriğine atfedilebilir. Başka bir deyişle müdahalede ele alınan ortak fonem-imla bileşimleri, soldan sağa her bir harfe işaret ederek hem sesletim hem imla kurallarının tanıtılması bu olumlu etkiye sebep olmuş olabilir. Bu araştırmanın sonuçları Wanzek ve diğerlerinin (2006) alanyazın incelemesi yaptıkları 19 çalışmaya ilişkin sentezleriyle de tutarlıdır. Wanzek ve diğerleri çalışmalarında imla müdahalesi içeren çalışmaların olumlu ve umut vadeden etkileri olduğunu ortaya koymuşlardır. Bu sonuçlardan hareketle Arapça imla ve yazmada zorluk çeken ÖG olan öğrenciler için erken müdahalenin etkili olduğu sonucuna varılabilir.

Çalışmanın sonuçları yazma stratejilerini öğretmek için spesifik ders sunulmasının etkili olduğunu göstermektedir ve alanyazında bir müdahale programı sonucu yazmada iyileşmeler olduğunu gösteren araştırma bulgularını da destekler niteliktedir (Azzam, 1993; Mohamed, Elbert, & Landerl, 2010; Saddler, Moran, Graham,

& Harris, 2004). Ayrıca, yazma testinin sonuçları deney grubunun kontrol grubundaki öğrencilere göre puanlarının istendik yönde anlamlı şekilde farklılaştığını ortaya koymuştur. Benzer şekilde Cihak ve Castle (2011) da bilgilendirici yazılar ile cümle kurma öğretimini içeren müdahalenin ÖG olan öğrencilerin yazma becerilerinde önemli iyileşmelere yol açtığını belirlemişlerdir. Walker, Shippen, Alberto, Houchins ve Cihak (2005) da ÖG olan öğrencilere doğrudan yazma öğretmenin öğrencilerin yazma becerilerinde gelişmeye yol açtığını belirtmişlerdir. Ayrıca, Graham, Harris ve Hebert (2011) de ÖG olan öğrencilere doğrudan öğretimle sunulan müdahalenin öğrencilerin yazma performanslarını iyileştirdiğini ortaya koymuşlardır.

Araştırmanın bulguları SAK'ta ÖG olan öğrencilere sağlanan derslerin içeriğinin yeniden tasarlanması ve doğrudan öğretimle müdahale yapılandırılarak sunulmasının öğrencilerin yazım ve imla becerilerini geliştirmede büyük etkisi olduğunu ortaya koymuştur. Bu bulgular daha önceki çalışmaların sonuçlarıyla da tutarlılık göstermektedir (Jensen, Wilson, Jordine, & Sakpal, 2012; Lazarus & Ogunsola, 2016; Parker, 2014; Ulring, McLaughlin, Neyman, & Waco, 2012). Önceki çalışmaların sonuçları doğrudan öğretimin, kendine özgü şu özellikleri nedeniyle yazma ve imla becerilerini geliştirdiğini göstermektedir: (i) önceden yazılmış ders planına bağlı olarak doğrudan, sistematik öğretim yapılması, (ii) öğretim hızı ve etkililiğine vurgu yapılması, (iii) açık iletişimi sağlamak için basit yönergeler kullanılması, (iv) öğrencilerin becerilerini belirlemek ve ek müdahaleye gereksinim duyan öğrencilerin belirlenmesini sağlamak için sıklıkla değerlendirme yapılması, (v) öğrenciler becerileri içselleştirinceye ve genelleme sağlanana kadar öğretime devam edilmesi ve (vi) grup öğretimi ya da birebir öğretim sağlanması (Texas Statewide Leadership for Autism, 2011).

Çalışmanın Sınırlılıkları

Birincisi, SAK'ta kızların ayrı okullarda eğitim gördüğü eğitim sisteminin kültürel ve muhafazakâr doğası nedeniyle örneklem yalnızca ilkokulda okuyan erkek öğrencilerden oluşmuştur. Araştırmanın örneklemini Rafha Eyaletindeki üç ilköğretim okulundan öğrenciler oluşturduğundan çalışmanın bulgularının genellenebilirliği sınırlıdır. Bu nedenle, ileride yapılacak araştırmalar diğer Suudi Arabistan illerinden katılımcıları içerecek şekilde planlanabilir.

Araştırmacılara Öneriler

Gelecekte yazım ve imlaya ilişkin çalışmalar bağımsız olarak yürütülebilir. İlköğretimin ilk sınıflarında okuyan ÖG olan öğrencilerin okuma becerilerinin geliştirilmesinde bu araştırmada geliştirilmiş olan müdahale programının etkililiği incelenebilir. Ayrıca, tipik gelişen öğrenciler ile ÖG öğrencilerin yazım ve imla becerileri karşılaştırılmalı olarak incelenebilir.

Sonuç

Bu çalışma, öğrenme güçlüğü olan öğrenciler için geliştirilmiş imla ve yazım becerilerini hedef alan bir müdahale programının etkilerini ortaya koymuştur. Bulguların gösterdiği gibi yazım ve imla sorunlarına müdahalede bulunmak için doğrudan öğretim yöntemi etkili bir yöntemdir. Araştırmanın sonuçları, öğretmenler, öğrenciler, araştırmacılar, müfredat geliştiriciler ve politika yapıcılar açısından önemlidir. Arapçada ÖG olan öğrenciler için gerçekleştirilen sınırlı sayıdaki müdahale çalışmaları bu alanda daha fazla araştırmaya gereksinimi ortaya koymaktadır. Bu nedenle, bu çalışma ile ÖG olan öğrencilerin yazım ve imla becerilerini geliştirmek için bir müdahale programı geliştirilerek alanyazına katkıda bulunulmaktadır. Çalışmanın bulguları, yetkililerin farklı öğrenme güçlükleri (başka bir deyişle akademik ve gelişimsel güçlükler) olan kadın ve erkekleri karşılaştırarak ÖG alanında çalışmalar yapmaları gerektiğine işaret etmektedir.