A Comparative Study on the Effect of Pre-instruction and While-instruction Alphabet Teaching in EFL Context

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Abstract—The present study was designed to specifically compare two methods of presenting the alphabet in Iranian guidance schools (an equivalent for middle school in other countries), namely pre-instruction and while-instruction to see if any of them is more successful in learners' alphabet learning.To this end, a quasi-experimental research design with two experimental groups including a pre-test and a post-test was set.The existing four intact classes were randomly assigned as two groups of pre-instruction(N=47)and while-instruction (N=43) experimental groups.Both groups followed alphabet learning process for six months. One of the researcherswas the teacher of the two groups and taught the alphabet through pre-instruction presentation to the first experimental group, andthrough while-instruction to the second experimental group. By accomplishing the treatment, the post-test was given to both groups. The results of independet-samples t-test indicated that while-instruction method for teaching alphaebt was much more beneficial than pre-instruciton. Language teachers can benefit from this finding in their elementary classes.

Index Terms—while instruction, pre-instruction, alphabet teaching, grammar translation method, whole language approach

I. INTRODUCTION

Learning the alphabet of the language is necessary for acquiring the reading and writing ability in the language. According to Bradley and Stahl (2001) alphabet recognition or alphabet knowledge has is the capability to distinguish letter shapes, names, and sounds and also the ability to quickly recall and name each letter (Bradley &Stahl, 2001). For language instruction in order to be more useful, learners must first (Torgesen, 1998). Therefore, learners should acquire the mastery ofphonemic awareness and alphabet recognition skills.

By the time children understand the concept thatwordsare divided into individual phonemes and these phonemes can be joined to each otherto makewords, they get the knowledge of letter-sound relationships to read and build words (Adams, 1990; Chard & Dickson, 1999). This ability shows students' understanding of the alphabets and word structuring system in the language and results in self-tutoring of the young learners since they themselves can read and write words and sentences and improve their independency in learning language.

Although we didn't learn our first language by letter recognition, it is essential to learn it in academic context since academic context requires more than speaking and listening and it contains learning to read and write. Reading and writing contains the words that are formed by letters. Therefore learning the alphabet is fundamental for learning to read and write. Moreover, letter-name knowledge is prior to formal reading instruction because it is one of the strongest predictors of children's reading ability. Without firm knowledge of letters, children will have difficulty with all other aspects of early literacy.

When discussing the vital role of children's possessing knowledge of alphabetic letters, many different skills are usually discussed. These skills range from recognizing and naming the letters of the alphabet to writing the letter and recognizing the related sound in the word. Some will include how-to-write skills, while still some others will cover matching sounds to letters as a component of letter knowledge.

Both letter and phonic instructions are needed to understand the alphabetic principle, namely the concept that a series of symbols (alphabet) present the sounds of our language in some known patterns. Lack of these skills causes to difficulty in acquiring the alphabetic principle which can limit the ability to use letter-sound correspondence and ultimately to decode words.

It can be easily understand that an important purpose of teaching phonics is to make the learners understand a systematic relationship between letters and their matching sounds. Beginner readers try to understand these letter-sound correspondences. Moreover phonics instruction shows how phonics can be used to decode words that have not been previously encountered.

Although phonemic awareness is a quite crucial component of literacy acquisition, but we should always note that it is not sufficient in itself. Another essential component is alphabet recognition, which involves letter shape recognition, letter-name knowledge, letter-sound knowledge and rapid-letter naming.

Alphabet recognition, particularly letter naming, has traditionally been used as an indicator of future reading achievement. Child's knowledge of alphabet letters and the ability to recognize and name the upper- and lower- case letters of the alphabet leads to their early success in reading .First-year reading achievement is reported to be based on the child's knowledge of alphabet and the ability to recognize and name the letters of the alphabet (Adams, 1990; Honig, 1996; Riley, 1996).

There are different ways to convey this knowledge to the learners; however, these ways can fall into two broad categories of teaching alphabet letters separately or in context. McGee and Morrow reported that students learn better when they learn alphabet with other letters and in the context of meaningful activities (McGee &Morrow, 2005).In this respect, Fischer (1996) discusses a new approach to teaching letters of the alphabet, one which focuses on studying letters and sounds in authentic contexts. Also Fischer (1996) emphasizes that children's interests, rather than a teacher's desire to pass through the letters of the alphabet in direct sequence, should direct curriculum. Alphabet learning can be integrated into other classroom activities (Wagstaff, 1998).

Due to the fact that alphabet teaching is one of the important factors in early language learning, the method of its teaching becomes a problematic choice for the teachers. The teachers of guidance schoolsin Iran have been faced with this issue. By changing the textbooks in guidance schools in Iran, the new book series moved toward CLT and the books considered learning letters in the context of other skills provided in the same unit. Students learn the whole English alphabet letters integrated with all skills by the end of annual program. Based on their traditional views and year of teaching alphabet at the beginning of the course, some teachers see pre-instruction of alphabet teaching as a success point for later instruction. Hence, they teach letters before any reading or writing materials.

Some other teachers, on the other hand, believe in the success of teaching alphabet while instructing all skills in the book. The prior group considers alphabet teaching as a preliminary stage of learning language while the lattergroup viewslanguage as a whole system and a continuum in which students' self –cognitions function to seek and learn letters in every unit.

This dilemma for teachers may result inchoosing a less useful teaching approach in the class and later outcomes in less productivity of the learners. However since this is a new phenomenon in Iranian context the problems and outcomes of the two methods of presenting the alphabets needs experimental studyto define the more useful method and toprovide teachers with documents and valid reports in order to select a more useful method.

Whilenew textbooks followed CLT and they demand for Whole Language Approach in presenting the alphabets, a traditionof teaching alphabets prior to instruction of other skills wasnot abolished and it has its own disadvantages and problems. This problem can be due to the lack of knowledgeabout a theoretical background of the method and technique for presenting the subject according to that method in the class, weak justification of the new textbooks by curriculum developers and planers, sticking to the traditional methods of presenting subject disregarding the aims of new method and textbooks, andlack of experimental reports about the effects of these two methods of alphabet presenting on the learning. So, this study tries to conduct an empirical study to identify the effects of these two methods of presenting alphabets in Iranian context.

This study was, therefore, planned to explore the probabledifference if there is any between these twomethods to provide a report based on an experimental study to put the teachers out of the dilemma mentioned before. Thus thestudy compared two methods of alphabet teaching which are pre-instruction and while instruction alphabet teaching to see which one is more effective than the other in learning alphabetic letters.In line with the purpose of the research,the following research question was put forward:

"Is there a significant difference between pre-instruction and while-instruction teaching of English alphabets in alphabet to Iranian first grade guidance school EFL learners?"

II. REVIEW OF THE LITERATURE

In teaching alphabet, there has been a controversy among teaching letter sound versus letter name. Although for ability to read and write, knowledge of letter sounds is more important still strong relations with later literacy skills have been found for knowledge of letter names as well as letter sounds (Scarborough, 1998; Schatschneider et al., 2004). Letter naming abilities could leads to emergent and later reading skills if letter sound knowledge is controlled (Burgess &Lonigan, 1998; Lonigan, Burgess, Anthony, & Barker, 1998; Schatschneider et al., 2004). Most of the instructional programs focus on naming the letter as a beginning skill in language learning. The same focus also exists in second language learning. There are some reports that letter name knowledge can assist learning letter sound knowledge (Evans, Bell, Shaw, Moretti, & Page, 2006; Justice et al., 2006; Piasta, 2006; Share, 2004).

The positive effects of letter name knowledge on acquiring the letter sound knowledge is dependent on the letter name structure effect (e.g., Evans et al., 2006; Justice et al., 2006; McBride-Chang, 1999; Piasta, 2006). In other words letters like M and K include cues to their sounds /m/ and /k/ which exist in their names. But there are some letters that they do not present any cues to their corresponding sounds. Considering letters like Y and H, no cues are possible in their name to their corresponding sounds.

Some studies (Bradley & Jones, 2007; Shaw, 2011; Chen et al, 2012) explored the factors that can affect alphabet learning. In a study Bradley and Jones (2007) tried to see the effects of reading aloud on learning alphabet. The researchers notices that while reading the books, the teachers focused on letter name rather than letter sound. In this exploratory study the researchers reported the different effects of alphabet books on learning alphabet. Therefore it can be concluded that the book type and the instructors' preference of letter name or letter sound can have effect on learning alphabet.

Shaw (2011) studied the effect of two handwriting approaches. The purpose of this study was to evaluate the effect of two handwriting approaches, D'Nealian and Sunform, on kindergartners' letter formations. 41participants received D'Nealian handwriting instruction as the control group; 133 kindergartners were instructed in Sunform as the experimental approach. Pre-post tests at the beginning and end of school year asked kindergarten students to write the letters of the alphabet from memory. The letter formations were scored on a four-point rubric for directionality and integration. The results showed the Sunform group had significantly higher scores on all but three letters of the alphabet. The D'Nealian students had considerably lower scores on missing or extra strokes, distortions and open letters. The findings of this study support the value of using an integrated, meaningful curriculum that appeals to young children and that supports motor development by requiring students to cross the midline to form counter-clockwise circles and diagonal lines (As cited in Shaw, 2011).

Chen et al (2012) investigated the effects of parental factor on the learners' alphabet and word learning. This study tried to find out the relationship between parents' demographic/socioeconomic backgrounds and their self-reported frequencies of engaging in early childhood education activities. The results indicted that White parents are more likely than Black and Hispanic parents to report reading to their children frequently, while Black parents are more likely than White parents to report teaching the alphabet and pointing out words to children.

Hall et al (2014) investigated interactive writing as an effective practice for increasing students' alphabet knowledge skills. The treatment group was given a 10-15 minutes (3 or 4 times a week) treatment of interactive writing lesson each day in through the small groups setting their classroom. However the young students in the control group were given conventional literacy instruction in small groups. For the purpose of the study the researchers collected the outcome data on upper case, lower case, and letter sound identification. The data were collected before and after the treatment phase. Comparing the data gathered from the pre-test and post-test of both groups indicated the positive effects of interactive writing strategy in instructing alphabets. The learners in the interactive writing group were found to have more knowledge of lower case and upper case letters after the treatment phase.

Piasta, Purpura, and Wagner, (2010) studied how to foster alphabet knowledge development. Alphabet instruction was done through two treatments of letter name combination with sound instruction or letter sound only. Therefore one of the groups of study was given letter sound instruction for teaching alphabet while the group was given letter sound instruction plus letter name instruction. In pre-test and post-test the aim was to measure the participants' on alphabet, phonological awareness, letter-word identification, emergent reading, and developmental spelling measures. Analyzing the data gathered from post-test and comparing the results indicated that when there is combination of letter sound and letter name instruction, children's letter sound acquisition is improved.

Jones and Reutzel (2012) studied the effects of enhanced alphabet knowledge instruction exploring a change of frequency, focus, and distributed cycles of review. The researchers conducted a two-year exploratory research study of alphabet knowledge instruction in 13 kindergarten classrooms in four at-risk urban schools. Based on insights for teaching from five evidence-based advantages that influence acquisition of letter names and sounds, instruction of letter names and sounds was enhanced to increase students' exposure to and practice with letters and to provide greater instructional focus on difficult-to-learn letters through brief lessons taught through distributed cycles of review. Results of this study show that students experienced increased success in acquiring alphabet knowledge, through Enhanced Alphabet Knowledge instruction (As cited in Jones & Reutzel, 2012).

From the provided review of the literature, it can be inferred that parental factors, the method of teaching, the context, and enhancement are among important factors affecting the alphabet teaching and learning.

III. METHODOLOGY

A. Participants

Since one of the researcherswasa teacher in a maleguidance school and he had four first grade classes in educational year 2014-15, the four classes without any modification in the number and arrangement of the students and their classes were considered as the sample. These intact groupswere randomly assigned as twoexperimental groups of pre-instruction and while-instruction.

The total number of students in the two groups was 110, but the ones with prior English alphabet knowledge (N=20) were not considered in the study however all the students in the classes followed the treatment. Therefore the sample for the study was 90 students. The pre-instruction and while-instruction groups included 47, 43 participants respectively.

B. Instruments

The data required for this study were participants' scores in pretest and post test. The alphabet recognition test was used for both pre-test and post-test. Students' pre-test examined whether they had any prior knowledge of the alphabet or not. These tests includedtwo parts of recognizing alphabets' names and sounds.

Alphabet recognition test included a sheet with random order of the alphabet in a square with both capital and small letters. Each correct answer scored 1 and each incorrect answer scored 0. The order of the alphabet was different in pre-test and post-test for every student. Therefore, the examiner recorded the serial number of the sheet for each student not to repeat that one in post-test. The sum of the test score was 52 which included 26 for alphabet recognition and 26 for sound recognition.

C. Data Collection Procedure

The entire sample was given alphabet recognition test to recognize students with prior alphabet knowledge. In the recognition test, students who had background knowledge about alphabets in English were recognized. Data from pretest exam identifies the homogeneity of the participants selected for the study. After finishing the treatment period post test exam gathered the participants' scores for their alphabet learning during the term.

A sheet containing all 26 capital and small letters in random order was delivered to the students, and they were asked to point to the correct letter as the examiner gave its name or sound. Responses for both tasks were scored as correct or incorrect. Composite scores (summed number of correct responses, ranging from 0 to 52) for the production tasks simply represented the number of letters or sounds correctly produced by the students.

In pre-test, the students whose scores were over 20 were considered to be familiar with alphabet and their performance was ignored in post-test. The number of the students who knew the alphabet was 20 in all and other 90 participants had no or limited knowledge about English alphabetic letters.

After identifying control and experimental groups, all participants were given pre-test to recognize participants with prior alphabet knowledge and ignore those participants' scores in pre-test and post-test. However they participated in the classes.

By accomplishing the treatment given to both groups, the needed data for analyzing and comparing the results of the study were gathered through the post-test given to all participants in the study. Post-test was similar to the pre-test which included alphabet recognition test.

IV. RESULTS AND DISCUSSION

The group means in pre-test and post-test were compared with each other to see the differences between the groups. SPSS data analysis software was used to apply independent samples' t-test to compare the mean scores of the pre- and post-test in the two experimental groups.Comparing the mean scores of the post-test shows the differences between pre-instruction and while-instruction groups.Table 1 shows the pre-test and post-test mean scores for both.

TABLE 1:
PARTICIPANTS' MEAN SCORES IN TWO GROUPS

Variable / Group	Frequency N	Pre Test M±SD	Post Test M±SD
Pre-instruction	47	23.46±11.24	86.91±17.29
While-instruction	43	21.11±11.45	94.81±18.10

As shown in Table 1 above, the pretest mean score and standard deviationwere$M = 21.11$, $SD = 11.45$ for the while-instruction group while they were$M = 94.81$, $SD = 18.10$for the post-test of the same group. The difference seemedto be high almost 73.7. The pretest mean score and standard deviationfor the control group were$M = 23.46$, $SD = 11.24$ while their posttest mean scoreand standard deviationwere$M = 86.91$, $SD = 17.29$. Again the mean difference was considered as high with almost 63.45 points increased.These results are shown in figure 3.1.
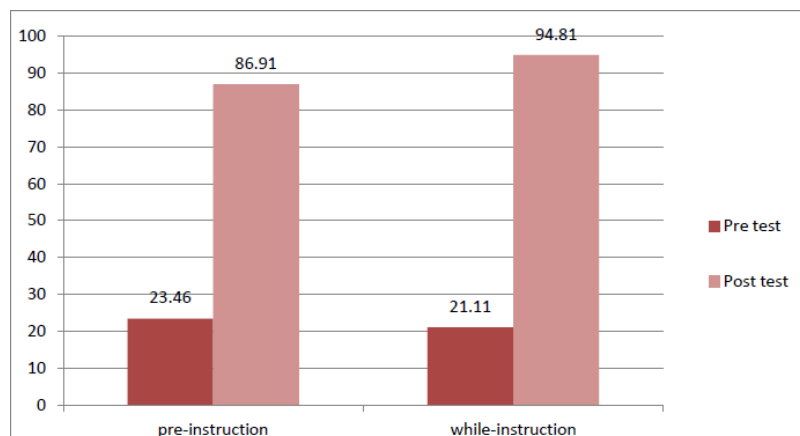

Figure 3.1: Research Groups, Means in the Pre-test and Post-test

On the whole, based on the descriptive statistics reported earlier, it could be said that both methods were effective and it seems that teaching alphabet at while-instruction method had more positive effect than teaching English at pre-instruction method. However, it is necessary for the data to be further examined through inferential statistics to ensure that the result is statistically significant.

The assumption of normal distribution of the pretest and posttest scores was first checked before conducting the inferential statistics. The normality of the score distributions was determined by One-Sample Kolmogorov-Smirnov Test.

TABLE 2:
ONE-SAMPLE KOLMOGOROV-SMIRNOV

N		90
Normal Parameters[a,b]	Mean	22.3444
	Std. Deviation	11.34164
Most Extreme Differences	Absolute	.204
	Positive	.103
	Negative	-.204
Kolmogorov-Smirnov Z		1.932
Asymp. Sig. (2-tailed)		.541

a. Test DIstribution is Normal.
b. Calculated from Data

Table 2 shows the results of One-Sample Kolmogorov-Smirnov Test. Analyzing the results of this test it can be seen that both groups are over .05 significant level. Thisproves that distribution of the data in both groups is normal.

To have a sound basis for comparing the two methods, participants of the two groups required to have almost equal knowledge of English alphabet. An independent samples t-test was consequently used to check for this equality, the results of which are presented in Table 3.

TABLE 3:
INDEPENDENT SAMPLE T-TEST FOR PRE-TEST

Group	Mean	Mean Difference	df	t	P
Pre-instruction	23.46	2.23	88	0.982	0.56
While-instruction	21.11				

As presented in Table 3, based on the results of the independent-samples *t*-test for participants' pre-test, the equality of alphabet knowledgebetween the while-instruction (N=43) and pre-instruction (N=47) groups was statistically determined. No statistically significant differencewas observed in the participants' alphabet knowledge pre-test scores of the while-instructiongroup (M = 21.11, SD=11.45) and the pre-instructiongroup (M = 23.46, SD=11.24); $t(28)$ = 0.982, $p<0.05$. So, they were almost equal and ready for the treatment.

To have a comparison of the effect of two instruction methods, another independent samples t-test was used for the post-test scores of the two experimental groups. The results are shown in Table 4.

TABLE 4:
INDEPENDENT SAMPLE T-TEST FOR POST-TEST

Group	Mean	Mean Difference	df	t	P
Pre-instruction	86.92	7.89	42	2.11	0.037*
While-instruction	94.81				

As Table 4 indicates, there was a statistically significant difference in the alphabet recognition post-test scores of the while-instruction group (M = 94.81, SD = 18.10) as compared with those in the pre-instruction group (M = 86.91, SD = ±17.29), t= 2.11, $p<0.05$. The results also showed that while-instruction experimental group outperformed the pre-instruction experimental group.Thus, it can be said that teaching English alphabet with while-instruction method has more positive effect than teaching English alphabet with the pre-instruction method.

According to the findings of this study it can be concluded that while-instruction method for teaching alphaebt is more effectivethan pre-instruciton of alphabet.The results of this study are in line with the findings ofWuori (1999) and Wagstaff (1998).

Both Wuori (1999) and Wagstaff (1998)highlight the importance of context in learning and the findings of this study support this idea because in while-instruction of alphabet the use of context (the companionship of other parts of book) helps the learners to use whatever they have learned in reading and writing works and they become curious about the letters they haven't learned yet.However, the number of supporting or contradicting findings is very limited, because there is not much research in this area. Therefore, more studies about the difference of these two methods of presenting alphabet to the learners can be done and stronger claims can be put forward for the findings.

The results of this research can be used as a useful way of teaching alphabet among beginners of English language learners. So,our findings can be useful for syllabus designers, curriculum developers, language teachers, and language teacher educators, especially with major change in TEFL approaches in Iranian educational system and emergence of the newly developed books based on Whole Language Approach.

V. Conclusion

With a major change in approaches to the language teaching, the Iranian guidance school EFL text books were also modified which would result in a change in teaching method of the teachers.However, in practice not all teachers changed their method of presenting alphabet to the new while-instruction method and some, based on their traditional views toward language teaching and the habit of years of teaching all the alphabet letter and sounds at the beginning of the course stock to their pre-instruction teaching method. The present study, therefore, was conducted to make a comparison between the effects of these two methods on alphabet leaning of teenagerEFL learners. The results of the data analysis revealed that while-instruction method resulted in higher knowledge of the alphabet and was more beneficial for the learners. This finding can have pedagogical implications not only for language teachers but also for material developers and language trainers as well.

References

[1]   Adams, M.J. (1990). Beginning to Read: Thinking and Learning About Print. Cambridge, MA: MIT Press.
[2]   Bereiter C, Campione J, Carruthers I, Hirshber J, McKeough A, Pressley M, et al. Open Court Reading Pre-K. 2003. Retrieved June 8, 2008, fromhttps://www.sraonline.com/products.html?PHPSESSID=5f4933c7b29f0ddaf8f04a56eef7f143&tid=1 &sid=147.
[3]   Bradley B.A., & Jones, J. (2007). Sharing Alphabet Books in Early Childhood Classrooms.*The Reading Teacher*, 60(5), 452– 463.
[4]   Bradley, B.A., & Stahl, S. (2001). Learning the Alphabet.Presented at the National Reading Conference. San Antonio,TX.
[5]   Burgess, S. R., &Lonigan, C. J. (1998). Bidirectional relations of phonological sensitivity and pre-reading abilities: Evidence from a preschool sample. *Journal of Experimental Child Psychology*, 70, 117–141.
[6]   Chen, J., Pisani, L., White, Sh., &Soroui, J. (2012) Parental Engagement in Early Childhood Education at Home. *Reading Psychology*, 33(6), 497-524.
[7]   Fischer, B. (1996). Moving Beyond "Letter of the Week."*Teaching PreK-8*, 26(4), 74-76.
[8]   Evans, M.A., Bell, M., Shaw, D., Moretti, S., & Page, J. (2006). Letter names, letter sounds, and phonological awareness: An examination of kindergarten children across letters and of letters across children. *Reading & Writing*, 19, 959–989.
[9]   Hall, A.H., Toland, M.D., Grisham-Brown, J., & Graham, S. (2014). Exploring Interactive Writing as an Effective Practice for Increasing Head Start Students' Alphabet Knowledge Skills. *Early Childhood Education Journal*, 42(6), 423-430.
[10] Heroman, C., & Jones, C. (2004) Literacy: The Creative Curriculum Approach. Washington, D.C: Teaching Strategies, Inc.
[11] Honig, B. (1996). Teaching our children to read: The role of skills in a comprehensive reading program. Thousand Oaks, CA: Corwin Press.
[12] Jones, C.D., &Reutzel, D.R. (2012).Enhanced Alphabet Knowledge Instruction: Exploring a Change of Frequency, Focus, and Distributed Cycles of Review *Reading Psychology*, 33(5), 448-464.
[13] Justice, L.M., Pence, K., Bowles, R.B., & Wiggins, A. (2006). An investigation of four hypotheses concerning the order by which 4-year-old children learn the alphabet letters. *Early Childhood Research Quarterly*, 21, 374–389.
[14] Lonigan, C., Burgess, S. R., Anthony, J. L., & Barker, T. A. (1998). Development of phonological sensitivity in two to five year-old children.*Journal of Educational Psychology*, 90, 294–311.
[15] McBride-Chang, C. (1999). The ABC's of the ABC's: The development of letter-name and letter-sound knowledge. *Merrill-Palmer Quarterly*, 45, 285–308.
[16] McGee, L.M., & Morrow, L.M. (2005).Teaching Literacy in Kindergarten. Guilford Publications. New York.
[17] Piasta, Sh.B.(2006). Acquisition of alphabetic knowledge: Examining letter- and child-level factors in a single, comprehensive model. Florida State University; Tallahassee, FL. Unpublished thesis.
[18] Piasta, Sh.B.,Purpura, D.J., & Wagner, R.K.(2010). Fostering Alphabet Knowledge Development: A Comparison of Two Instructional Approaches *Reading and Writing: An Interdisciplinary Journal*, 23(6), 607-626.
[19] Riley, J. (1996). The teaching of reading.London: Paul Chapman Publishing.
[20] Scarborough, H. (1998). Early identification of children at risk for reading disabilities. In B. K. Shapiro, P. J. Accardo& A. J. Capute (Eds.), *Specific reading disability* (pp. 75–119). Timonium, MD: York Press.
[21] Schatschneider, C., Fletcher, J.M., Francis, D.J., Carlson, C.D., &Foorman, B.R. (2004). Kindergarten Prediction of Reading Skills: A Longitudinal Comparative Analysis. *Journal of Educational Psychology,* 96, 265–282.
[22] Share, D.L.(2004). Knowing letter names and learning letter sounds: A causal connection. *Journal of Experimental Child Psychology*, 88, 213–233.
[23] Shaw, D.M. (2011). The Effect of Two Handwriting Approaches, D'Nealian and Sunform, on Kindergartners' Letter Formations. *Early Childhood Education Journal*, 39(2), 125-132.
[24] Torgesen, J. (1998). Catch them before they fall; Identification and assessment to prevent reading failure in young children. *American Educator*, 24, 32-39.

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