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The Impact of Baby College Phonics System on Iranian Children EFL Learners' Phonological Awareness, Spelling, and Willingness to Communicate

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Abstract

This study is an attempt to investigate the impact of Baby College Phonics system on Iranian children EFL learners' phonological awareness, spelling, and willingness to communicate (WTC). To this end, 80 EFL learners within the age range of 8 to 12 were selected, and homogenized. The participants were then assigned to an experimental group (i.e., Baby College Phonics) and a control group. Having selected the participants and assigning them to the groups, the researchers administered a phonological awareness test, a spelling test, and a WTC questionnaire. Next, the experimental group was exposed to Baby College Phonics system, whereas the control group was instructed based on a non-phonics approach. After 15 sessions, the phonological awareness test, spelling test, and WTC questionnaire were administered again. The findings revealed that Baby College Phonics system had a significant impact on Iranian children EFL learners' phonological awareness, spelling, and WTC. The findings have some fruitful pedagogical implications for Iranian policy makers, course book writers, and material developers.

Keywords: Baby College Phonics system, Phonological awareness, Spelling, WTC

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1. Introduction

There are numerous distinct skills involved in acquisition and articulation of a foreign/second language encompassing grammar, lexicon, and pragmatics. However, phonological awareness appears to be one of the most critical competencies, not only for mature learners but also kids and children, owing to its intricate amalgamation of a series of cognitive and physiological abilities (Celce-Murcia et al., 2010).

Phonological awareness, as defined by Winter and Grawunder (2012), refers to the understanding of the various attributes of a language's sound system, such as its sounds, syllable structure, and phonotactics. This concept has been identified as a reliable indicator for predicting the development of reading, vocabulary, and spelling abilities in both first and second language acquisition. Phonological awareness skills might take into account a variety of capabilities such as identification of syllables, rhymes, phonemes, and analogical skills (Baezzat et al., 2018).

It is generally agreed that phonological awareness goes hand in hand with dictation ability (Brown, 2007). Given that one of the main problems in children with spelling problems is a failure of phonological awareness, the importance of effective teaching methods consisting of phonological awareness is more evident than ever before (Taheri & Taki, 2017).

Another equally important issue in L2 learning is learners' willingness to communicate (WTC) in second language (L2) settings. WTC, as first proposed by MacIntyre et al. (1998), refers to "volitional inclination toward actively engaging in the act of communication in a specific situation, which can vary according to interlocutor(s), topic, and conversational context, among other potential situational variables" (Kang, 2005, p. 291). It is argued that the primary goal of acquiring a second language should be to cultivate in language learners the desire to actively pursue occasions for interaction, as well as the preparedness to participate in communication.

It has frequently been observed that the process of acquiring the ability to read and write is a multifaceted endeavor, particularly for novice learners, specifically those who are young and learning English as a second language. These learners must coordinate numerous

cognitive processes in order to achieve fluency in reading and accuracy in spelling. The teaching method known as systematic phonics instruction places emphasis on the mastery of correspondences between graphemes and phonemes, and the subsequent application of this knowledge in reading and spelling words (Harris & Hodges, 1995). Phonics instruction is specifically designed for early learners in the primary grades and for children who encounter challenges in the acquisition of reading skills (The National Reading Panel, 2000, as cited by Brown, 2001).

The systematic phonics instruction, as stated by Herring (2017), leads to an enhanced growth in reading. This is due to the fact that knowledge of phonics aids in the development of word recognition. The ability to recognize words increases fluency in reading, which subsequently enhances reading comprehension. This is because children are not faced with the challenge of decoding words and can instead focus their complete attention on deriving meaning from the text. Additionally, phonics instruction is thought to enhance spelling ability, as pointed out by Pinnell et al. (1994), as reading and spelling are interconnected processes. Phonics involves the combination of sounds to read printed words, while spelling entails breaking down spoken words into sounds in order to write them. To spell a word, a child must match each sound heard in the word to a corresponding spelling. However, the impact of phonics instruction on phonological awareness and dictation has not been adequately explored.

Researchers argue that phonological awareness is a powerful indicator of early reading development and is casually related to reading ability (Cheung et al., 2001). Although the relationship between phonological awareness and written language processing is well established, the impact of phonics instruction on phonological awareness has not yet been adequately explored. Some studies show that morphological awareness is a predictor of some language components including understanding the spelling system (e.g., Fowler et al., 1995; Reed, 2012) and single word reading and reading comprehension (e.g., Qian, 2002; Tyler & Nagy, 1990). However, the role of morphological awareness in listening comprehension has not been adequately explored.

Systematic instruction in phonics has been the subject of considerable research attention of both scholars and language instructors in the context of first-language education in countries such as the United States, the United Kingdom, Australia, and New Zealand. Notably, phonics instruction is compulsory in these countries. However, there is limited knowledge regarding the impact of phonics instruction on the WTC and dictation of foreign language learners. The National Reading Panel (2000, as cited by Brown, 2001) conducted a meta-analysis of 38 studies and provided strong evidence supporting the effectiveness of phonics instruction in first-language contexts, regardless of whether it was synthetic or analytic. Yet, there is a noticeable lack of research studies on phonics instruction for foreign language or second language learners. This raises the question of whether phonics instruction is equally effective in promoting phonological awareness and dictation. To bridge the gap in the literature, the following research questions are proposed:

1. Does Baby College phonics system have any statistically significant effect on Iranian children EFL learners' phonological awareness?

2.) Does Baby College phonics system have any statistically significant effect on Iranian children EFL learners' spelling?

3. Does Baby College phonics system have any statistically significant effect on Iranian children EFL learners' WTC?

The justification for the importance of this research lies in the fact that in Iran, there is a lack of belief or limited belief in the instruction of phonics and it is necessity for the development of early literacy skills in English. This may be attributed to their strong adherence to the traditional approach of whole language instruction, which does not emphasize on phonics. In this particular study, the focus is on the use of Baby College Phonics system in an Iranian context, aiming to demonstrate how an unfamiliar approach is perceived and put into practice. Consequently, the outcomes of this study hold significance as they can offer a practical model for educators in determining effective methods of teaching English as a Foreign Language (EFL). Moreover, the utilization of Baby College Phonics system in classroom setting may provide a more contextualized understanding of the actual

teaching and learning process, enabling language teachers to decipher the impact of this approach on EFL learners' phonological awareness, dictation, and WTC.

2. Review of Literature

2.1. Phonics Instruction

Phonics is a method of teaching which focuses on ways of decoding written letters and spoken sounds. This approach encourages children to decode words by letter-sounds, instead of recognizing whole words (Kilpatrick, 2020). Stahl (2004, p. 35) claims that phonics refers to "any approach in which the teacher does or says something to help children learn how to decode words".

Phonics is also known as the alphabetic principle or alphabetic code (Martinez, 2011). In addition, it is also a guide to an alphabet symbol of transcription so, knowing the alphabet symbols will make the translation of the spoken word into its written form and vice versa more convenient (Ming & Dukes, 2010). Phonics instruction is a way of teaching which teaches children that there is a relationship between the graphemes (letters of written language) and phonemes (the individual sounds of spoken language). The aim of this method of teaching is to make learners find out that there is a relationship between written letters and spoken sounds. It also aimed to help children how to use their phonetic knowledge in reading and writing (Lonigan, 2003, as cited in Lonigan, 2007).

Phonics instruction promotes the increase of learners' awareness allowing them to perceive the sounds in association with letters, integrating phonemic awareness. According to Doty et al. (2015, p. 503), phonics instruction teaches learners "the relationship between the letters of written language and the sounds of spoken language". Although phonics teaching is mostly used to improve literacy skills in L1, there are examples of the use of this methodology in EFL classrooms to improve reading and pronunciation skills. Ibarrola (2007) suggests the use of phonics instruction in EFL primary school contexts to improve not only reading comprehension but also pronunciation.

According to Stahl (2004), phonics instruction is an approach in which the instructor teaches learners how to decode words. Teaching sounds-symbol correspondences directly,

having students manipulate letter sounds in written words through spelling tasks, teaching patterns of the similar spelled words or anything else that helps children learn about orthographic patterns in written form are involved in this approach.

Phonics is a way of instruction which teaches learners correspondences between graphemes in written language and phonemes in spoken language and how to use these correspondences to read and spell words (Ehri, 2003). Phonics instruction is systematic when

> all the major grapheme-phoneme correspondences are taught and they are covered in a clearly defined sequence including short and long vowels as well as vowel and consonant digraphs such as oi, ea, sh, th, and blends of letter-sounds that form larger subunits in words such as onsets and rimes (Ehri, 2003, p. 3).

According to Bald (2007), the systematic teaching of phonics refers to the way of connecting the sounds of spoken English with letters or groups of letters (e.g., the phoneme /k/ can be represented by c, k, ck, ch, or q spellings) and the way of blending the sounds of letters together to produce approximate pronunciations of unknown words (the sounds /p/, /e/, /n/ can be blended to pen). Phonics is systematically taught in different ways like synthetic phonics, analytic phonics, embedded phonics, analogy phonics, onset-rime phonics, and phonics through spelling.

In line with Ibarrola's suggestion, Tomás et al. (2017) carried out a study applying phonics instruction to 25 phonemes. The study included 50 Spanish participants, aged 5 and 6 years old. One of the aims of this study was to verify if there were differences in perception and production of English sounds after phonics teaching. According to the results, phonics teaching assisted the phonological production of sounds, improving pronunciation. In addition, according to a study carried out by Matos (2018), an improvement in terms of pronunciation was achieved by young EFL learners using phonics instruction. This study focused on the contrast of sounds /θ/-/ð/ and /I/-/I:/. 13 participants aged from 10 to 12 years old. Furthermore, Martinez (2011) carried out a study about the use of explicit phonics instructions in EFL classrooms, aiming to identify if it had positive effects on literacy of 85

participants, from the first grade, attending bilingual school. The author concluded that young learners' pronunciation skills improved when reading.

2.2. Phonemic Awareness

There have been many discoveries about cognitive development and what linguistic skills children need to become successful readers. Phonological awareness has been around for many years, but connecting research to colleges and schools has been slow (Kilpatrick, 2020). In the mid to late 1900's, phonological awareness was popular in some programs. Despite that fact, many educators were not taught about phonological awareness in college and are learning the importance of it while teaching (Kilpatrick, 2020).

When teachers are effectively teaching students phonological awareness they are then reaching all levels of reading abilities and helping them learn (Hatcher, 2022). The term phonemic awareness has currently become a buzzword and many educators are beginning to understand the importance of providing developmentally appropriate instruction to teach children so they are able to build upon prior knowledge to become fluent readers (Ming & Dukes, 2010).

Different levels of phonological awareness include syllable, onset-rime, and phoneme. These skills begin to be acquired and mastered in preschool and are typically achieved by late first grade to early third grade (Kilpatrick, 2020). It is important to teach phonemic awareness skills in proper order to children making them successful in phonics and identifying words (Stotsky, 2009). Children first learn the difference between words and sentences, learn to rhyme, be aware of syllables, manipulate onset and rime, and then begin to be aware of different phonemes (sounds) to begin manipulating sounds (Moats, 2009). Phonemic awareness is one part of phonological awareness, but all of the above-mentioned skills are critical to a child's reading development (Yopp & Yopp, 2009).

Phonemic awareness "refers to the specific ability to focus on and manipulate individual sounds (phonemes) in spoken word" (Lonigan, 2007, p. 1). Being able to isolate phonemes is the first task a student will become fluent with in phonemic awareness. The student will be able to identify the beginning, middle, and end sounds of a word. Next, a

student will begin to segment phonemes in single syllable words into their individual sounds. Once the student is able to segment sounds, they will begin to blend the phonemes together to produce a word (Gillon, 2005).

The most difficult part of phonemic awareness is being able to manipulate the sounds of a word. To do this, the student will replace, take away, or add sounds to a word to produce a new word (Lonigan, 2007). A student who is able to manipulate and isolate phonemes in a word is showing the highest level of phonological awareness and is preparing to become a fluent reader (Kilpatrick, 2020).

Phonemic awareness instruction is vital for all students, because it may be difficult to identify the students who are struggling readers until they have fallen behind (Kilpatrick, 2020). Ball and Rahilly (2014) made an interesting discovery when studies showed that "phonemic awareness was more predictive of reading development than students' IQ or socioeconomic level" (p. 28). Providing phonological awareness instruction as early as preschool using playbased methods such as nursery rhymes has been effective in developing phonemic awareness to help students understand the basic phonemes in the language (Kilpatrick, 2020). The goal of a student's mastery of phonemic awareness is that they will be able to successfully decode words and become fluent readers.

2.3. WTC

The term Willingness to communicate (WTC) was firstly employed by McCroskey and Baer (1985) in relation to interaction in first language. It was an extension of lack of inclination to communicate by Mortensen et al. (1977) about tendency to oral performance (as cited in McCroskey & Baer, 1985). McCroskey and Baer (1985) defined L1 WTC as a steady inclination toward communication when a person feels free to communicate.

Xie (2011, p. 19) treats "WTC in L1 as a personality-based, trait-like predisposition which was relatively consistent across a variety of communication contexts and types of receivers". To put differently, while other variables such as context may influence people's inclination to speak, individuals show steady WTC propensity across various circumstances.

According to McCroskey and Richmond (1990), there are different variables that influence willingness to communicate in first language acquisition which are communication competence, self-efficacy, introversion, communication anxiety, and cultural diversities. In the early 1990s, McCroskey and Richmond (1990) worked on WTC in the native language speakers of various first languages in Micronesia, Sweden, Puerto Rico, and Australia. They were looking for the relationship among WTC, communication anxiety, speaking anxiety, and introversion in these four nations. The results showed that the level of speaking anxiety, WTC, introversion, and communication competence was different among the people in these countries. Moreover, it was found that the relationship among these variables in different countries was different. While US learners were more willing to express themselves, Micronesian learners were very unwilling to communicate. The learners from Sweden were found to have the most level of language skill, whilst Micronesian learners had the least level of language competence. Based on the results of this study, McCroskey and Richmond (1990) proposed that no generalization can be made without referring to the culture of the people.

MacIntyre (1994) proposes a model to forecast L1 WTC. This model assumes that self-perceived communication competence and speaking anxiety perceived by learners to have straight effect on individuals' willingness to communicate. It means a mixture of high level of communicative competence and a relative shortage of speaking anxiety lead to high a level of WTC. Personality trait was another influencing variable in his model. Xie (2011, p. 68) states that "the personality trait of introversion contributes to both communication apprehension and the perception of communicative competence, and self-esteem plays a role in reducing communication apprehension".

2.4. Empirical Studies

The phonics approach is also called a systematic and explicit phonologically- based approach that values the phonological and orthographic components of words as its focus is on teaching word recognition (Honig, 2001). Phonics has been described as both "…a system for encoding speech sounds into written symbols … [and a way of] teaching learners the

relationships between letters and sounds and how to use this system to recognize words" (Mesmer & Griffith, 2005, pp. 366–367).

Empirical evidence from numerous intervention studies in English-speaking children (e.g., Conrad & Levy, 2011; Hines, 2009; O'Connor, 2014; Sénéchal et al., 2012) have already demonstrated the functional importance of the rime-based phonics intervention for improving children's reading performances. In spite of this fact, very little has been known so far about the effects of such an instruction on the reading growth of ESL/EFL children since there is a lack of research in this area. Few studies have been attempted in ESL/EFL settings to explore the impact of phonics instruction on other variables such as spelling, WTC or motivation.

Agegnehu et al. (2023) aimed to assess whether a training-based intervention using an explicit rime-based phonics method improves the phonological awareness outcomes of EFL children in Ethiopia. The participants were two groups of 3rd grade children (N = 70) from two public primary schools in Hawassa, Ethiopia. A quasi-experimental research design was used in which a group of children (N = 35) were randomly assigned to the experimental group and another group (N = 35) to the control group. The experimental group was explicitly exposed to a training-based beginning reading intervention using an explicit rime-based phonics method. The control group stayed in their regular classroom with their regular beginning reading lessons with the conventional way. The phonological awareness test (PAT) was used to measure the phonological awareness outcomes in the two groups before and after the intervention. The findings showed that the experimental group achieved significant improvement on the phonological awareness in post- test and that the magnitude of the intervention's effect was very large for all sub-subtests and the total phonological awareness. The findings also indicated that a brief and direct beginning reading instruction with an explicit rime-based phonics method helps children in a non-English language context with a first language (L1) significantly different from English to rapidly improve their phonological awareness performances. The findings further suggested that just knowledge of letters alone is not a sufficient condition for phonological awareness to develop.

Zuriyatiaslina, et al. (2018) investigated whether or not the onset-rime instruction improves phoneme blending and word reading outcomes in Malaysian EFL learners and concluded that the use of the onset-rime instruction significantly improved students' outcomes in phoneme blending and in new word reading. Similarly, Ng and Yiakoumetti (2010, as cited in Agegnehu et al., 2023) found that a systematic and explicit rime-based phonics intervention program resulted in significant improvements in word recognition outcomes of Hong Kong Chinese-speaking children.

3. Method

3.1. Participants

In order to conduct this study, 60 male and female EFL learners within the age range of 8 to 12 studying at Baby College and Home of Language in Tehran, Iran, were selected out of 80 participants. That is, they were selected from a pool of 80 participants using a two-stage sampling procedure. All the participants in the study were from Tehran province and Persian was their native language. Additionally, it was ensured that none of the participants had ever resided in a foreign country.

The participants who were included in this study were assumed to be at the elementary level of proficiency based on the evaluation made by the institute in advance. Initially, they were conveniently chosen and subsequently homogenized based on their performance on a proficiency examination, specifically the KET Test. Hence, in order to address the homogeneity of the participants, 60 individuals out of the 80 test takers, whose scores on the homogeneity test deviated by one standard deviation above and one standard deviation below the mean (Mean ± SD), were selected.

Consequently, 20 test takers who obtained exceedingly high or exceedingly low scores on the test were deemed ineligible for the present study. Subsequently, the selected participants were equally divided into two groups (i.e., the experimental group receiving phonics instruction and the control group).

3.2. Instruments

Key English Test

The KET serves as evidence of an individual's ability to utilize the English language for the purpose of communicating in basic situations. The examination evaluates all four essential language skills, namely reading, speaking, writing, and listening. The reading and writing sections assess an individual's understanding of simple written information, such as signs, brochures, newspapers, and magazines, comprising a total of 56 questions. The listening section, on the other hand, consists of 25 questions and necessitates the examinee's comprehension of announcements and other oral materials delivered at a reasonably slow pace. The speaking section gauges an individual's capacity to engage in a conversation by responding to and posing simple inquiries. Notably, the speaking test is administered face to face with one or two other candidates and two examiners, which enhances the test's authenticity and reliability.

Phonological Awareness Skill Test

In this study, the Phonological Awareness Skills Test (P.A.S.T.) was administered as the pre-test and post-test in order to collect data. The test, which is a kind of achievement test, was developed by Yvette Zgonc (2000; as cited by Anthony & Francis, 2005). The appropriateness and content validity of the revised forms were ensured via expert judgement from two academic staff in ELT at two different universities in Iran. This test can be applied to evaluate language learners' phonological awareness skills at the levels of word, syllable, onset-rime, and phoneme. The P.A.S.T. consists of 10 parts. These parts consist of sentence segmentation, rhyme recognition, rhyme production, syllable blending, syllable segmentation, syllable deletion, phoneme isolation of initial sounds, phoneme isolation of final sounds, phoneme blending, phoneme segmentation, phoneme deletion of initial sounds, phoneme deletion of final sounds, phoneme deletion of first sound in consonant blend, and phoneme substitution. There are 20 items in total and each correct answer equals 1 score.

Spelling Test

A diction task was administered before and after the treatment. This test was given in order to make sure that the learners learnt letter sounds and they are able to spell them correctly at the end of level. For example, students from phonics one must be able to read and write the words which are made from letters A, S, P, T, N, I.

Words were selected from textbooks or teaching packages commonly used in Baby College. The participants were therefore supposed to have encountered these words in their lessons. All items were appropriate in difficulty level. Yeung et al. (2013) used a similar task to investigate Hong Kong kindergarteners' spelling performance. In this task, each one-syllable word was presented orally by the experimenter, together with a sentence containing the word. The children were encouraged to try their best to write the word correctly. A demonstration item was given before the actual testing. One point was given for the correct writing of each word. The internal consistency was 0.87. To avoid practice effect, two parallel forms of the same test were developed and were subsequently confirmed by two experienced language testers.

Willingness to Communicate Questionnaire

To calculate WTC of the participants, a WTC questionnaire which was designed by McCroskey and Richmond (1990), was employed. The questionnaire consisted of 12 items and the participants were completely free to choose whether they want to initiate the communication or not. The employed test was based on the Persian version of the questionnaire of willingness to communicate which was translated and validated by Ganji (2002, as cited in Tavakoli, 2013).

3.3. Procedures

Prior to the initiation of instruction, a cohort comprising a total of 80 male and female English as a Foreign Language (EFL) students was enlisted to serve as the study population. The individuals were required to adhere to specific selection criteria, which stipulated the voluntary participation of students who had never resided in a foreign country. Subsequently, the Key English Test (KET) was administered to the aforementioned 80 learners with the aim of ascertaining the absence of any significant divergence among the participants. Following the assessment of homogeneity, a sample comprising 60 learners were chosen to participate in the research endeavor. This sample consisted of individuals whose scores deviated by one standard deviation above and below the mean score. Then, the participants were assigned to an experimental group (i.e., phonics instruction) and a control group.

Having selected the participants and assigning them to the groups, the phonological awareness test, spelling test, and WTC questionnaire were administered to the participants. Next, the instruction began. The experimental group was taught through phonics instruction in order to get familiar with alphabet sounds, the written form of them and spelling of the words. The students were granted magnetic letters with the intention of engaging in play and locating the accurate spelling. Persian language served as the medium of instruction. Following this, the participants were afforded the chance to juxtapose and differentiate their own spellings in relation to those depicted on the board, subsequently rectifying any errors. The learners learnt the English letter names and how to write them. In addition, the learners were accustomed to some key terms such as letter, word, change, add, and omit.

The second step of the lesson involved the identification and classification of certain words that were compiled as the student spelled them in the word formation process. This particular phase of the lesson focused on the orthographic patterns that were shared by two or more words created during the lesson. In this stage, the students actively manipulated the index cards that were created from the lesson and proceeded to sort them based on their rhyming properties. To illustrate, the instructor selected a word from the set of cards and requested the student to locate a word that either rhymed with or resembled the selected word, such as "Can you find a word that rhymes with or looks like 'cat'?"

The students in control group were exposed to non-phonemic instructions (e.g., Discovery series) through which the words were organized alphabetically by frequency. After 15 sessions, the phonological awareness test, spelling test, and WTC questionnaire were administered again.

3.4. Data Analysis

To analyze the data by running independent-samples t-test statistical procedure, first, some assumptions were checked and the results of independent-samples t-tests are presented subsequently.

Homogeneity of Error Variances

To check the homogeneity of variances, Levene's statistic was used. Leven's statistic tests the assumption that the error variance of the dependent variable is equal across groups.

Table 1

Levene's Test of Equality of Error Variances[a]

	Levene's Statistic	**df1**	**df2**	**Sig.**
Awareness (pre-test)	.01	1	58	.89
Awareness (post-test)	.65	1	58	.42
Spelling (pre-test)	.05	1	58	.81
Spelling (post-test)	1.30	1	58	.25
WTC (pre-test)	.05	1	58	.82
WTC (post-test)	1.48	1	58	.22

As displayed in Table 1 above, the results of Levene's test were not significant for the phonological awareness pre-test ($F = 0.01$, Sig= 0.89, $P > .05$) and post-test ($F = 0.65$, Sig= 0.42, $P > .05$), the spelling pre-test ($F = 0.05$, Sig= 0.81, $P > .05$) and post-test ($F = 1.30$ Sig= 0.25, $P > .05$), the WTC pre-test ($F = 0.05$, Sig= 0.82, $P > .05$) and the WTC post-test ($F = 1.48$, Sig= 0.22, $P > .05$. Based on these results, it can be concluded that there were not any significant differences between the variances of the groups.

Linearity of Slope of Regression Lines

This assumption is checked by drawing a scatter-plot. As Figure 1 shows, there was a linear relationship between the pre-test and the post-test scores which is an indication of the fact that the assumption of linearity of regression lines was also held.

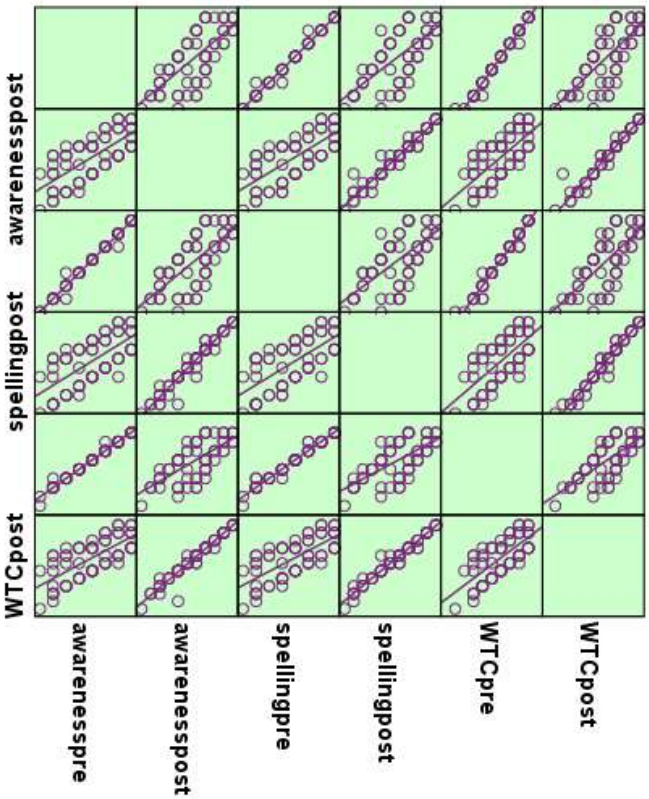

Figure 1

Linear Relationship among Regression Lines

4. Results

4.1. Testing the First Research Hypothesis

With regard to the first research hypothesis (i.e., Baby College phonics system does not have any statistically significant effect on Iranian children EFL learners' phonological awareness), the descriptive statistics showed that there was a difference between the post-test scores of the experimental group (M=17.36 and SD=1.79) and the control group (M=14.03 and SD=2.09) with regard to phonological awareness. In order to analyze whether this difference was meaningful or not, the independent-samples t-test was utilized. The results of this analysis are presented in Table 2.

Table 2

Independent Samples T-Test between the Post-tests

		Levene's Test for Equality of Variances		**t-test for Equality of Means**						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Awareness (post-test)	Equal variances assumed	.65	.42	6.63	58	.00	3.33	.50	2.32	4.33
	Equal variances not assumed			6.63	56.64	.00	3.33	.50	2.32	4.34

Based on the results presented in Table 2, it can be concluded that with the 95% confidence, there was a significant difference in the mean scores of the participants' post-tests in two groups (t= 6.63, P<0.05). Based on the results presented in Table 2, Baby College phonics system has a statistically significant effect on Iranian children EFL learners' phonological awareness. Thus, the first research hypothesis is rejected.

4.2. Testing the Second Research Hypothesis

With regard to the second research hypothesis (i.e., Baby College phonics system does not have any statistically significant effect on Iranian children EFL learners' spelling), the descriptive statistics showed that there was a difference between the post-test scores of the experimental group (M=15.46 and SD=1.75) and the control group (M=11.73 and SD=2.11) with regard to their spelling. In order to analyze whether this difference was meaningful or not, the independent-samples t-test was utilized. The results of this analysis are presented in Table 3.

Based on the results presented in Table 3, it can be concluded that with the 95% confidence, there was a significant difference in the mean scores of the participants' post-tests in two groups ($t= 7.43$, $P<0.05$). Based on the results presented in Table 3, Baby College phonics system has a statistically significant effect on Iranian children EFL learners' spelling. Thus, the second research hypothesis is also rejected.

4.3. Testing the Third Research Hypothesis

With regard to the third research hypothesis (i.e., Baby College phonics system does not have any statistically significant effect on Iranian children EFL learners' WTC), the descriptive statistics showed that there was a difference between the post-test scores of the experimental group (M=27.36 and SD=1.79) and the control group (M=23.80 and SD=2.21) with regard to their WTC. In order to analyze whether this difference was meaningful or not, the independent-samples t-test was utilized.

Based on the results presented in Table 4, it can be concluded that with the 95% confidence, there was a significant difference in the mean scores of the participants' post-tests in two groups ($t= 6.85$, $P<0.05$). Based on the results presented in Table 4, Baby College phonics system has a statistically significant effect on Iranian children EFL learners' WTC. Thus, the third research hypothesis is also rejected.

Table 3

Independent Samples T-Test between the Post-tests

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		Levene's Test for Equality of Variances		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.								Lower	Upper
WTC (post-test)	Equal variances assumed	1.48	.22									
	Equal variances not assumed											
Spelling (post-test)	Equal variances assumed			1.30	.25	7.43	58	.00	3.73	.50	2.72	4.73
	Equal variances not assumed					7.43	56.09	.00	3.73	.50	2.72	4.73

Table 4

Independent Samples T-Test between the Post-tests

		Levene's Test for Equality of Variances		t-test for Equality of Means						
			ig.		f	ig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									ower	pper
TC (post-test)	qual variances assumed	.48	22	.85	8	00	3 .56	. 52	.52	.60
	qual variances not assumed			.85	5.52	00	3 .56	. 52	.52	.60

5. Discussion

Regarding the first research question which sought to explore if Baby College System had any statistically significant impact on Iranian children EFL learners' phonological awareness, the analysis of the data using independent samples t-test revealed that there was a significant difference in the mean scores of the participants' post-tests in two groups. That is, Baby College phonics system has a statistically significant effect on Iranian children EFL learners'

phonological awareness. This finding is in line with a number of research studies (e.g., Eryilmaz & Yesilyurt, 2020; Saiegh-Haddad, 2019). Furthermore, Agegnehu et al. (2023) explored whether a training-based intervention using an explicit rime-based phonics method improves the phonological awareness among EFL children in Ethiopia. He concluded that explicit rime-based phonics method assisted children in a non-English language context with a first language (L1) significantly different from English to rapidly improve their phonological awareness performances.

Regarding the second research question which inspected whether Baby College System had any statistically significant impact on Iranian children EFL learners' dictation, it can be concluded that there was a significant difference in the mean scores of the participants' post-tests in two groups. That is, Baby College phonics system has a statistically significant effect on Iranian children EFL learners' dictation. This finding corroborates with what Zuriyatiaslina et al. (2018) observed. Zuriyatiaslina et al. (2018) mentioned that the phonics approach focuses on analytical skills for breaking the code of written language. Teachers would highlight that, although the words 'big', 'pig', and 'dig' have different onsets (beginning sounds), the three words contain the same rhyme family '-ig'. Children would reflect on the shared spelling patterns across the target words. Knowledge of these patterns will help children sound out familiar words, and predict the dictation of unfamiliar words. This, in turn, would develop their dictation ability.

Finally, regarding the third research question, the findings revealed that Baby College phonics system has a statistically significant effect on Iranian children EFL learners' WTC. According to Hines (2009), vocabulary instruction can go hand-in-hand with phonics instruction. Key words that contain the target letter-sound relationships are first embedded in fun visuals that make sense to the children. Vocabulary instruction is followed by games through which children learn to identify and manipulate sounds. Once the children are able to say the whole words, the next step is to use activities to teach phonological awareness by directing the children's attention to the sound units within words (e.g., syllables, onsets, rhymes, phonemes) and encouraging the children to manipulate these sound units (e.g.,

blending and segmenting). Through this, children become more and more willing to participate in communicative interactions. Hence, the learners' WTC improves.

6. Conclusion

Based on the findings, it can be concluded that Baby College Phonics system can have a significant impact on Iranian children EFL learners' phonological awareness. It is commonly agreed that phonological awareness is seen as an important component of foreign language (L2) reading since this awareness is regarded as a pre-requirement of recognizing the relationship between a letter and its function (Saiegh-Haddad, 2019). Besides, phonological awareness can influence the writing skills of learners (Eryilmaz & Yesilyurt, 2020). As a subset of phonological awareness, phonemic awareness has occupied an important space in the relevant literature. According to Wasik (2001), phonemic awareness can be improved and assessed by teachers with the help of activities such as sound matching, sound isolation, sound blending, sound addition, substitution, or segmentation. The examples of such activities are adequately covered in Baby College Phonics system which can lay a solid foundation stone for EFL learners' phonological development.

Moreover, from the findings, it can be concluded that Baby College Phonics system can have noticeable impact on Iranian children EFL learners' spelling and WTC. Classroom instructional practices that support the development of phonics knowledge include teaching sound-letter correspondences and having students practice decoding (i.e., sound out) words (Brown, 2001). This can boost young learners' spelling ability. Furthermore, the findings may in general provide support for the observation that when children can identify words, syllables, and sounds and can make a connection between letters and sounds, they are able to write. Awareness of sounds helps them categorize orally delivered words and then write them. When children write or spell a word, they rely on the relationship between letters and sounds or phonological codes. In addition to this awareness of sounds, sound segmentation skills are essential for identifying and using unfamiliar words, for reading and writing a word, and for decoding and remembering a word. This can subsequently improve their WTC in classroom context.

The results may prove useful to policy makers as they consider the value of devoting limited instructional time and resources to teaching phonological awareness and phonics to beginning English L2 readers. At the school and classroom level, these findings may convince teachers who are uncertain about the effectiveness of phonics instructional techniques to integrate them into their L2 reading pedagogy.

Based upon the conclusions reported here, policymakers should consider providing beginning learners of English as an L2 with phonics instruction. Likewise, L2 pre-service and in-service reading teachers who are less knowledgeable about phonics instruction should seek training to teach phonics effectively to enable their learners to decode the target language better. This decoding ability is a vital first step to reading, enjoying, and ultimately learning the target language.

The format of the Baby College System facilitates the ease with which it can be implemented into the classroom. Specifically, the lessons within the Baby College System can be scripted. It contains detailed instructions about the implementation of the activities, and provides some flexibility with regards to the pacing of each lesson. Therefore, inexperienced or novice language teachers in Iran can use Baby College System with absolute confidence, being relieved that every point and activity is thoroughly explained and guided.

Baby College System can be implemented effectively in Iran educational system or any teaching programs that incorporate important literacy concepts and include activities that are enjoyable for the students. Hence, Baby College System are typically more preferred and more likely to be used by experienced and novice language teachers. Finally, Baby College System can be used with all students, both those that are demonstrating early reading skills that are considered to be at grade level as well as those that are identified as being at-risk for future reading difficulties.

Even though current research efforts have provided us with valuable insights, important work remains to be done. For example, additional research can provide us with a more fine-grained understanding of the interaction between learners' personal characteristics (e.g., age, L1 reading ability, etc.) and Baby College Phonics' instructional techniques and

approaches to which they are exposed. This study was carried out with a relatively small group of language learners. Future studies could explore the verifiability of findings with a bigger sample of study. Last but not least, future studies can inspect the role of Baby College Phonics on students' communicative apprehension and foreign language anxiety.

Conflict of interest

The author(s) certify/certifies that they have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in the present research paper.

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