# The Effect of Using Multisensory-based Phonics in Teaching Literacy on EFL Young Female/Male Learners' Early Reading Motivation

Leila Farokhbakht, M.A. TEFL, University of Isfahan, Iran

## Abstract

The present study sought to investigate the effect of adopting a multisensory-based phonics (i.e. Jolly Phonics) for teaching early English literacy skills on the reading motivation of Iranian EFL young learners. It also aimed to find out whether there is a significant gender difference in the effect of this multisensory method on enhancing boys' and girls' early reading motivation. To this end, 100 zero-beginners of English (50 boys and 50 girls) aged between 10 to 12 participated in this study. Among the 50 boys participating in this study, 25 were randomly assigned to the experimental group and 25 were assigned to the control group. Likewise, from among the 50 girl participants, 25 of them were randomly assigned to the experimental group and the other 25 were assigned to the control group. While the students in the control group were taught basic English literacy skills through the rote traditional phonics, the learners in the experimental group were taught English literacy (i.e. letter-sound knowledge and reading & writing in the word level) via a synthetic multisensory-based phonics named Jolly Phonics. After a one-month English course, all the participants filled in a 4-point scale Early Reading Motivation Questionnaire (ERMQ). A set of descriptive and inferential statistics were used to analyze students' scores obtained from the questionnaire. The results revealed that the experimental (Jolly Phonics) group had a higher motivation in early English reading skills than the control group. The findings also showed that the multisensory-based phonics had a more positive effect on boys' reading motivation than girls'.

Key words: phonics, multisensory approach, young learners, literacy, reading motivation

#### **1. Introduction**

The importance of motivation in academic achievement has drawn researchers' attention to itself over the years. "Researchers have claimed that better motivated students perform better in school grades and other achievement outcomes" (Hornery, Craven, Yung & Ali, 2008: 2).

For quite a long time, research on affective learner factors were mostly carried out on adult learners because it was believed that young learners resemble one another to the extent that inquiry of such individual difference variables would not be fruitful at all. The popular assumption was that all children have high levels of motivation to learn FLs, have very positive attitudes and are successful in learning languages by default. However, MacIntyre, Baker, Clement and Donovan (2002) notify that young learners differ among themselves just the same as more mature learners do. Therefore, investigations into young learners' individual differences are crucial (Mihaljevic Djigunovic, 2012).

Research on attitudes and motivation in FL learning has a long history (e.g., Dornyei, 1990; Gardner & Lambert, 1959, 1972; Nikolov, 2002; Vilke, 1979), however, the inceptions of such investigations with young FL learners were somehow complicated. The existing instruments were mostly appropriate for older learners and could not automatically be used with

children. The available options were either to adapt them to the needs and requisites of younger age groups or design completely new ones (Mihaljevic Djigunovic, 2012).

Despite the fact that motivation and attitudes are two distinct individual learner factors, they are closely inter-related and are frequently investigated together. "While language attitudes refer to positive or negative feelings about a language and what the learner may connect it with (Gardner &MacIntyre,1993), Gardner (1985, 2010) defines motivation as a combination of the desire to learn the language, positive attitudes to learning the language, and the effort invested in learning" (Mihaljevic Djigunovic, 2012: 57).

Until recently, motivation and attitudes were regarded in terms of their relationship with learner achievement and considered as the cause of learning success (e.g., Burstall, 1975; Vilke, 1979). However, more recently some researchers (e.g., Blondin et al., 1998; Edelenbos, Johnstone, & Kubanek, 2007) have pointed out that attitudes and motivation should be looked at as an aim and the outcome of early FL learning. Attitudes and motivation are not any more solely thought of as single variables in relation to learning outcomes, but they are often viewed as interacting with other individual learner characteristics, such as language anxiety, language aptitude, language learning styles and strategies, and the like. Furthermore, it is observed that the developmental aspects of motivation and attitudes are taking on importance (e.g., Mihaljević Djigunović & Lopriore, 2011; Nikolov, 2002). This can indicate the dynamics of young learners' affective development, which reveals the complex characteristics of early FL learning (Mihaljevic Djigunovic, 2012).

On the contrary, in the 1970s language learning achievement was defined and evaluated with regard to the number of linguistic structures young learners were able to master within a particular learning period, which led to deciding against early FL learning in some contexts such as Britain. But due to the contributions made in the developments of young learners' affective factors, nowadays young learners are seen as significant sources of data which have multidimensional and dynamic characteristics. However, despite the major progresses in the studies on young learners' motivation and attitudes, a lot remains to be investigated in this area. The most recent developments in motivational research such as L2 motivational self-esteem have been connected with older learners and have not yet concerned younger learners. Therefore, research innovations and reconceptualizations are seen as necessary in this field. Since age is a key factor in FL learning, there seems to be a need for young learner motivation to be conceptualized differently from older learner motivation (Mihaljevic Djigunovic, 2012)

Since literacy skills such as reading might have a determining influence on later educational outcomes of students, they require motivation. According to Gambrell, Palmer, Codling and Mazzoni (1996), teachers have recognized motivation as the heart of many problems they encounter in teaching young learners to read. Therefore, finding ways to enhance the reading motivation of learners from the very beginning stages of language learning seems to be critical.

Different methods of phonics have long been used in teaching the letter-sound correspondences, alphabet and other early literacy skills. However, there is a paucity of research in the literature that have compared and investigated the effect of different phonics instructions on children's reading motivation. Thus, the researcher in the present study seeks to discover whether adopting a multisensory-based phonics (i.e. Jolly Phonics) for teaching early literacy skills is going to improve EFL young learners' early reading motivation. Moreover, the effect of this approach on early reading motivation of learners of different sexes will be investigated.

Jolly Phonics is a fun and child-centered approach to teaching literacy which has actions for each of the 42 letter sounds of English and teaches the five key skills for reading and writing by using a multisensory approach. These five skills include learning the letter sounds which consist of the alphabet sounds as well as diagraphs (e.g. sh, ai, etc.), learning letter formation, blending, segmenting, and tricky words that have irregular spellings and children learn them separately in this method ("Teaching Literacy with Jolly Phonics", December 2014).

# 2. Literature review

## 2.1. Eliciting data on attitudes and motivation of young language learners

According to Mihaljevic Djigunovic (2012) investigating young learners' motivation and attitudes is rather complicated. Children sometimes find it difficult to express their thoughts, perceptions and feelings. Therefore, it is of great importance that appropriate instruments and procedures are made use of. "Young learners have been observed to be a very valuable source of information on early FL learning" (Enever, 2011; Nikolov, 2002). The same as studies with older learners, questionnaires are often used to collect data on young learners' motivation and attitudes. With younger children usually smiley questionnaires are used (Szpotowicz, Mihaljević Djigunović, & Enever, 2009). They are considered as age-appropriate for young learners because they consist of visual scales that children can easily relate to. In smiley questionnaires, children choose a happy, sad or indifferent smiley according to how they feel or think about the language learning aspect in question.

Relatively lots of studies have been carried out on the attitudes and motivation of young learners as opposed to older or adult learners. Most of the research on age-related differences in motivation and attitudes suggest that generally young learners have more positive attitudes compared to older learners. But this interest tends to decline over time (e.g. Burstall, 1975; Chambers, 2000; MacIntyre et al., 2002; Nikolov, 1999). Nevertheless, findings of the Croatian longitudinal project showed that under favorable teaching conditions, high motivation and positive attitudes can be maintained over long periods of time (Mihaljevic´ Djigunovic´, 1998). On the other hand, some studies haven't discovered any significant age-related differences in motivation and attitudes of young leaners of different age groups (Lasagabaster, 2003; Williams et al., 2002). Some other studies (e.g. Julkunen & Borzova, 1996) also found mixed results.

A number of studies have been conducted to investigate the fluctuations in attitudes and motivation of young learners with different starting ages. While Muñoz (2000) and Muñoz and Tragant (2001) found no significant differences in motivation between children starting at ages eight and 11, Cenoz (2004) found that those young learners that had started learning a FL earlier had higher motivation, with larger differences existing between those that started at four years and later starters than between those that started at eight or 11 years. Tragant (2006) indicated a general pattern which implied a decline in positive attitudes around the age of 10–11.

Lopriore and Mihaljevic Djigunovic (2011) conducted a research study on the attitudinal aspects of early EFL learning. Their aim was to recognize the initial attitudes of young beginners of EFL, the developments of those attitudes from grade 1 to grade 2 and the relationship between those attitudes and other aspects of early EFL learning such a language behavior and learning achievement. A total of 91 Italian and Croatian EFL learners selected from among students with different language learning abilities (high, average and low abilities) participated in the study. The instruments used for measuring attitudes and classroom behavior included smiley questionnaires and classroom observation and interview. The findings revealed that young

learners' initial attitudes towards EFL were mostly positive and with the exception of a few students, these positive attitudes continued to grade 2.

In another study, Lopriore and Mihaljevic Djigunovic (2011) tried to explore the initial feelings, attitudes and motivation of young EFL learners and change in their attitudinal and motivational levels over three years of the primary school. Innovative methods in the form of smiley questionnaires and oral interviews were used to elicit data from children. These data triangulated with the data obtained from teachers, parents and classroom observations indicated that young learners generally start FLL with very positive attitudes and high motivation. The changes that happen in motivational levels are due to the novelty of new activities and difficulties with language learning. The overly positive self-concept of young learners turns more realistic because their awareness and ability to compare themselves with peers increases when they grow up. Moreover, as children grow their individual learner characteristics associate with language achievements more.

Mihaljevic Djigunovic (2012) looked into young FL learners' motivation under two different sets of learning conditions. She intended to see whether young learners' motivation and attitudes for learning English would be significantly different in highly favorable and unfavorable teaching settings. She concluded that young learners who learned English under very favorable conditions (appropriately trained teacher, intensive classes, small groups) viewed English as a favorite school subject more frequently and enjoyed age-appropriate class activities (playing) more compared to learners who were exposed to formal learning under less favorable conditions. Therefore, she claims that good conditions of learning should be secured at the very start of FL learning. The first contact with the FL may be decisive for the young learner's attitudes and motivation for the rest of their life (Mihaljevic Djigunovic, 2012).

#### 2.2. Children's agency

"The field of SLA has been traditionally dominated by studies that explored children's second language performances from an adult perspective, using tests and tasks without involving children more actively in the process of research" (Pinter, 2012: 108). Until recently researchers when investigating children's lives and aspects of childhood have been inclined to ask adult respondents such as teachers and parents to give reports rather than children themselves (Scott, 2000). These inclinations may have been based on the belief that children are not as reliable sources of information as adults are. However, there's been increasing evidence indicating that children themselves are the best sources of information as far as issues pertinent to them are concerned.

Following the declaration of children's rights by the United Nations Convention on the Rights of the Child in article 12(1989) and the British Psychological Society's Ethical Code's shift from 'subjects' to participants in the 1991 edition, a growing awareness has been fostered to give children a more active participation in the research studies which are conducted on them and in decisions which affect them (Pinter, 2012; Woodhead & Faulkner, 2000).

Davie (1993) in his paper 'Listen to the child: a time for change', argued that children's perspectives should be taken into consideration in areas of psychological work especially the projects concerned with issues that affect children's lives. Davie's claim was also directed at academic researchers to refine their methods of data elicitation from children in order to empathize with children's experience, understand their beliefs and respect their concerns (Woodhead and Faulkner, 2000). Pinter (2012) as well mentioned that traditional questionnaires and interviews to investigate children's opinions and views are not usually very well suited to

their needs. These assumptions have resulted in the development of innovative methods such as 'participatory' (e.g. Nagy,2009 and O'Kane,2000) and 'visual' methods (e.g. Johnson, 2008) which can be used to elicit insights from children of all ages and compensate for young learners' restricted linguistic abilities to express themselves.

#### 2.3. Literacy Motivation

Literacy motivation is a multifaceted and complex entity. As the experts in the field argue, motivation cannot be reduced to a single factor which people have or do not have. The conceptual framework of literacy motivation is founded on renowned motivation constructs of current motivation theories. Some of these constructs are concerned with individual's beliefs, values, and goals for achievement and some others are related to the intrinsic and extrinsic motivation and social motivation. These elements are pivotal to literacy motivation (Guthrie& Wigfield, 1997; Wigfield, 2000). Thus, literacy motivation must be perceived with regard to goals or reasons for reading or writing which may be associated with different aspects such as task values, expectancies, self-efficacy, or goal orientation (Eccles & Wigfield, 2002; Guthrie et al., 2007; Mazzoni, Gambrell, & Korkeamaki, 1999). People may have different reasons, goals, and expectancies and subsequently be motivated in various ways. This multifaceted structure is clearly perceptible from authors in the field of literacy considering reading and writing motivation as multidimensional elements (Baker & Wigfield, 1999; Guthrie et al., 2009; Hornery, Craven, Yueng & Ali, 2008; Pajares & Valiante, 2001; Pitcher et al., 2007; Schutte & Malouff, 2007) and constructing instruments to identify reading and writing motivation with several dimensions, allowing a multifaceted view of these constructs (Coddington & Guthrie, 2009; Codling & Gambrell, 1997; Garcia & Caso, 2004; Hornery et al., 2008; Pajares & Valiante; Scher & Baker, 1997; Wigfield, Guthrie, & McGough, 1996).

#### 2.4. Gender Differences in Literacy Motivation

Gender is a variable that has the potential to affect motivation profiles. Various studies have investigated the effects of gender differences on motivation which have reached a degree of similitude with girls gaining higher motivational scores.

Wigfield and Guthrie (1997) found out a gender effect in fourth and fifth grade students with girls achieving higher motivation with regard to reading efficacy, importance of reading, and social reasons for reading and boys only being more motivated in terms of competition in reading. Mazzoni et al. (1999) also came up with girls showing higher reading motivational scores in first and second grades. Baker and Wigfield (1999) identified a similar effect in fifth-and sixth-grade students for nine different reading motivation dimensions, with girls displaying higher motivational scores than boys. Monteiro and Mata (2001) obtained the same results with boys gaining higher motivation only in reading competition.

The same gender effect has been observed in reading attitudes too. McKenna (2001) came up with some results in terms of reading attitudes which suggested that girls possessed more positive attitudes than boys. The author held that the reason for this gender difference may be the gender-specific beliefs about what others expect from reading. He furthermore explained that although it is not clear yet that how these cultural expectations operate, research in different cultural settings has not demonstrated any cultural specific expectations. Analogous gender effects were also discovered with regard to motivation for writing which as well were in favor of

girls achieving higher motivation in most aspects of writing (e.g. Meece & Miller, 1999; Pajares, Miller, & Johnson, 1999; and Pajares & Valiante, 1997).

## 2.5. The significance of reading motivation

Being able to read is not only important for academic success, but also as a general life skill that is necessary in a literate society (McGeown, 2013). Within the young learners' reading research field, the focus has been mostly on the development of cognitive (e.g., language, decoding) skills to sustain and ameliorate children's reading rather than a focus on increasing motivation to read. However, researchers are increasingly becoming aware of the fact that children's motivation to read is decisive for their reading development. According to McGeown (2013), children need both the skill and will in order to become successful readers. Since reading is a purposeful and effortful activity which often involves preference and perseverance, motivation is vital for children to develop their reading skills. Students' motivation in reading at a young age may have significant influence on later learning outcomes.

Many studies have investigated different aspects of young learners' reading motivation. For instance, Wigfield (1997), Baker and Wigfield (1999), Wigfield, Guthrie, Tonks and Perencevich (2004), and Hornery et al. (2008) studied the domain-specific and multidimensional characteristics of reading motivation. Others inquired into the relationship between children's attitudes and motivation for reading and their achievement and success in reading (e.g. Atkinson, 2006; Gambrell, Palmer, Codling & Mazzoni, 1996; Guthrie & Knowles, 2001; Mckenna, 2001; Mckenna &Kear, 1990; Mckenna, Kear & Ellsworth, 1995; Morgan & Fuchs, 2007; Unrau & Schlackman, 2006; Verhoven & Snow, 2001; Wang & Guthrie, 2004; and Wigfield & Guthrie, 1997). In addition, some others have studied the association of motivation with the achievements in both reading and writing (e.g. Gambrell & Gillis, 2007; Mata, 2011; Nolen, 2007; and Wilson & Trainin, 2007). However, among all the research studies in the field of literacy motivation, research on the effect of phonics (especially multisensory phonics) as a way of teaching literacy on enhancing young learners' motivation for literacy has been very scant, if any at all. Furthermore, most of the research in the area of reading and literacy motivation has been conducted in the context of English as the mother tongue of the learners rather than ESL or EFL context. In the present study, attempt has been made to observe the effect of using a multisensory-based phonics approach (i.e. Jolly Phonics) in teaching early literacy skills on EFL children's reading motivation, and this is where the present study departs from the studies conducted in the literature.

As it was mentioned earlier, the instruments and questionnaires intended to elicit data from children should make sense to them in order to make them engaged in the research process and gain reliable data. To provide some examples of the research which used this kind of visual child-friendly method for eliciting data on young learners' motivation and attitudes the studies by Mckenna & Kear (1990) and Mihaljević Djigunović (2008) can be mentioned. Mckenna & Kear (1990) made use of Garfield (the cartoon character) as the choices of their 4-point scale questionnaire. They used this reader-friendly attention-getting questionnaire to collect data on elementary students' attitudes toward recreational and academic reading. Each questionnaire item contained 4 choices from the happiest to the saddest Garfield and the participants had to choose one of the Garfields based on their feeling about that item, questioning their attitude toward one of the aspects of reading. Mihaljević Djigunović (2008) also used a 3-point smiley questionnaire containing happy, sad and indifferent smileys to obtain data on EFL young learners' attitudinal aspects of early foreign language learning.

In the present study, the researcher, inspired by the work done in the previous literature, has designed and developed a child-friendly questionnaire by using Sponge Bob (an attractive cartoon character) as the choices of its items in order to find out whether using multisensorybased phonics (Jolly Phonics) for teaching early literacy skills has any effect on enhancing young learners' early reading motivation. The study also seeks to find out whether this multisensory phonics approach affects girls' and boys' motivation differently, i.e. to see whether there is any gender difference in the evaluations of the motivation questionnaire made by girls and boys.

#### 3. Methodology

### **3.1. Research questions and hypotheses**

The present study sought to find answer to the following questions:

**1.** Does multisensory approach to teaching phonics (i.e. Jolly phonics instruction) compared to traditional phonics instruction have any significant effect on Iranian young EFL learners' reading motivation?

**2.** Is there a significant difference between the evaluations made in the early reading motivation questionnaire by girls and boys in the experimental group (i.e. the group to whom literacy was taught through Jolly Phonics)?

Based on the above research questions, the following hypotheses were formulated:

**1.** The Jolly Phonics instruction adopted for teaching phonics to children will enhance young learners' motivation in reading skills.

**2.** There isn't any significant difference between the evaluations made in the early reading motivation questionnaire by girls and boys in the experimental group (i.e. the group to whom literacy was taught through Jolly Phonics).

## **3.2.** Participants

One hundred participants (50 girls and 50 boys) ranging from 10-12 years old were selected through non-random convenience sampling from among the EFL elementary learners in Sokhansara Institute. The reason for selecting these students was that they were going to learn English for the first time. Therefore, the utilization of each of the two phonics instruction methods could be observed in teaching literacy to them.

In order to make sure that the students were homogeneous in terms of their oral language and alphabet knowledge in English (i.e. to become sure that all of them were zero beginners of English), the ones that had any familiarity with the alphabets or had studied English before in any other institute or had been homeschooled in English were recognized prior to the treatment and excluded from the study. Consequently, the permission of the head of the institute was obtained for implementing the project. Also, parents of the students were informed about the project and their consent was gained.

## 3.3. Treatment

This experimental study was conducted during an English summer course and lasted for 30 sessions. The learners were assigned to eight Starter classes (four girls' classes and four boys' classes) according to their age and their elementary education levels (zero beginners) by the institute. Two of the girls' classes were selected as the control group and the other two were chosen as the experimental group. Similarly, two of the boys' classes were considered to be the

control group and the other two were opted for the experimental group. Each class had an average number of 15 students. As a result, we had four control groups including about 50 students (approximately 25 girls and 25 boys) and four experimental groups including about 50 students (approximately 25 girls and 25 boys). The teachers who were selected for teaching the experimental classes had been trained in the Jolly Phonics workshop.

The students would attend the English classes 6 days a week. The treatment was carried out in thirty 90-minute sessions. Forty five minutes of each session was devoted to teaching literacy skills through the Jolly Phonics program and the other 45 minutes was allotted to teaching other language skills and sub skills, i.e. the simple dialogues, songs, structures and vocabulary items in the children's textbook.

The 42 main sounds of English were taught in the following order of seven groups not in the alphabetical order.

s, a, t, i, p, n
 c k, e, h, r, m, d
 g, o, u, l, f, b
 ai, j, oa, ie, ee, or
 z, w, ng, v, oo, oo
 y, x, ch, sh, th, th
 qu, ou, oi, ue, er, ar

This allows the possibility of forming very simple three-letter words from the very early stages. For example, the words *pin*, *pan*, *tip*, *sat* could be formed when the first group of sounds is taught.

Each of the above letter sounds were introduced to children via its related action, song and story. Then, the correct way of letter formation was taught with teacher showing the formation on the board. The children would follow the teacher's movement simultaneously showing the letter formation in the air and tracing the dotted letters with their finger in their pupil book or the big finger phonics books. This multisensory approach offers children movement, sight, hearing and speech to help them remember and motivates them to learn literacy skills (Jolly, 2012). After that, the teacher would teach blending and segmenting in order to aid children with reading and writing. Students were taught how to sound out the individual sounds in the words and then mixing them together to read the words. Furthermore, they learnt to listen carefully for the sounds in words by holding up a finger for each sound and then write the words. The words which have irregular spellings are referred to as tricky words in Jolly phonics method. Since these words couldn't be learnt by blending and segmenting skills, they were taught by practice, repetition and further exposure through different techniques such as word walls and mnemonics. These 5 basic literacy skills, namely learning the letter-sounds, letter formation, blending, segmenting and tricky words were all taught and revised using the flash cards, posters, games and other intriguing materials offered and provided by the Jolly Learning Ltd during the course.

# **3.4. Instruments**

At the end of the course, a 4-poin Likert scale questionnaire was administered to all the participants. This Early Reading Motivation Questionnaire (ERMQ) had 23 items in learners' mother tongue (Farsi) (See Appendix). The items of the questionnaire were derived from 2 standard questionnaires: Young Reader Motivation Questionnaire (Coddington & Guthrie, 2009) and Reading Motivation (Adapted from Jingle Jangle) (Hornery et al., 2008, Based on Jingle Jangle, Marsh et.al., 2003) and were adapted to the aims of the study. The items were in the form

of declarative statements rather than questions. Every item had 4 choices (*very much, a lot, a little, a little bit*). In addition, there was a picture of a colorful Sponge Bob on top of each choice. The participants were required to choose one of the choices according to the color of the Sponge Bob. The color of the Sponge Bob would decrease as the degree of agreement to each question declined in every choice. The Sponge Bob for the first choice (*very much*) was totally colorful, the Sponge Bob for the second choice (*a lot*) was half colorful, for the third choice (*a little*) only one third of the Sponge Bob was colored and for the fourth choice (*a little bit*) approximately one fourth of the Sponge Bob was colored. In fact, Sponge Bob was supposed to lead children through selecting the choice which was closer to their opinion or feeling about each statement.

According to Mihaljević Djigunović (2012), children sometimes find it difficult to express their thoughts, perceptions and feelings. Therefore, it is crucial that appropriate instruments and procedures be used for eliciting data on attitudes and motivation of young learners. To achieve this objective, usually smiley questionnaires are used with young learners. Since they include visual scales to which children can easily relate their idea or feeling, they are very age-appropriate for young learners. In these types of questionnaires, children choose a sad, happy or indifferent smiley according to how they think or feel about the language learning aspect in question.

Since the statements of the questionnaire in our study were not in line in terms of negativity and positivity of meaning, we couldn't use happy and sad smileys in the choices. So we decided to resort to a cartoon character, which was supposed to be the favorite for the majority of children, and we set the degree of its colorfulness as the criterion of selection for each choice.

# 3.4.1. Reliability and validity of the ERMQ

Using Cronbach's alpha, the internal consistency (reliability) of the ERMQ was estimated. The results indicated the reliability index of 0.766 for the questionnaire.

With regard to validity, the ERMQ enjoys content validity by nature because it measures the reading motivational states of the young learners, which is compatible with the objectives of the study.

Before being administered to the participants, ERMQ was given to several M.A students, Ph.D. students and university teachers of the University of Isfahan in order to be examined, evaluated and edited in terms of content and face validity. The questionnaire was subsequently qualified as being valid by the experts except a few items which were modified to meet the viewpoints of the experts.

After receiving the experts' judgment, the questionnaire was piloted with a similar group of zero beginners at the same age who were not the target participants of the study. Issues regarding the administration, the required time, clarity of the questionnaire items as well as their rubric were inspected in this pilot study. Besides, two items in the ERMQ were indicated as ambiguous for students in the pilot study. Therefore, these items were modified in order to be comprehensible to young learners.

# 3.4.2. Scoring procedures of ERMQ

Two different scoring schemes were employed for analyzing experimental and control groups' data on the ERMQ: (i) *raw scores* or *raw ratings* and (ii) *weighted scores* or *weighted ratings*. *Raw scores* were identical with the actual number assigned to each point of the 4-point Likert scale (1 = A little bit, 2 = A little, 3 = A lot, and 4 = very much). Weighted scores were

based on different weightings given to each point of the 4-point scale in the ERMQ. In order to determine the participants' weighted scores, separate scoring procedures were used for positively-loaded and negatively-loaded items. The scoring scheme for the 4-point Likert scale used in the motivation questionnaire was the following:

The scheme of weighted scores on the motivation questionnaire			
Positively-loaded items	Negatively-loaded items		
<i>Very much</i> $=$ 4	A little bit=4		
A lot = 3	A Little = 3		
A Little = 2	A $lot = 2$		
A little bit = 1	Very much = 1		

#### 4. Data analysis

Table 2

Table 1.

A set of descriptive and inferential statistics were used to answer the two research questions in this study. With regard to descriptive statistical procedures, mean and percentage analysis on the data collected from the ERM questionnaire were conducted. Concerning the inferential statistics, since the number of participants in each group was below 30, a Mann-Whitney U Test which is the non-parametric alternative to the independent-samples t-test was used to interpret the participants' answers to the questionnaire' items. The mean scores of students in responding to items in the early reading motivation questionnaire (ERMQ) administered to the learners in each group are presented in Table 2.

Descriptive statistics of the experimental and control groups						
		Ν	Minimum	Maximum	Mean	SD
Experimental	Female	25	77	90	84.16	4.12
	Male	25	80	92	87	3.20
	Total	50	77	92	85.58	3.92
Control	Female	25	57	92	78.96	7.27
	Male	25	68	90	80.16	4.96
	Total	50	57	92	79.56	6.19

The total mean score of ERMQ for students in the experimental group (Jolly Phonics group) was 85.58 and for those in the control group was 79.56. The mean score of the questionnaire for the girls of experimental and control group was respectively 84.16 and 78.96. The mean score of the questionnaire for the boys of experimental and control group was respectively 87 and 80.16. The summary of the data are also illustrated in figure 1 below:



*Figure 1.* The mean and standard deviation of the scores of girls/boys in the experimental/control group

In order to compare the mean scores in the experimental and control groups, a Man-Whitney U Test was used. Table 3 represents the Mann-Whitney U Test applied to the means:

control group			
Reading	Ν	Mean Rank	Sum of Ranks
Experimental	50	65.48	3274.00
Control	50	35.52	1776.00
Total	100		
Mann-Whitney U	501.000		
Ζ	-5.173		
Asymp. Sig. (2-tailed)	.000		

Mann-Whitney U Test on the mean scores of experimental and control group

Table 3

As it is shown in the table above, the mean score of the 50 students in the experimental group is 65.48 and the mean score of the 50 learners in the control group is 35.52. Furthermore, p=0, i.e. p<0.05 which is significant. Thus, it is concluded that there is a significant difference between the reading motivation of the students in the control and those in the experimental group. In other words, those young learners who learnt early English literacy skills through the multisensory-based phonics approach were more motivated in English reading than those who were taught literacy skills through the traditional phonics approach.

Another Mann-Whitney U Test was used to compare the mean scores of girls in each of the control and experimental groups, as shown in Table 4 below:

experimental and control group				
Reading	N	Mean Rank	Sum of Ranks	
Experimental	25	35.02	875.50	
Control	25	15.98	399.50	
Total	50			
Mann-Whitney U	74.500			
Z	-4.629			
Asymp. Sig. (2-tailed)	.000			

Table 4Mann-Whitney U Test on the mean scores of girls in theexperimental and control group

As it is demonstrated in the above table, the mean score of the 25 girls in the experimental group is 35.02 and the mean score of the girls in the control group is 15.98. The P value is 0 (p=0), i.e. p<0.05 which shows a significant difference between the mean scores of girls in the experimental and control groups.

For comparing the mean scores of boys in each of the experimental and control groups, a third Mann-Whitney U Test was run, as given in Table 5 in the following:

Table 5

Mann-Whitney U Test on the mean scores of boys in the experimental and control group				
Reading	Ν	Mean Rank	Sum of Ranks	
Experimental	25	31.42	785.50	
Control	25	19.58	489.50	
Total	50			
Mann-Whitney U	164.500			
Ζ	-2.878			
Asymp. Sig. (2-tailed)	.004			

According to the table, the mean score of the 25 boys in the experimental group is 31.42 whereas the mean score of the 25 boys in the control group is 19.58. Moreover, the p value is 0.004 (p=0.004), i.e. p<0.05 which displays a significant difference between the mean scores of the boys in the experimental and control groups.

The second research question investigated whether there was a significant difference between the evaluations made by the girls and the boys in the experimental group of the YRM questionnaire In order to answer this question, a fourth Mann-Whitney U Test was used, as given below in Table 6:

Table 6Mann-Whitney U Test on the scores of boys and girls in theexperimental group

Reading- Experimental	Ν	Mean Rank	Sum of Ranks
Boy	25	30.40	760.00
Girl	25	20.60	515.00
Total	50		
Mann-Whitney U	190.000		
Ζ	-2.386		
Asymp. Sig. (2-tailed)	.017		

As it is displayed in the table above, the mean score of the 25 boys in the experimental group is 30.4 while the mean score of girls is 20.6. Besides, the P value is 0.017 (p=0.017), i.e. p<0.05, which shows a significant difference between the scores of girls and boys in the experimental group. Therefore, it can be concluded that by using the Jolly Phonics method for teaching English literacy, boys became more motivated to learn early English reading skills than girls.

## 5. Discussion and conclusion

The primary purpose of this research study was to inquire into possible effects of adopting a multisensory-based phonics approach (i.e. Jolly Phonics) in teaching early literacy skills on children's motivation for reading in early stages. It, also, intended to find out whether this approach to teaching phonics affects girls' and boys' reading motivation differently. The results of data analysis for the ERMQ indicated that jolly phonics method contributed to enhancing young learners' early reading motivation.

Regarding the gender differences in reading motivation, the results arrived at by analyzing the results of ERMQ suggested that the multisensory-based phonics (i.e. Jolly phonics) contributed to boys' reading motivation more than girls'. This finding opposes Baker and Wigfield (1999) who found out a gender effect in fifth and sixth-grade students for nine different reading motivation dimensions, with girls displaying higher motivational scores than boys. It also contrasts with McKenna (2001) that came up with some results in terms of reading attitudes which suggested that girls possessed more positive attitudes than boys. Moreover, as opposed to Mazzoni et al. (1999) that came up with girls showing higher reading motivational scores in first and second grades, our study discovered boys to be more motivated in reading. However, this finding is partly in agreement with Wigfield and Guthrie (1997) who concluded that boys were only more motivated in terms of competition in reading. It is as well partially in accordance with Monteiro and Mata (2001) who obtained the same results with boys gaining higher motivation only in reading competition.

The possible explanation for the overall differing outcomes of our study with regard to boys gaining higher motivational scores could be due to the multisensory and funny characteristics of Jolly phonics method. The stories, songs, and actions in this method are very child-friendly and have originally been devised in line with the preferences and favorites of 3-6 year old native children in the first place. Thus, the younger the learners, the more they will enjoy the funny techniques introduced in Jolly Phonics. The participants of our study were 10-12 year olds (fourth, fifth and sixth graders of primary school) with the mean age of eleven. Whereas, girls usually reach the puberty at the age of 11, boys commonly enter puberty at least at the age of 14. Accordingly, in the age of 10-12, boys still have the immature and child-like characteristics of a child or a young person. Therefore, while boys of this age respond to the child-like actions and activities offered by Jolly phonics with more enthusiasm, girls may tend to see these actions as childish and not appropriate for their age, and hence be less motivated to connect with the method.

To sum up, the findings of the present study advocated that the multisensory method of Jolly Phonics contributed to higher reading motivation of students in early stages of learning English literacy. Undoubtedly, the reason for achieving these results is that the students in the control group were taught English literacy through the rote traditional phonics, which lacks any form of motivation for children as the knowledge acquired through rote learning cannot be easily applicable to new (unseen) words. However, the learners in the experimental group learnt literacy skills via Jolly Phonics which results in systematic literacy learning by presenting a multisensory child-centered approach for teaching the key skills for reading and writing.

The results of this study may add to the inadequate body of research conducted on young learners' motivational profiles in the EFL context specifically in the domain of literacy learning. The findings might be helpful for all young beginners of English who have turned desperate by the dull and rote phonics methods for learning literacy skills and are therefore looking for ways to overcome the difficulties they encounter with forming and writing letters and blending the sounds together to read and write new words, especially the tricky words which have irregular spellings. Furthermore, the results may be useful for the teachers and even parents of the young learners who are dealing with the first steps of learning literacy in English. The findings can also be beneficial for the language institutes and schools to enhance their students' satisfaction by offering a fun and motivating method for teaching English literacy skills to the children. Teacher trainers and curriculum designers may also benefit from the results.

One of the limitations of this study was the short period of time that we had for running the treatment. It takes at least about a school year (about 9 months) for the Jolly Phonics program to reveal its beneficial effects on literacy skills of students (S. Darby, personal communication, March 15, 2014). But due to the time limitations that we had, we were constrained to measure the reading motivation of students only on word level. Therefore, further research in the form of longitudinal studies is required in order to assess the young learners' reading motivation over a longer period of time and on sentential and textual level.

Furthermore, the participants of our study were 10-12 year-old students. Thus, the findings cannot be generalized to learners of younger age groups. Subsequently, replicating the study with a group of younger age group can be suggested.

In addition to that, in this study the motivational profiles of students were evaluated solely with regard to the reading skills. Hence, there is a need for further research studies to investigate into the effect of multisensory-based phonics on other language skills such as writing or the attitudes and motivation of children towards learning English in general.

Moreover, to estimate the reading motivation of students, we used a 4-point Likert scale questionnaire and we made use of the cartoon character "Sponge Bob" as its choices for visually attracting and sustaining children's involvement in the process of research. But, there still remains the need for devising alternative assessment techniques such as open-ended questionnaires similar to Nagy's study (2009) in which more participatory techniques can be engaged.

Last but not least, as for the control group, the rote traditional phonics was adopted to teach English literacy. Since comparing Jolly phonics with other phonics method such as analytic

phonics may lead to different results, further research can apply other phonics methods to be compared with the effect of multisensory-based phonics on children's motivation.

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# 7. Appendix

Age: \_\_\_\_ Girl() Boy()

Please read the following questions carefully and choose the best answer which you think suits your idea according to the color of Sponge Bob.

- Very much
   A lot
   A lot
   A little
   A little bit
- 1. I can work out hard English words by myself without getting extra help.

2. I can read the English words of my course book very well.



3. I can even read English words that I haven't seen in my course book before.



4. When reading English words, I can work out the sounds in words very well.



6. I'm sure that I'll be able to read English story books in a near future.

A lot

Very much



A little

A little bit

20

A little bit

A little bit

A little bit

Very much A lot A little 8. Playing word games in the class is fun for me.

A lot

7. I like to practice reading English words at home too.

9. I have difficulty reading English words.

Very much



A little

11. I need extra help when reading English words.



12. I like my teacher's method of teaching English letter sounds.



13. I think the method my teacher uses to teach reading English words is very interesting and helpful.



14. When I see my improvement in reading English words, I feel clever.



15. I really enjoy it when I can read English words by sounding out the letter sounds all by myself.



17. I learn better when I read English words with my friends putting our ideas together.



18. I enjoy helping my classmates read English words.



- Very much A lot A little bit
- 19. I like to do better in reading English words than other students.

- 20. I learn better when I try to read English words better than my friends.
  - Very much O







21. I like to volunteer to read English words in the class.



22. I feel that my classmates are better at reading English words than me.



23. When reading English words in the class, I feel stressed out.

