

Using Multisensory Approach in Enhancing EFL Reading Fluency Skills of Primary Stage Students

A Thesis Submitted in Fulfillment of the Requirements
for the M.ED. Degree in Curriculum and Instruction
(Teaching English as a Foreign Language)

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(*) A research extracted from a master thesis to complete the requirements for obtaining a master degree in education, majoring in English education.

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ABSTRACT

The current study aimed at investigating the effect of using the multisensory approach on the development of EFL reading fluency skills of primary stage students. It adopted the pre/post – test quasi-experimental design. The participants were 72 fifth grade primary stage students at New Aswan Distinct Official Language School, Aswan Administration, Aswan Governorate. They were assigned to two groups; an experimental group (n=36) and a control group (n=36).The researcher designed an EFL Reading Fluency skills test and a rubric. The experimental group received instruction on EFL Reading Fluency skills lessons by using the multisensory approach, while the control group was taught the same EFL Reading Fluency skills lessons by following steps in the teacher's guide. The experiment lasted for four weeks during the second term of the school year 2023/2024.The statistical analysis of the obtained data revealed that using multisensory approach developed EFL Reading Fluency skills of the fifth-grade primary stage students.

Key Words: *The Multisensory Approach, EFL Reading Fluency skills, Fifth grade stage Students*

مستخلص الدراسة

هدفت الدراسة الحالية الى فحص فاعلية مدخل الحواس المتعددة على تنمية مهارات الطلاقة فى القراءة فى اللغة الانجليزية لدى طلاب المرحلة الابتدائية. تمثلت مجموعة الدراسة من (٧٢) طالب وطالبة من طلاب الصف الخامس الابتدائى فى مدرسة أسوان الجديدة المتميزة لغات، وتم تقسيمهم عشوائيا الى مجموعتين، (٣٦) كمجموعة تجريبية و (٣٦) كمجموعة ضابطة. استخدمت الدراسة الحالية المنهج شبه التجريبي . وتم تصميم اختبار مهارات الطلاقة فى القراءة. ودرست المجموعة التجريبية الوحدة المصوغة باستخدام مدخل الحواس المتعددة، بينما درست المجموعة الضابطة الوحدة المختارة باتباع خطوات تدريسيها المتاحة فى دليل المعلم لمادة اللغة الانجليزية للصف الخامس الابتدائى. وبعد الانتهاء من التجربة التى استمرت لمدة اربعة أسابيع بالفصل الدراسى الثانى ٢٠٢٣/٢٠٢٤، وقد تم تطبيق الاختبار قبلها وبعديا على مجموعتى البحث، وبعد رصد النتائج وتحليلها احصائيا، جاءت النتائج مؤكدة على فاعلية مدخل الحواس المتعددة فى تنمية مهارات الفهم القرائى فى اللغة الانجليزية للمجموعة التجريبية.

الكلمات المفتاحية: مدخل الحواس المتعددة - مهارات طلاقة القراءة باللغة الانجليزية كلغة أجنبية- طلاب الصف الخامس الابتدائى

Introduction and Review of Literature

Reading Fluency skills are considered very important for English language learners. So, the researcher attempted to use Multisensory Approach as important method for developing EFL reading fluency skills. The Approach is performed with tasks, strategies and activities.

1.1 Definition of Multisensory Approach:

Multisensory approach entails the use of our senses. It focuses chiefly on the use of visual, auditory, and kinesthetic-tactile elements. It gives extra approaches for grasp new information, extra approaches to have in mind it and extra methods to recall it later.

Multisensory Approach is concurrently visual, auditory, and kinesthetic-tactile to decorate reminiscence and learning. Links are constantly made between the visible (what is seen), auditory (what we hear), and kinesthetic-tactile (what is feel) pathways in getting to know to study and spell .It ability getting to known by means of many senses in which instructors need to rent human senses (sight, hearing, smell, style and touch) as feasible in the lecture room things to do (Nijakowska, 2010).

The multisensory is additionally acknowledged as the Orton Gillingham (O&G) approach. The intention of this strategy is to instruct college students to study thru the use of extraordinary senses. According to Davis (2011), Orton believes that college students are in a position to research higher via remembering the letters if they are allowed to see, pronounce, and write the letters. Davis (2011) additionally delivered that the first one to carry the thinking of mixing sounds collectively to study a new phrase was once Orton (Davis, 2011).

1.2 Importance of Multisensory Approach:

Using the same teaching strategy is not going to help every individual student. Multisensory learning techniques are designed to consider that every child is different.

To apprehend why multisensory method is one of the most high-quality pupil engagement strategies, it is vital to recognize how our minds work. The human genius has developed to study and improve in a multisensory environment. According to the total talent gaining knowledge of theory, all talent features are interconnected for this reason (Kast et al., 2007).

For older grades, multisensory things to do can additionally assist educate extra complex studying capabilities like fundamental questioning or superior analyzing comprehension. It is possible, for example, to take turns studying pages from a novel or textbook aloud as a classification to have interaction with their auditory and visible senses. Even little things to do that contain more than one sense can train college students to use their complete Genius whilst analyzing or writing (Colonius, 2012).

With the understanding that the brain uses of the five basic senses to obtain perception on the world, it is unsurprising that utilizing a couple of senses will increase the probability of knowledge absorption. In its simplest form, the theory behind multisensory schooling is to grant every child the advantage of lessons taught through more than one sense that would expand the possibility of the child absorbing the material. In extra complicated terms, instruction concentrated on more than one senses stimulates extra neural pathways inside the brain (Christie, 2000).

1.3 Multisensory Approach and Visual learning in the Classroom

According to brain research, the brain can register 36,000 visible photographs per hour. With this information, it is unsurprising that visible aids can beautify studying – specifically when the relationship between interest and the visible gadget are compared. When the eyes consumption information, it is dispatched from the eyes to the thalamus, and up to the visible cortex in the brain. Feedback returns from the visible cortex thru the thalamus and to the eyes. This comment is the mechanism that keeps interest. Therefore, if the eyes are receiving a low degree of stimulation, such as observing a motionless lecturer, it will be tougher to pay attention (Jensen, 1998).

Based on this knowledge, Wilmes et al. (2008) revealed that instructors go round the lecture room to expand and limit distance from students. Additionally, with extra than thirty awesome visible areas in the talent for visible stimulations such as color, movement, hue, and depth, it is pretty apparent why Wilmes et al. (2008) additionally suggested the use of visible shows to exhibit content, color-code materials, and flip off the lights for a few moments to supply college students a risk to internalize the fabric they learn (Wilmes et al., 2008).

It is believed that a wealthy lecture room – one that is full of visible stimulations such as posters, mobiles, maps, pictures, and image organizers – will influence scholar getting to know at 22 some level. In fact, one learns about researched restoration instances of sufferers in a hospital. The sufferers positioned in a room with a view had a quicker healing time than these sufferers who had a brick wall for a view. It used to be concluded that the stimulation feeds the talent (Quirk, & Beem, 2012).

Multisensory Approach and Movement and Tactile Learning in the Classroom

Movement and Tactile have a robust correlation to improve learning in general and Reading comprehension specially. For instance, one learn about found that cardio exercising improves cognitive functioning – specially perception and retention. The cognitive advantages of movement do no longer give up there. Rolling, rocking, crawling, tumbling, and matching are believed to create vast beneficial properties in interest and reading comprehension in the course of existence. The significant instructional effects of movement can influence all learners (Spratt, Pulverness, & Williams, 2011).

Research has additionally determined that students who analyze kinesthetically will be in a position to remember the actions of the physique and use this as a bridge to make connections to the records they have learned. Research also discovered bodily pastime assists college students who may additionally in any other case have hassle concentrating, sitting still, and paying interest in class. This is due to the fact it approves college students a time to wind down and loosen up (Shams &Seitz,2008).

Movement can additionally have an effect on academic performance. For instance, students realized language arts standards thru dance activities. Students who had been worried in these things to do boosted their analyzing rankings with the aid of 13% in six months; whereas district-wide scholar analyzing ratings dropped by way of 2%. Another find out about located that youth who spend a greater hour a day in gymnasium category carried out drastically higher on checks than their peer counterparts who did not exercise. Exercise has been demonstrated to have a range of tutorial advantages for students.

One such correlation between workout and lecturers has been located in talent research. The- adrenaline-no adrenaline response of the physique and fast healing from bodily workout absolutely trains the physique to reply to challenges greater shortly (Matos , & Bessa , 2015).

This will help students to end up quicker problem-solvers. Aside from the instructional benefits, motion can additionally increase children's attitudes towards (Jensen, 1998). In a cross-cultural study, researchers determined that students who skilled motion in the lecture room said a increased experience of pleasure whilst learning. Movement has additionally been linked to an expand in students' self-esteem, emotional expression and self-regulation, and social feature (Mason & Goldstein, 2019).

The Multisensory approach doesn't definitely imply you have students use pictures, exhibit video, or have them pass while they are working. The key is to use two or extra senses at the equal time. So, something like tracing and pronouncing the sound at the equal time is multisensory, whereas tracing letters is not multisensory.

Definition of EFL reading fluency

Reading fluency is one of the basic reading skills. Oral reading fluency has an undeniably crucial role in reading achievement. Experimental studies conducted recently verify that oral reading fluency plays a key role for successful literacy (Chard, Vaughn, & Tyler, 2002; Kuhn & Stahl, 2003; National Reading Panel [NRP], 2000; Rasinski & Hoffman, 2003).

Reading fluency is defined as the skill of reading a text fast, accurate and with an appropriate expression (NICHD, 2000). Rasinski (2004) noticed that comprehension should be included into this definition. A reader with fluent reading makes reading

effortless by using appropriate meaning units and immediately recognizes words. As the students with fluent reading make an automatic reading, they know how to associate words quickly in order to comprehend text (Tankersley, 2003).

According to Topping (2006), there are a number of reasons for difference in reading fluency between students. These differences are listed as word decoding processing, vocabulary level which is obtained in family and social environment (sight word vocabulary), decoding rate of unfamiliar words, usage of context skill which helps decoding words, determining among the possible meanings of a word, speed related creating holistic meaning, student's priority of fluent reading over accurate reading depending on situation. Oral reading fluency has three main components. This word decoding accuracy, automaticity of word recognition and prosody (Hudson, Lane & Pullen, 2005; Penner-Wilger, 2008).

Prosody is defined as reading skill which includes reading smoothly with appropriate expression and meaning units. There will be no more detailed explanation about prosody which is left out of scope of this study.

Word decoding is defined as the skill of producing accurate phonological representation of each word. Sight-word vocabulary of readers and challenging reading processes which force them to resort to word recognition strategies are related to accurate word recognition skill. Strong understanding of the alphabetic principle, sound association skill, the ability to use other cues to the identity of words in text, in other words they are establishing necessary skills for word recognition (Torgesen & Hudson, 2006). Accurate word decoding is a basic competence for automatization which is the next component of fluent reading (Penner-Wilger, 2008).

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Importance of EFL Reading Fluency Skills

Reading fluency is often mentioned in international articles as an important indicator for the detection and diagnosis of reading difficulties (Fletcher et al., 2007). While at the same time it is recognized as the connection of basic reading skills with comprehension, which is the purpose of reading (NRP, 2000). This established relationship between fluency and comprehension is not fixed, as it seems to differ depending on the level of development of fluency and the student's grade of study (Rasinski et al., 2017) and the way it is evaluated (Kuhn et al., 2010; Miller & Smith, 1990).

Fluency is mainly associated with oral reading, since it is characterized by accuracy, speed and prosody (Protopapas & Skaloubakas, 2008). The way of assessing oral fluency that has prevailed so far for all school grades is the oral reading of a text or a list of words and/or pseudowords for one minute, counting the correctly read words in relation to the specific time unit (Deeney, 2010).

The assessment of reading fluency is carried out mainly in the first grades of primary school, with the aim of detecting and

diagnosing Special Learning Difficulties (SLD) and consequently direct, individualized intervention. Fluency, however, does not stop developing and is consolidated exclusively in the first grades of primary school, as difficulties continue in the next school grades up to and including higher education (Rasinski et al., 2017). In addition, the assessment of oral reading requires a lot of time and is carried out individually (Denton et al., 2011).

Reading fluency is one of the defining characteristics of good reading, and a lack of fluency is a common characteristic of poor readers. Differences in reading fluency not only distinguish good readers from poor, but a lack of reading fluency is also a reliable predictor of reading comprehension problems (Hudson, Lane, & Pullen, 2005).

Most children who are poor readers in elementary school experience difficulty acquiring the skills necessary to decode and comprehend words in print accurately. The most compelling reason to focus instructional efforts on students becoming fluent readers is the strong correlation between reading fluency and reading comprehension (Kame & Simmons, 2001; Allington, 1983; Torgesen, 1998). There is an extensive body of research establishing measures of oral reading fluency as valid and reliable predictors of important reading outcomes on high stakes assessments (Good, Simmons, & Kame, 2001).

Problem of the Research

The researcher works as an English as a Foreign Language (EFL) teacher in Aswan Governorate. She observed that most fifth grade primary stage students had weakness in EFL Reading Fluency skills. They had problems in reading fluently text or a story, grouping words together to help with meaning, and other problems which affect their level in EFL Reading Fluency skills.

To make sure that the problem of reading fluency skills is a real one, the researcher interviewed 9 fifth grade primary stage teachers. All of them confirmed that they have problems in EFL Reading Fluency skills which were represented in their weakness in reading texts and stories, their low marks in EFL Reading Fluency questions in exams, and many other problems in EFL Reading Fluency skills.

Results revealed that EFL Reading Fluency skills were difficult for students even they were good at decoding, spelling and reading. Because of these problems and the importance of EFL Reading Fluency skills, students were in a real need to enhance their EFL Reading Fluency skills. The researcher would try to investigate the effect of a multisensory approach on developing EFL Reading Fluency of the fifth grade primary stage students.

Questions of the Research

The research attempted to answer the following questions:

- What are the EFL reading Fluency skills necessary for the fifth grade primary stage students?
- What are the features of the experimental unit “Homes in Egypt” which is designed according to the multisensory approach for the fifth grade primary stage students?
- What is the effect of using multisensory approach on EFL reading Fluency skills of the experimental group?

Hypotheses of the Research

- 1- There is a statistically significant difference between the mean scores of the experimental and control groups in the post administration test of the fluency reading in favor of the experimental group.

- 2- There is a statistically significant difference between the mean score of the experimental and control groups in the pre- and post-administrations of the reading fluency test in favor of the post administration.

Method

Design of the Research

The present study followed the pre-, post- test quasi-experimental design two groups. It determined the effect of using the multisensory approach on developing the EFL reading fluency skills of the fifth grade primary stage student. The researcher tested the two groups by using the pre EFL reading fluency test for equivalence in their EFL reading fluency skills before carrying out the experiment.

The researcher taught both the experimental group and the control group. They were both taught the same unit with the same lessons. The experimental group was taught how to apply the steps of the multisensory approach in studying the experimental unit designed by the researcher .The control group received for the same EFL reading fluency lessons using steps provided in the teacher's guide.

Variables of the Research

The independent variable in the present study is the multisensory approach, whereas the dependent variable is reading comprehension skills of fifth grade primary stage students.

Participants

The participants of the present study were 72 fifth grade primary stage students at “New Aswan Distinct Official Language School”, Aswan Administration, Aswan Governorate. They were enrolled in the school year 2022-2023.

The Participants formed two classrooms from the list of classrooms of one teacher. The two classrooms were randomly selected and distributed into two groups. 36 students in the experimental group and 36 students in the control group.

The students' age in the two groups was nearly the same. They had the same linguistic background as they have been studying English for the same numbers of years. The two groups had no experience with learning and studying reading comprehension by using the multisensory approach before conducting the experiment. Thus, the participants of the study constituted a homogenous group.

Research Findings

Results Related to the First Hypothesis

In order to verify the validity of the first hypothesis of the present study, which stated that there is a statistically significant difference between the mean scores of the experimental and control groups in the post administration test of the fluency reading in favor of the experimental group. The t-test was used to compare the difference in the mean scores of the experimental group and the control group on the post- administration.

Table 1:

t-test Results of the Pre- Test Comparing the Experimental and Control Groups Mean Scores in EFL Reading Fluency Sub-skills Differences between the Experimental and Control Groups.

Group	Number of Students	Mean Score	Standard Deviation	t- Value	Degree Of Freedom	Sig.
Experimental	36	13.40	1.27	0.83	70	.4092
Control	36	13.70	1.29			

The results of Table 4.1 showed that the mean score of the experimental group on the post- administration of the reading fluency was 20.42 with a standard deviation of 1.9 while the mean score of the control group on the post- administration was 16.42 with a standard deviation of 1.7 .This result revealed that the difference in the mean scores between the experimental group and the control group on the post- administration was statistically significant ($t= 9.45, p>0.01$) in favor of the experimental group. Thus, the development of the reading fluency of the experimental group was due to the training they received by using the multisensory approach.

Based on the above result, " There is a statistically significant difference between the mean scores of the experimental and control groups in the post administration test of the fluency reading in favor of the experimental group." Thus, the first hypothesis of the study was verified.

Results Related to the Second Hypothesis

The researcher used the t-test to verify the second hypothesis of the present study which stated that there is a statistically significant difference between the mean score of the experimental and control groups in the pre- and post- test of the reading fluency test in favor of the post administration.

Table 2:

T-test results Differences between the Experimental Group and the Control Group in the Post- Test

Group	Number Of Students	Mean Score	Standard Deviation	t-test Value	D.F	Significance
Experimental	36	20.42	1.9	9.45	70	0.001
Control	36	16.42	1.7			

The result of Table 4.2 showed that the mean score of the experimental group on the pre- reading fluency was 12.17 with a standard deviation of 2.11, while the mean score of the experimental group on the post- reading fluency test was 20.42 with a standard deviation of 2.44. This result revealed that the difference in the mean score of the experimental group between the pre- and post-test was statistically significant ($t = 7.790$, $p > 0.01$). Thus, the development of reading comprehension skills of the experimental group was due to the training which they received by using the multisensory approach.

Based on the above finding, the second hypothesis of the present study which stated that there is a statistically significant difference between the mean score of the experimental and control groups in the pre- and post- test of the reading fluency test in favor of the post test was accepted.

Discussion of the Study Results

The previous statistical analysis was carried out to answer the present study questions and to verify its hypotheses and to investigate the effect of the multisensory approach on the development of the reading comprehension skills of the experimental group.

In the present study, the researcher used the multisensory approach in teaching the modified reading fluency lessons to the experimental group in order to develop their reading fluency skills. The researcher used different multisensory activities to take into account all students' modalities which were as follows: auditory, kinesthetic, visual and tactile and which made the reading lesson more effective and interesting. The students were active participants in their learning while they were practicing the multisensory activities.

At the beginning, the researcher noticed that some students were afraid of answering the questions wrong, but the researcher tried to calm them down by clarifying the instructions very well and helping them do the activity and answer all the questions.

By the end of the experiment, the researcher asked the students about using the multisensory approach in reading fluency lessons; they showed their enjoyment with this approach and they expressed their aspiration to apply it to the entire curriculum.

The results of the present study were encouraging. They revealed that the multisensory approach led to a remarkable development in the reading fluency skills of the experimental group.

Conclusions of the Research

Based on the study, the following conclusions were made:

- The multisensory approach proved to be effective in developing the reading fluency of the experimental group .It provided the experimental group with a stress free environment that made them relaxed.
- The results of the present study proved that teaching lessons appealing to multiple senses of primary stage students like visual, auditory, and kinesethic is an effective method of teaching and learning reading fluency.
- When the students were involved in the learning process, the understanding of the information was higher and also the retention. Students can retain information in a much better way as compared to the normal ways.
- The multisensory approach enabled the teacher to identify the appropriate educational tools, which contain drawings, colors, prominent maps, environmental materials, films, audio media,

graphs and mental maps, where the student uses multiple senses in learning to facilitate learning.

- The learning process using the multisensory approach is more effective and efficient than teaching in the traditional way in the development of reading fluency among students.

Recommendations

In the light of the study results and observations, the following recommendations have been formulated:

- EFL teachers of the primary stage should develop their students' reading fluency by using the multisensory approach.
- EFL teachers of the primary stage should be trained to be aware of using the multisensory approach in developing reading fluency to apply it effectively in classrooms.
- Students should be encouraged to engage in the learning process to gain more confidence.
- Courses for English teachers should be held in general during the service in the training Department of the directors of education on how to use and apply the entrance of the multisensory approach inside the classrooms.
- Taking advantage of the Teacher's Guide prepared according to the multisensory approach in preparing a teacher's guide for the rest of the educational materials.
- EFL supervisors should draw EFL teachers' attention of the importance of using the multisensory approach in teaching reading comprehension skills to primary stage students.

Suggestions for further Research

Based on the present study, the researcher suggested conducting more studies such as:

- A study could be designed on applying multisensory approach to the preparatory stage with a larger sample size than the sample used in this research to make sure of its effectiveness.
- A study could be conducted on using multisensory approach in teaching reading fluency for pupils with learning difficulties.
- A study could be carried out on using multisensory approach in digital learning.
- A study could be conducted on using multisensory approach for developing other skills such as: writing, listening and speaking.
- A study could be designed on using multisensory approach with higher level skills.

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