The Effect of the Systemic Approach on Developing
The Second Preparatory Stage Students' EFL Reading Skills

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Abstract

This research aimed at investigating the effect of the systemic approach on developing the second preparatory grade students at Temai AL-Amdid Preparatory School. The sample (N=45) consisted of second preparatory grade students, who were assigned into two groups; a control group taught traditionally while the other group was exposed to the system approach during the academic year 2020/2021. The instrument used in the research was an EFL reading skills test. Results found statistical significant difference among mean estimates of both groups, indicating effect of the systemic approach on the development of the students' EFL reading skills who were exposed to the systemic approach procedures.

Key Words: Reading skill, Systemic Approach.

Introduction

Language learning is really one of the most important aspects of the educational process. The close relationship between language and reading achievement is usually readily acknowledged. It seems axiomatic that reading comprehension is directly dependent on knowledge of the meaning of words and the ability to understand sentence structure. Learning language concerns itself with meanings. Perhaps, human being is basically concerned with meanings and use language as their tool to grasp, to comprehend, and to share meanings. (Dabbour, 2001, p.4).
Language is learned to express feelings and communicate with others. During early speech and language development, learning skills is important to the development of literacy. Literacy is a person ability to read and write. Reading and writing are important to help function in school, on job, and in society. They often perform poorly in school, have problems reading, and then have difficulty understanding and expressing language. Adults may also have literacy problems. Some adults continue to struggle with reading and writing from childhood. Others have trouble reading and writing after a stroke or brain injury. (Black, 2011, p10).

Reading is a good device to increase systematic knowledge (syntactic and morphological) as well as schematic knowledge (encyclopedia, socio-cultural, topic and genre). Intensive reading is useful in the language to analyze grammatical features, to learn how discourse makers are used to connect parts of text, and to infer the meanings of new words and lexical items relying on the context. Teachers should become aware that reading is useful to their students only when this activity involves tasks that are realistic and relevant to students' lives (Brooks, 2000, p.34).

Over the last decades, cognitive scientists have energetically investigated the extent to which such dimensions of background knowledge and responsiveness might explain individual differences in reading proficiency. As expected, children do contrast along such dimensions, both with each other – and with the demands of their texts (Ali, 2007, p67). In addition, instructional support of such knowledge and strategies generally does result in increases in the productivity of their reading (Pattisohn, 2006)
Yet, research has also shown that as students' reading experience grows, these sorts of capabilities tend to grow alongside. That is, to the extent that students do read, they generally do learn new words, new meaning, new linguistics structures, and new modes of thought in course (Morgan & Kutieleh, 2007, p56).

Ali, (20011, p30) mentioned that, "students in the primary grades learn to recognize and decode printed words, developing the skills that are the foundations for independent reading. They discover the alphabetical principle (sound- symbol match) and learn to use it in figuring out new words. They build a stock of sight words that helps them to read quickly and accurately with comprehension. Students acquire vocabulary through exposure to rich language situations, such as reading books and other texts and conversing with adults and peers. They use context clues, as well as direct explanations provided by others, to gain new words. They learn to apply word analysis skills to build and extend their own vocabulary".

As students progress through the grades, they become more proficient in applying their knowledge of words (origins, parts, relationships, meanings) to acquire specialized vocabulary that aids comprehension.

Teaching English and specially reading as a part of teaching and learning process creatively would be reflected on students' ability successfully. So, regarding what Cline (2002, p20) and King (2006, P6) suggest, the researcher of the present research finds out that the skills of comprehension, phonics, identifying vocabulary, spelling and fluency are essential to provide students with to develop their reading skills.
So the research will adapt the following model of reading skills:

![Reading Skills Diagram]

*Figure (1) Reading skills. Cline, Johnston and King (2006, P.6).*

**Phonemic awareness**

Phonemic awareness is the ability to listen to, identify, and manipulate the individual sounds – phonemic in spoken words. Phonemic awareness instruction strengthens students' ability to read words, which improves reading comprehension. Systematic phonics at the very beginning tends to produce generally better reading and spelling achievement than intrinsic phonics (phonics taught more gradually in the context of meaningful reading). Phonemic awareness deals with the structures of sounds and words. It is the understanding that words are made up of sounds which can be assembled in different ways to make different words. Once a child has phonemic awareness, he is aware that sounds are like building...
blocks that can be used to build all the different words (Graves Watts, 2003; Hamer, 2007& Hayati, 2009).

**Phonics**

Phonics is the understanding of how letters combine to make words. Phonics curriculum usually starts with teaching letters, slowly creating a working knowledge of the alphabet. Children learn the sounds of each letter by associating it with the word that starts with that sound. Phonics skills grow through reading activities, and students learn to distinguish between vowels and consonants and understand letter combinations such as blends and digraphs (Mayer, 2003&Mohamed, 2009).

**Fluency**

Al-Tamimy and Munir (2008) identified that fluency is the ability to read a text accurately and quickly. Helping children develop their fluency will improve their oral reading skills and allow them to read aloud with expression. Fluency is the bridge between word identification and comprehension. Fluent readers focus their attention on text meaning rather than decoding words. Helping students in recognizing the importance of punctuation marks and their uses will improve fluency. Developing fluency is essential in building text comprehension and oral language skills. The National reading Panel (20009) identified fluency as one of the five major components of reading that teachers must include in their instruction. According to the National Panel fluency is reading text with speed, accuracy, and expression.
Developing Vocabulary

Developing Vocabulary is essential for reading comprehension. Readers cannot make meaning of what they are reading without knowing what most of the words mean (Arani, 2004, p56). Children should learn the meanings of new words that are not necessarily part of their oral vocabulary. Nation (200, p.43) stated that according to knowing the words under developed involves:

- Being able to recognize it when heard
- Being familiar with its written form
- Recognizing its parts and being able to relate them to its meaning.
- Knowing the particular meaning of the word
- Understanding it in a given context
- Knowing the concept behind the words which allows understanding in different contexts.
- Being able to recognize typical collocations

Teaching Comprehension

Bachman (1995) added that teaching comprehension strategies that guide students as they read and write, allow for students to be actively engaged with the text. Assessing students' prior knowledge, prediction, question generating and answering, summarization, retelling, modeling meta-cognitive strategies are all essential in building students' text comprehension. Reading in English like reading in your native language, it is not necessary to read and understand each word in English. Remember that reading skills in your native language and English are basically the same.
There are four types of reading skills used in English as follows:

1. **Skimming**: it is quickly gather the most important information, or gist, running your eyes over the text, noting important information. Use skimming to quickly get up to speed on a current business situation. It is not essential to understand each word when skimming.

2. **Scanning**: it is used to find a particular piece of information, running your eyes over the text, looking for the specific piece of information you need. Use scanning on schedules, meeting plans, etc. in order to find the specific details you requires. If you see words or phrases that you do not understand, do not worry when scanning.

3. **Extensive Reading**: Extensive reading involves learners reading texts for enjoyment and to develop general reading skills. It can be compared with intensive reading, which means reading in detail with specific learning aims and tasks. A teacher reads a short story with learners, but does not set them any tasks except to read and listen.

4. **Intensive Reading**: Intensive reading involves learners reading in detail with specific learning aims and tasks. It can be compared with extensive reading, which involves learners reading texts for enjoyment and to develop general reading skills.

The researcher thinks that Language skills learning including reading is still much more concentrated on providing students dysfunctional unsystematic bulky data. The immediate result is rote learning of language with little or no applications. Learning reading as a basic skill has become incoherent, too difficult for a student to comprehend, and internalize in a disintegrated system. A student
who learns such incoherent and disintegrated linguistic skills feel uneasy in practical situations in which they are required to use the skills they acquired. As a result of such disintegrated view held by learners, there is a need for new approaches to be used in teaching English among which the systemic approach is one example.

Systemic approach for improving reading is not new. It has been very successfully implemented for over decades, though sadly there are still many who could have benefited enormously, but have lacked the opportunity (McGee, 2005, p67).

Researchers indicated that best practices in reading education incorporate systemic approach activities geared toward children's learning styles. Systemic approach teaches reading through using Auditory (hearing) and visual (sight) pathways (Alderson, 2000, p100). This gives multiple pathways for information to reach brain. It is diagnostic as it involves constant testing and reflection on the knowledge of the student. It is important to unite the components of written language. Thus it treats sound-symbol knowledge, oral language (grammar and pronunciation). Teaching and learning in this way is an exciting journey of discovery. It is a fast paced and creative process where learning is fun since each small step is mastered and the learner is aware of what they have gained. Everyone can call himself a success. Confidence is built through growing mastery of written language. The students can see themselves as successful learners and this helps each individual learner gain independence and a great "can do" attitude (Merrow, 2001, p45).

The Systemic approach benefits those with reading problems. It has been proven to be effective for a wide range of ages and abilities,
including adults. The rationale behind a systemic approach is students with weaknesses in underlying language skills involving speech sound (phonological) and print (orthographic) processing and in building brain pathways speech with print. The brain pathways used for reading must develop to connect many brain areas and must transmit information with sufficient speed and accuracy. These students may also have difficulty rhyming words, blending sounds to make words, or segmenting words into sounds. Because of their trouble establishing associations between sounds and symbols, they also have trouble learning to recognize words automatically "by sight" or fast enough to allow comprehension. If they are not accurate with sounds or language symbols, they will have trouble forming memories for common words, even the little words in students' books. They need specialized instruction to master the alphabetic code and to form those memories (Chain, 2009, p15).

The recent research on science education supported employing the systemic approach in teaching such disciplines as mathematics. However, results from many other studies involving the system approach were in line with the earlier studies. In the field of Arabic teaching the perceived gap in research motivated interested authors to adopt the system approach in their studies on teaching language.

However already addressed by many studies, it is reasonable to ask what the systemic approach is. Primarily, the systemic approach has been developed based on Ausbel theory of meaningful verbal learning wherein experiences are presented schematically to demonstrate the connectivity, interactivity and interdependence between new and older experiences that are already stored in learner's cognitive structure (Al-Hajaya, 2012). The meaningful
learning, therefore, does not take place only as a result of accumulation of new facts with already acquired facts; rather the meaningful learning happens as a result of interaction of the new knowledge with what is already learned. In consequence, cognition should be a logical, integrated, and organized structure. This mechanism reduces effort needed for one learner to link such experiences together (Shehab, 2001).

The systemic approach also depends on the constructivist theory in which it is presumed that learning happens when new concepts and cognitions are linked with already held knowledge. Thus what the system approach makes is to shift emphasis in learning from the external (teacher-student-classroom) to internal factors. The meaningful learning will be created out of a network of interrelated concepts that facilitates concept learning, retention, and comprehension (Saudi et al, 2005). The mental processes a learner would have in learning situations such as prior knowledge, remembering, data processing, and learning styles are contributing to the meaningful learning (Al-Najdi et al, 2003).

The meaningful learning will be created out of a network of interrelated concepts that facilitates concept learning, retention, and comprehension (Moats, 2007). The mental processes a learner would have in learning situations such as prior knowledge, remembering, data processing, and learning styles are contributing to the meaningful learning (Mohammed, 2006). Systemic Approach to Teaching and Learning (SATL) is based on the same idea that phenomenon are interrelated in a system. It means that different phenomena affect each other, and at the same time, no single phenomenon can take place in isolation. Students should not learn
isolated facts (by heart), but they should connect concepts and facts in a logical context. In contrast with the usual strategy we believe it is more difficult to obtain a global view of collection of linearly arranged concepts than with the systemic representation, which stresses strong relationships among concepts (Gheith, 2007).

Fahmi & Abdussabour (2001) conducted a study aimed at identifying the effectiveness of the systemic approach in facing educational challenges in present and future at public education and university levels. Results found statistically significant differences between the system approach-based teaching method and the traditional method, and differences were in favor of participants exposed to the system approach-based instruction. The study recommended application of the system approach in the educational process in light of the larger system theory. Center for the virtual University (2001) conducted a study entitled “System Approach to Design Learning Activities on the Web” supported that the educational use of the system approach to design learning activities on the World Wide Web (Internet) saves time and produces meaningful learning. Relying on the system approach, the study proposed a 7-step strategy to design online learning activities, where (1-4) steps show how to think about the textbook and clearly identify the intended learning outcomes. However, steps (5-7) are used to link between the varied online illustrations, suggesting how a teacher should customize the numerous technological possibilities in designing a combination of effective instructional activities. Results demonstrated positive use of the system approach in designing online instructional activities which saves time and produces meaningful learning. The seven steps already indicated represented the website map that provide teachers the opportunity to think throughout the curriculum from beginning to end, and on learning by giving examples of the integration between technology and textbook.
Those steps are: setting the general instructional objectives of the textbook, linking teaching with the general textbook goals, designing proper learning sequence, building activities, involving students, using means that are suitable to the instructional activities.

Al-Said (2002) conducted a survey study for the purpose of identifying effectiveness of using the system approach in engineering education for sustainable development. The systematic electromechanical curriculum proved effectiveness of the system approach, provide competitive edge to engineers, identify skills required for the intended work, and was helpful in linking basic and applied cognitions interactively with the engineer's background knowledge. Results indicated that the system approach empowered the experimental group produce quality performance compared with their counterparts who did not practice the skills under study.

Al-Nimire’s study (2004) aimed at exploring the effect of using system approach in teaching triangulation on achievement and higher order thinking skills among the first secondary students during the 2nd semester. The sample (N=100) consisted of first secondary grade students in the Qalubiya District assigned to experimental and control groups. The experimental group administered two versions of the achievement test, and the system higher order thinking skills was administered as pretest and posttest. Results found a statistically significant differences at ($\alpha=0.05$) among both groups.

Al-Qaderi’s study (2006) aimed to identify the effect of science instruction using the holistic cognitive system approach on the developed scientific thinking skills among primary 4th grade students in comparison with the traditional method. The sample (N=160) consisted of primary 4th grade students was randomly selected with the cluster method from public schools within Al-Kora
Provincial Directorate of Education. Participants were assigned to eight classrooms, four classrooms; two for males and two for females served as experimental and four classrooms; two for males and two for females served as control groups. The experimental group was taught the Light Unit selected from the Primary 4th Textbook based on the holistic cognitive system approach, whereas the control group taught the same unit traditionally. The scientific thinking skills scale was developed which found differences in favor of the system approach-based group; whereas no such differences were found attributed to gender.

**Statement of Problem**

The problem of the present study is represented in the weakness of the English language reading skills among Egyptian second preparatory school students. This may be the lack of using new different methods and techniques in teaching reading. Therefore, there is a need to develop these skills among students. Thus, the present study is an attempt to develop EFL reading skills of the preparatory stage students using the systemic approach.

**Questions of the study**

The problem addressed by this study can be specifically stated in the following:

What is the effect of the systemic approach on developing the EFL reading skills of the Second year preparatory students?

From this main question, the following subquestions were derived:

1- What are the EFL Reading Skills required for Second preparatory students?
2- What's the proposed framework for using the Systemic Approach to develop the EFL Rearing Skills required for Second year preparatory students?
3- What is the effect size of the Systemic Approach on developing the EFL reading skills of the Second year preparatory students?

Aims of the Research
The present study aimed at investigating the possible effect of using the systemic approach on developing reading skills of EFL second grade preparatory students.

Hypotheses of the Research
1- There is a statistically significant difference between the mean scores of the experimental group and the control group in the post administration of the reading skills test in favor of the experimental group.
2- There is a statistically significant difference between the mean scores of the experimental group in the pretest and post test of the reading skills test in favor of the post test.

Variables
This study involves the following variables:

**Independent Variable:** The system approach

**Dependent Variable:** Students’ reading skills development

Delimitations of the Study
This study is restricted to the following limits:
1. A forty second prep grade students attending Temai Al-Amdid Prep school
2. The first term of academic year 2020 - 2021
3. Reading skills

Significance of the Research

The present study may contribute to:

- Providing evidence on the effect of the systemic approach on the development of the preparatory stage student’s reading skills.
- Providing teachers and educators with alternative methods that better improve their performance.
- Directing attention to the importance of reading as a neglected component in language learning.
- Attracting the attention of EFL researchers, course designers, curriculum developers and language specialists to the importance of using the systemic approach to develop reading skills.

Instrument of the Research

The following instrument was developed and administered by the researcher.

An EFL Reading Skills Test (used as pre and post test).

Description of the test

The EFL reading skills test included two sub-skills:

1. Word recognition: includes three questions in which students were asked firstly to identify the odd words. Secondly, use these words in sentences of their own. Thirdly, finish the text with the missing words in the given word list.
2. Reading comprehension: includes six questions in which students are asked to read the text and answer the questions.

**Method of Research**

This research is quasi-experimental, depended on the analytical and descriptive methods through reviewing the related literature and previous studies. The semi-experimental method is used for testing the systemic approach and measuring its effect on developing EFL reading skills among second prep grade students.

**Definitions of the Research**

**Reading Skills**

Reading Skills are the ability that pertains to person's capacity to read, comprehend, interpret, and decode written language and texts.

As for educators and researchers, Reading is a multifaceted process involving such areas as word recognition, orthography(spelling), alphabetics, phonics, phonemic awareness, vocabulary, comprehension, fluency, and motivation(Wikipedia).
The systemic approach

Amin Farouk Fahmy and Golajowski (2000) define the systemic approach as "the study of concepts or topics through an integrated system in which all the relationships between any concept and other concepts or topics are clear, and clear to prepare it according to a specific plan or a specific specialization".

It is a context in which each single component affects and is affected by the other components to form a whole. It is the context that has an interactive nature. The multiplications of those components

Muhammad Ali Nasr (2009) defines it as "the study of concepts and topics in an integrated systemic form in which all relationships between facts and concepts are clear to achieve the desired goals."

The researcher defines it as the study of subjects in a coherent and integrated manner that make the second-grade student be able to relate his previous experiences with subsequent educational situations and benefit from them in his real life.

Systemic Approach in Teaching:

a set of activities enhanced by graphics and illustrations related to the literacy analysis and synthesis skills forming a system of associated letters depending on the system approach-based teaching method.

Treatment

The research sample was conducted with 40 student (N=40). They had two sessions a week for one month and a half. The time taken was 24 hours. The experiment included the units of pupil's Book (1,2,3 and 4) applying the systemic approach, but through the traditional steps suggested by the Ministry of Education Teacher's
Guide covered particular language function and reading skills to be developed through some specific activities.

**Post-testing**

After the treatment, the test was conducted again to the research sample to assess the effect of the systemic approach on developing EFL reading skills. It was applied on the 30\textsuperscript{th} December 2021.

**Results**

Before implementing the systemic approach, the pre-post test was administered to the students. The means, standard deviation and t-value of the group were computed.

**Table (1)** Result of t-test between pre-post test mean scores in the research sample in overall writing skills.

<table>
<thead>
<tr>
<th>The Skills</th>
<th>N</th>
<th>Application</th>
<th>Mean</th>
<th>Fd</th>
<th>S.D</th>
<th>T Test</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reading Skills</td>
<td>40</td>
<td>Pre</td>
<td>12.050</td>
<td>39</td>
<td>1.6602</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>16.663</td>
<td></td>
<td>1.5021</td>
<td>9.766</td>
<td></td>
</tr>
</tbody>
</table>

Table (1) indicates that there was statically significant difference between the means of the second preparatory grade students' scores on the pre-post application of the EFL reading test in the overall reading skills in favor of the post application of the test where t-value is (9.766), which is significant at (0.00). and also shows the mean score of the experimental group at the post test (16.663) is higher than the mean score of the same group at the pre-test (12.050). Thus the first hypothesis is confirmed.
Table (2) shows the means scores of the experimental group in the pre/post-assessment in the overall reading skills and Blake modified Gain Ratio.

<table>
<thead>
<tr>
<th>Reading Skills</th>
<th>The pre mean</th>
<th>The Post mean</th>
<th>Total Mark</th>
<th>Blake Ratio</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identifying the odd word</td>
<td>5.041</td>
<td>7.615</td>
<td>5</td>
<td>1.207</td>
<td>accepted</td>
</tr>
<tr>
<td>Answering through Questions</td>
<td>3.188</td>
<td>5.375</td>
<td>5</td>
<td>1.192</td>
<td>accepted</td>
</tr>
<tr>
<td>Skimming</td>
<td>4.213</td>
<td>7.950</td>
<td>5</td>
<td>1.206</td>
<td>accepted</td>
</tr>
<tr>
<td>Scanning</td>
<td>2.099</td>
<td>4.050</td>
<td>5</td>
<td>1.204</td>
<td>accepted</td>
</tr>
<tr>
<td>Overall Reading skills</td>
<td>14.541</td>
<td>24.99</td>
<td>20</td>
<td>1.321</td>
<td>accepted</td>
</tr>
</tbody>
</table>

It is remarkable that Blake Ratio for word recognition skills, comprehension skills, skimming and scanning skills is located between (1.2:2) this leads to a good effect on the Systematic approach in developing reading skills by comparing their results in pre-post test in favor of the post application of the test.

**Discussion:**

Table (1) showed that the experimental group students achieved more improvement in their overall reading skills where t-value was significant at the level (0.01). This supported the first hypothesis statistically. These improvements were due to the use of the Systemic Approach.
The result is due to applying the Systemic Approach activities such as drawing, brainstorming, discussion, mind maps and students' writings at homework used as a reading experience in the next session, sharing ideas orally, visually portraying experiences, reading pictures and graphic organizers. These activities helped students improving their EFL reading skills. As were doing the tasks, the researcher went around them, monitored, guided them and provided positive feedback. Therefore, the Systemic Approach helped students master the EFL reading skills. This result was consistent with these studies: (Snow, 2003; Bachman, 2005; Hammer, 2007 & Ali, 2011).

The Systemic Approach focused on developing the students' EFL reading skills (word recognition, comprehension skills, skimming and scanning skills). The thinking activities used in the Systemic Approach such as graphic organizers, drawing, mind maps, and portraying ideas with personal connections, enlightened students' thinking and senses to convey ideas and support them with the relevant details. In addition, the Systemic Approach activities stimulated students on the reading texts in a supportive environment focusing on the content more than the form through using students' experiences around them.

As indicated in table (2), the experiment group students showed higher improvement in "Comprehension Skills" where t-value was significant at the level (0.00). This supported the second hypothesis statistically.

**Conclusion and Recommendation**

According to the results of the statistical analysis of data, it could be conducted that the experimental group student's EFL reading skills were developed as a result of the Systemic Approach. This
meant that the Systemic Approach was effective in developing some reading skills among the second grade preparatory students. To sum up, the present research provided a clear idea about what the Systemic Approach is and encouraged the second year preparatory school students to develop reading skills through the systemic procedures with clear objectives.

In the light of the previous findings, the following recommendations could be presented:

1. Providing a learning environment with varied activities and tasks to overcome reading problems.
2. English teachers should be trained on the Systemic Approach-based learning and how to implement the approach in teaching EFL skills at primary and preparatory schools.
3. Curriculum designers should make use of the Systemic Approach when designing English curricula.
4. Addressing the attention to the experimental learning which the Systemic Approach comes from in developing EFL reading skills and other language skills.
5. Relating the learners' life or personal experiences to the school through interaction between teacher and students inside the classroom. This assures the idea of "Language for life".
6. Considering learners' needs, diversity, characteristics at each stage; for instance, the second grade preparatory students like drawing, role play, playing games, doing action activities, moving in class, singing and so on. At this stage, students' attitude to experience reading and writing is through relating this senses to the outer world.
7. Focusing on activities that stimulate students higher thinking skills e.g. Analysis, synthesis, application, etc. not only recalling information.
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