The Effectiveness of a Suggested Metacognition-Oriented Programme in Developing Reading of Secondary School Students

Prepared by :-
Dr. Mahmoud Abd Al-Naser Nasr
(Assistant Professor)

Abstract

The purpose of the study was to design a metacognition-oriented programme and to test its effectiveness in developing reading of Egyptian secondary school students. The sample of the study consisted of 140 students including both males and females distributed randomly between the experimental and control groups. Statistical analyses indicated that there were no significant differences between the mean scores of the students of the two groups in the pre-administration of the test. Significant differences were found between the mean scores of the students of the two groups in the post administration of the test in favour of those of the experimental. There were significant differences between the mean scores of the experimental-group students in the pre and post administrations of the test in favour of the post. No significant differences were found between the mean scores of the control-group students in the pre and post administrations of the test. Similarly, no significant differences were found between the mean scores of males and females in the experimental group in the post administration of the test. The programme proved to be effective with a gain ratio of 1.01.

Keywords:- Metacognition, Metacognition-Oriented Programme, Reading

فعالية برنامج مقترح موَّجه باستخدام ما وراء المعرفة في تنمية مهارة القراءة لدى طلاب المرحلة الثانوية

استهدفت الدراسة الحالية تصميم برنامج موَّجه باستخدام ما وراء المعرفة واختبار فعاليته في تنمية مهارة القراءة لدى طلاب المرحلة الثانوية. اشتملت الدراسة على ١٤٠ طالباً وطالبة. أوضح التحليل الإحصائي للبيانات عدم وجود فروق ذات دلالة إحصائية بين متوسطات درجات طلاب المجموعة التجريبية والضابطة في التطبيق القبلى للاختبار. وُجدت فروق دالة إحصائياً بين متوسطات درجات طلاب المجموعتين في التطبيق البعدى للاختبار لصالح المجموعة التجريبية. كما أوضحت النتائج وجود فروق ذات دلالة إحصائية بين متوسطات درجات طلاب المجموعة التجريبية في التطبيق القبلى والبعدى للاختبار لصالح التطبيق البعدى, فى حين لم توجد فروق دالة إحصائياً بين متوسطات درجات طلاب المجموعة الضابطة فى التطبيق القبلى والبعدى للاختبار. كما لم توجد فروق دالة إحصائياً بين متوسطات البنين والبنات في المجموعة التجريبية في التطبيق البعدى للاختبار. أثبت البرنامج فعاليته بنسبة كسب ٠١ .٠١

كلمات مفتاحية:- ما وراء المعرفة, برنامج موَّجه باستخدام ما وراء المعرفة, مهارة القراءة

The Effectiveness of a Suggested Metacognition-Oriented Programme in Developing Reading of Secondary School Students

Introduction

Language skills proceed in a hierarchical form on the top of which listening resides. Speaking, reading and writing follow sequentially. Listening and reading are classified as receptive language skills compared with speaking and writing which are viewed as productive ones.

Reading is one of the most pivotal skills for the plethora of learners of English. However, it has been severely neglected and looked down upon in English classes under the dominance of the audio-lingual tradition which tended to dub reading as a matter of decoding speech written down (Lesaux and Keiffer, 2010). Reading wasn't taken very seriously in theory or practice. However, advances in the area of psycholinguistics and schema theory fervently led to correct such misconceptions about reading and to settle some of the dust raised in the area. In this way, reading came to be regarded as an active skill and an interactive one at the same time. Paulston and Bruder (1976) view reading as a kind of "information processing" in which the reader interacts with the graphic input as s/he attempts to reconstruct a message encoded by the writer (p.157). Silberstein (1987) concurs with Paulston and Bruder (1976) that reading is a sort of "information processing" in the sense that the reader is an active, planning, decision-making individual who coordinates a number of strategies in order to facilitate comprehension (p.30).

Reading is an active skill in which the reader makes an active contribution by drawing upon and using various skills s/he has acquired (Swanson and Hseih, 2009). The proficient reader depends on various sources of information in order to reconstruct the meaning: phonetic, syntactic, semantic, schematic etc. Specialists in the field stress the existence of a dynamic relationship between the text and the reader.

Texts don't explicitly contain meaning. They only have a "potential for meaning" (Wallace, 1993: 39). This potential is

realized in the interaction that takes place between texts and readers. In this manner, meaning is created in the course of reading as the reader draws on existing linguistic and schematic knowledge as well as the input provided by the text. In this way, reading involves an interaction between language and thought. The reader brings to the task a formidable array of information and ideas. Such an array, coupled with the ability to make predictions, determines the expectations, anticipations and hypotheses the reader will develop while reading. A skill in reading depends on the efficient interaction between linguistic knowledge and schematic knowledge which subsumes beneath it knowledge of the world.

In this respect, the use of metacognitive strategies looms large in the field of language learning and teaching as an effective means of aiding the reader in her/his interaction with the text in order to attain meaning. Metacognition is a term used in information-processing theory to indicate an "executive" function. It involves the use of certain strategies for planning learning, thinking about learning, monitoring one's production and comprehension, and evaluating learning afterwards (Brown, 1994: 115).

Problem of the Study:

The problem of the present study was crystallized in the low level of secondary school students in reading as a net result of using methods and strategies which are not in accord with the nature of that skill. The status quo of reading in our schools impelled the researcher to design a metacognition-oriented programme and to test its effectiveness in developing reading skills of secondary school students.

Context of the Problem:

Reading plays a paramount role in learning a foreign language. However, this skill hasn't been given much attention in Egypt. To the best knowledge of the researcher, no study has been conducted to design a metacognition-oriented programme intended to develop the reading skill of Egyptian secondary school students.

The need to conduct the present study emanated from:

1-The researcher's experience in English language teaching for a long time. This experience put the researcher in close proximity with difficulties students may experience when dealing with a reading text.

2-Reviewing the outline of the present syllabus revealed that the emphasis given to the reading skill isn't sufficient at all, since the lion's share is assigned to the study of grammar patterns and drills which are crucial for passing exams.

3-Recommendations of other researchers in the field (e.g. Carrell, 1984, Floyd and Carrell, 1987, Woldesenbet, 1989, Marshall, 1996, El-Sayed, 1998, Nasr, 2002 and 2006, Al-Harby, 2008, Swanson and Hseih, 2009, Lesaux and Keiffer, 2010, Faiz, 2017, Mahdi, 2018, Yen, et al., 2018, Jasim, 2019, Chin, 2019, etc) the plethora of which stress the importance of reading and suggest that more studies should be conducted to devise methods and techniques in order to develop such a skill.

Purposes of the Study:-

The present study had a tripartite purpose:-

1.Identifying reading skills which are suitable for secondary school students.

2.An instructional purpose which is designing a metacognition-oriented programme intended to develop reading skills of secondary school students.

3.A research purpose which is testing the effectiveness of the suggested programme in developing reading skills of secondary school students.

Questions of the Study:-

The present study attempted to answer the following questions:-

1.What are the reading skills which are suitable for secondary school students?

2.What's the actual status (present level) of those students in reading?

3.What are the bases for designing a metacognition-oriented programme intended to develop reading skills of secondary school students?

4.What are the features of the suggested programme?

5.To what extent is the suggested programme effective in developing reading skills of secondary school students?

Hypotheses of the Study:-

The present study tested the following hypotheses:-

1. There will be no statistically significant differences between the mean scores of the students of the experimental and control groups in the pre-administration of the reading test.
2. There will be statistically significant differences at 0.01 level between the mean scores of the students of the experimental and control groups in the post administration of the reading test in favour of the experimental.
3. There will be statistically significant differences at 0.01 level between the mean scores of the experimental-group students in the pre and post administrations of the reading test in favour of the post.
4. There will be no statistically significant differences between the mean scores of the control-group students in the pre and post administrations of the reading test.
5. There will be no statistically significant differences between the mean scores of males and females in the experimental group in the post administration of the reading test.
6. The suggested programme will be effective in developing reading skills of secondary school students.

Significance of the Study:-

1. The importance of the study emanates from the fact that it may lead to shed light on the role played by metacognitive strategies in developing the reading skill of secondary school students. Studies by O'Malley et al. (1985), Levesque (1989), Groller (1989), Van and Abraham (1990), Abdl-Rehim (1993), Ivers (2007), McCarthy and Garavan (2008), Kane, et al. (2014), Channa, et al. (2015), Faiz (2017), Wang, et al. (2018), Chin, (2019) and many others stress the importance of such strategies in rendering effective learning and developing language skills, especially reading. This denotes that the teacher can achieve better results if s/he is aware of and able to select and use metacognitive strategies which are suitable for her/his students in order to facilitate the process of reading and to make it a profitable experience.

2.The present study may aid the teacher to detect causes of reading breakdown which may be lack of relevant background knowledge in the form of schemata or lack of instantiating such knowledge. The breakdown may be attributed also to the teacher not using the suitable kinds of metacognitive strategies in order to develop the reading skill.

3.The study may lead us to regard reading as an active skill in which the reader interacts with the linguistic input offered by the text using the suitable kinds of metacognitive strategies in order to create meaning.

4.The study may lead to extend the teacher's responsibility to be aware of what her/his students already use of metacognitive strategies in order to facilitate reading.

5.The study may lead to change the false conceptions about reading that have dominated for a long time under the influence of the audiolingual tradition.

6.The study offers a metacognition-oriented programme intended to develop the reading skill of secondary school students. The study offers also a standardized reading test which proved to be valid and reliable. Moreover, the study offers a teacher's guide which elucidates the procedures involved in implementing the reading programme.

7.The study may help students, teachers and programme designers via a) helping students to develop their reading skills, b) guiding English teachers by improving their teaching practices of the reading skill, and c) providing programme designers with what's needed to develop reading skills of secondary school students.

8.To the best knowledge of the researcher, no study had been conducted to design such a type of programme in Egypt for the stage chosen. As a result, the present study attempted to contribute to our understanding of a little researched area in Egypt.

Limitations of the Study:-

1.The present study was conducted in the Governorate of Beni-Suif where the researcher lives and works.

2.The study was limited to a sample of 140 students selected randomly out of four classes of secondary schools in the Directorate of Beni-

Suif. Students were distributed equally between the experimental and control groups including both males and females.

3.The study was limited to ten reading skills since:-

a) Such skills are basic ones in the secondary stage.

b) Some students have some kind of difficulty in mastering these skills.

c) A percentage of about 75 of the jury members agreed upon such skills.

4.The experimental study lasted for 9 weeks, approximately two classes per week.

Variables of the Study:

In order to conduct the present study, the following variables were manipulated.

1)Dependent Variable:-

This variable was represented by the reading skill of secondary school students as represented by the sample selected randomly by the researcher. It was measured by a reading test prepared by the researcher.

2)Independent Variable:-

This variable was represented by a metacognition-oriented programme intended to develop reading of secondary school students. The programme was prepared by the researcher.

3)Control Variables:-

In order to test the effect of the independent variable on the dependent one, the researcher attempted to control the following variables:-

a) level of secondary school students in reading before administering the programme.

b) age c) socio-economic level d) sex e) teacher

Methods of the Study:-

In order to conduct the present study, the researcher used:-

1.The Descriptive Method:-

This method was used for reviewing pertinent literature, determining reading skills which are suitable for secondary school students and identifying the general design of the suggested programme and the reading test.

2.The Quasi-experimental Method:-

This method was used in conducting the experiment, administering the suggested programme and the reading test, analyzing the data and interpreting the results.

Experimental Design:-

The researcher used two groups:-

1.Experimental Group:-

Its students studied the suggested programme.

2.Control Group:-

Its students had their regular classes.

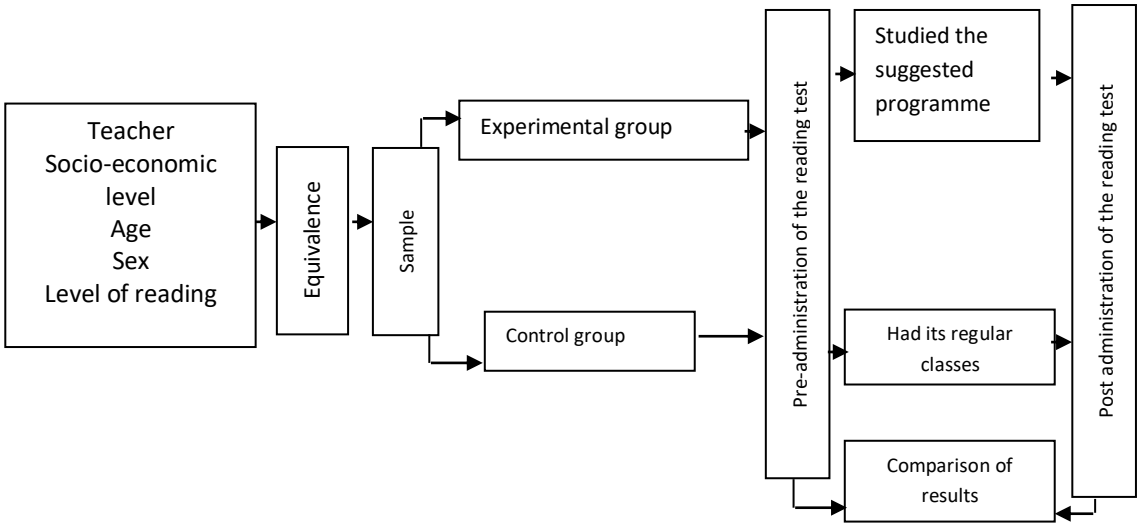

Figure (1) Experimental Design of the Study

Instruments of the Study:-

In order to conduct the study, the following instruments were used:-

1. A reading test prepared by the researcher.
2. A metacognition-oriented reading programme prepared by the researcher.
3. A teacher's guide prepared by the researcher.

Definition of Terms:-

The following terms were used in the present study:-

1-Reading:-

Al-Muttawa and Kailani (1984) define reading as "extracting meaning from the printed or written material"(p.114).

Smith (1985) defines reading as "extracting information from the text" (p.104).

In the present study, the researcher used the term "reading" to mean a process consisting of a series of sub-processes which start with the identification of letters, words, sentences – in short, graphic symbols - and end with the getting of meaning. Without obtaining meaning, one hasn't read at all.

2-Metacognition:-

Dirkes (1985) defines metacognition as "thinking about thinking, knowing what we know. Just as an executive's job is the management of an organization, a thinker's job is the management of thinking" (p.96).

Carrell et al. (1989) offer a definition of the term as "the student's awareness of strategies and the relationship between the student's perception of these strategies, her/his strategy use and her/his level of comprehension" (p.23).

Winch and Hoogstad (1991) define metacognition as "knowing what kind of strategies to use or actions one must take to construct meaning from the text, and when to use these strategies to achieve different goals" (p.48). Since this definition suits the purpose of the study, it will be adopted by the researcher.

Procedures of the Study:-

In order to conduct the present study, the following procedures were followed:-

1-Reviewing pertinent literature.

2-Determining reading skills which are suitable for the secondary stage in the light of reviewing related literature and objectives specified by the Ministry of Education, consulting some specialists in the area and making use of the researcher's experience in teaching English.

3-Validating the skills by submitting them to a jury committee.

4-Preparing a pre-post reading test.

5-Validating the test by submitting it to a jury committee.

6-Piloting the test.

7-Preparing a metacognition-oriented reading programme. This step included:-

a) Determining bases for designing the programme.

b) Determining programme rationale.

c) Determining programme document. This step included:-

*-Determining goals of the programme.
*-Specifying instructional objectives of the programme.
*-Preparing the content of the programme.
*-Designing the strategy of teaching the programme.
*-Selecting teaching aids of the programme.
*-Preparing activities of the programme.
*-Preparing supplementary materials of the programme.
*-Determining a suitable means for evaluating the programme.
*-Computing the time needed for conducting the programme.
*-Validating the programme by submitting it to a jury committee.
*-Piloting the programme.
*-Producing the final form of the programme.
*-Preparing the teacher's guide.

8-Selecting a sample distributed randomly between the experimental and control groups including both males and females.
9-Administering the pretest to the two groups.
10-Administering the programme to the experimental group.
11-Administering the post test to the two groups.
12-Analyzing data statistically, interpreting results, forwarding recommendations and suggestions for further studies, then concluding.

Review of Related Studies:-

Although there is a noticeable dearth in research on metacognition-oriented reading programmes for the secondary stage in Egypt, it's beneficial to cast light on some efforts that have been exerted in the area.

Starting in the incipient years of the eighties of the last century, Haynes (1982) launched a study the purpose of which was to investigate the relationships among concrete and abstract concept development, metacognitive awareness of concrete-abstract concept differences and comprehension of concrete and abstract texts at four age levels. Three tasks were administered individually to 24 subjects at each of the four age levels. Statistical analyses of the data indicated that metacognitive awareness of concrete-abstract differences plays an important role in comprehension of abstract texts.

In a similar but quite unique manner, O'Malley et al. (1985) conducted a study aiming at investigating the learning strategies used by beginning and intermediate ESL students. Twenty six strategies were identified: metacognitive, cognitive and social. Intermediate students tended to use more metacognitive strategies than beginning students. Repetition and note taking were the most frequently used strategies. Next to them were cooperation and question for clarification. The metacognitive strategies that were used were related to planning and attention enhancing. Strategies were applied to discrete points rather than integrative tasks.

Following in the same methodological and psychological vein, Smith (1988) examined the development of reading comprehension skills, metacognitive reading skills and reading attitudes among 84. Statistical analyses of the data indicated that there were significant differences between groups favoring those reading the easy texts on the comprehension, memory and summary tasks. There were mixed results on the monitoring measures indicating that adults had more difficulty in monitoring when they understood a difficult text than they did in monitoring how well they remember information.

In the concluding year of the eighties three studies are of great preponderance to be included in this review. Carrell et al. (1989) conducted a study the purpose of which was to investigate the effect of metacognitive reading training of a heterogeneous group of 26 ESL students on improvement in ESL reading comprehension. Statistical analyses of the data indicated that the metacognitive strategy training was more effective than traditional instruction in improving ESL reading comprehension and that the degree of effectiveness is dependent on the student's learning style.

O'Malley et al. (1989) attempted to identify strategies students used in listening comprehension and to find out the difference in strategy use between effective and ineffective students. Statistical analyses of the data revealed that certain strategies differentiated between effective and ineffective learners such as self-monitoring, elaboration and inference. Such strategies were

applied in various ways. Generally speaking, effective listeners used top-down and bottom-up processing strategies, while ineffective listeners became occupied with defining every word.

Levesque (1989) compared the effect of advance organizers and metacognitive strategies instruction on comprehension. Group 1 received a combination of advance organizer presentation with metacognitive strategies instruction. Group 2 received only an advance organizer. Group 3 received only metacognitive strategy instruction. The control group received no treatment before the lecture. Statistical analyses of the data indicated that there were significant effects for verbal ability on the measures of listening and reading comprehension. Significant differences were found between the scores of subjects on the cloze measure. Subjects who received the advance organizer plus metacognitive strategies instruction, and subjects who received only the advance organizer achieved significantly higher scores than subjects who received metacognitive strategies instruction and subjects in the control group.

In the incipient year of the nineties of the same century, Van and Abraham (1990) conducted a study to determine why two unsuccessful ESL learners failed to complete an academic programme. Unsuccessful learners were not "inactive learners". On the contrary, they employed a wide variety of strategies but they were unsuccessful in applying the strategies appropriately because they didn't use the metacognitive or "self-regulatory" skills that would help them assess the task and use the strategies needed for its comprehension.

Abdl-Rehim (1993), in an empirical study, investigated the effect of metacognitive strategies on enhancing reading comprehension among prospective teachers of English at faculties of education. Statistical analyses of the data indicated that there were no significant differences between deep (analytic) and elaborative (global) processes in the two experimental groups at four levels of comprehension. The researcher attributed this result to the examination-oriented Egyptian culture, and consequently, memorization seems rather to preponderate as a learning style.

Following in the same footsteps, David (1995) explored the associations between metacognition and science reading comprehension. He investigated also the effects of teaching science reading strategies on science reading metacognitive awareness, science reading metacognitive self-management and science reading comprehension. Furthermore, he explored differential effects of science reading instruction on science reading metacognitive awareness, science reading metacognitive self-management and science reading comprehension for specific reading ability and gender groups. Statistical analyses of the data indicated significant correlations between metacognitive awareness and comprehension task success and a positive association between metacognitive self-management and comprehension task success and that a differential learning effect has taken place with lower ability.

With the advent of the new millennium, Mokhaimer (2001) launched a comparative study intended to investigate the effect of three types of strategic treatments on listening comprehension of second year students in faculties of education: top-down, bottom-up and interactive strategies (using both top-down and bottom-up strategies simultaneously). Statistical analyses of the data indicated that the interactive type of strategic processing, that's making use of the input provided by the spoken text amalgamated with previous background knowledge, proved to be superior to the other two types of strategies.

Similarly, Nasr (2002) designed a metacognitive schema-based programme intended to develop reading comprehension of third year prep school pupils. Strategies used in the programme aimed at constructing, activating and instantiating schemata before starting reading tasks. Statistical analyses of the data proved the effectiveness of the programmme in developing reading comprehension of the experimental group that studied the suggested programme.

Experimenting also with the metacognitive aspects of reading comprehension, Lesaux and Keiffer (2010) conducted a study to explore the nature of reading comprehension difficulties among early adolescent language minority learners and native English

speakers in urban schools. Findings demonstrated the need for middle schools to identify why students are having comprehension difficulties and to target instruction to meet their specific needs, given the wide variation in the struggling reader population.

Channa, et al. (2015) collaborated in an attempt to examine metacognitive strategies based on planning, monitoring, and evaluating in order to develop reading comprehension. The main purpose was to help readers to enhance their capabilities and to power reading through the use of these strategies. The study indicated that the strategies used in reading comprehension were significant. The findings of this study revealed that teachers scaffold to develop reading and comprehending skills of students.

Venturing into the arena of online reading, Zarrabi (2016) designed a mixed-method study the purpose of which was to investigate the metacognitive online reading strategies employed by highly proficient non-native English-speaking graduate students. Quantitative data were collected from 46 students through the Online Survey of Reading Strategies (OSORS). Qualitative data were obtained through recording think-aloud sessions with six volunteers who individually read a TOEFL practice passage and said what they thought as they read the passage. The quantitative findings revealed that students used most of OSORS strategies in the three categories or global strategies, problem-solving strategies, and support strategies. The qualitative data analysis revealed that students used most of the strategies that were relevant to the reading task.

Yen, et al. (2018) conducted a study, the main intent of which was to explore methods of assessing metacognition in reading informational science texts to address the gap they felt in research. A total of 55 studies in 47 articles published from 1990 to 2016 investigating effects of metacognition on science reading were reviewed. The analysis revealed frequently applied methods, including self-report questionnaires for measuring metacognitive knowledge, event-based assessment for metacognitive skills, and questionnaires or interviews for metacognitive experiences. E-based

environment was reported to have a potential to support comprehensive and complicated measurement of metacognition. Finally, triangulation of findings from various methods proved to be essential in assessing metacognition involved in self-regulated reading.

Experimenting with reading comprehension, Boschert (2018) investigated whether using metacognitive prompts could improve the metacognition and reading comprehension of at-risk community college students. The semester-long intervention focused on using metacognitive prompts during reading and metacognitive conversation. A sample of 75 participated in the experiment. Participants receiving Pell Grants and with ACT scores below the college readiness benchmark showed statistically significant increases in metacognition and reading comprehension. Results offered suggestive evidences that the reading intervention, using metacognitive prompts while reading, was effective in improving the metacognitive awareness and the reading comprehension of at-risk community college students.

Venturing into the arena of metacognition, Wang, et al. (2018) attempted to identify factors related to reading comprehension, and to compare similarities and differences in the reading processes of deaf and hearing adults. The sample included four groups, each consisting of 15 adults. The groups were identified as (a) deaf high-achieving readers, (b) deaf low-achieving readers, (c) hearing high-achieving readers, and (d) hearing low-achieving readers. Results indicated that deaf high-achieving readers performed similarly to hearing high-achieving readers, except for phonological skills, and that for all participants, phonological skills and metacognition were related to reading comprehension skills.

Following in the same metacognitive vein, Chin (2019) explored whether (L2) less proficient adult learners can become skilled readers by investigating the effect on students' attitudes to strategy use when explicit instruction of metacognitive reading strategies is combined with an extensive reading approach. Results proved that L2 less proficient adult learners can become skilled

readers through explicit instruction of metacognitive reading strategies combined with an extensive reading approach.

General Comments on Related Studies:-

Through reviewing pertinent studies, it looms legibly that the plethora of such studies agree explicitly and implicitly that metacognitive strategies and metacognition-oriented instruction:-

1. play a paramount role in effective learning and retention and developing language skills, especially reading, the focus of the present study.
2. can be a crucial determiner in defining the rate of learning progress. Fast and slow learners can be distinguished patently in terms of the strategies they are apt to make use of.
3. have been shown to impact information processing at different levels of complexity.
4. can render the function of aiding the learner to self-monitor her/his own information processing.
5. can potentially influence the learners' awareness of and attitudes towards the learning material.
6. enable the learner to plan her/his own learning, think about the learning process as it takes place, monitor her/his own production or comprehension and to evaluate learning after finishing its tasks.
7. increase the learner's awareness of and knowledge about why and when a given strategy or skill is used.
8. prepare the learner to realize the specific role of the skill s/he has acquired and developed in the whole hierarchy of skills contributing to learning.
9. put the learner in a proper position to define a certain problem and to search for alternative solutions.
10. help the learner to become self-directed and to be in charge of her/his own learning utilizing some kind of regulation for such learning.
11. aid in making a shift from rote learning to a meaningful type of learning.
12. help the learner to search the text to identify unknown items, predict the meaning that may lie ahead, create a mental image of the ideas and to highlight and summarize the main ideas in the text.

13.encourage learner-autonomy and active involvement. They reduce, to some extent, passive inattention.

The experimental design in most of the previous studies used two groups: an experimental group and a control one except in a few cases in which more than one experimental group were used.

Most of the previous studies have focused mainly on adult students of English at the university level and so none of them, according to the researcher's present knowledge, has designed a metacognition-oriented programme for developing reading at the level chosen by the researcher.

Theoretical Background:

Metacognition and Reading

I-Metacognition as a Concept:

The concept (metacognition), or "thinking about thinking" (Boschert, 2018), is considered to be one of the most important theoretical constructs in cognitive psychology. Such a concept dates back to Flavell (1976) who derived it from the general context of research on the human memory. This concept attracted the attention of many researchers both theoretically and empirically. Metacognition expresses the individual's knowledge of her/his own cognitive processes and any cognitive product related to them (McCarthy and Garavan, 2008). Flavell attempted to lay a theoretical background for the concept via his series of research extending from 1976 to 1987. He suggested that most psychological activities such as cognitive processes, attitudes, motives, emotions, psychomotor skills, etc.. can be subsumed within metacognition.

Metacognition, denotes an individual's awareness of what s/he learns, the ability to make certain plans in order to achieve certain goals, the ability to select suitable strategies and the ability to make self revision and evaluation (Ivers, 2007). Most research pinpoints that metacognition includes self-regulation of the learner. Learners who have a lot of metacognitive skills are more effective in regulating their own learning. They have also the ability to control learning processes and to diagnose learning problems. Those

learners have the ability to cope with different learning situations. Researchers have a consensus upon the fact that there is a positive correlation between metacognition and the learner's goals. Such a correlation increases when learners adopt learning goals that stress understanding and success in learning situations and goals that aim at developing learning skills and enhancing positive attitudes towards learning (Ford et al., 1998: 218).

II-Metacognitive Skills:

One of the main principles underlying the apparent development in the theoretical framework of metacognition is that the individual must have the ability to make use of her/his cognitive structure, schematic background knowledge and information processing strategies in an effective and productive manner. Specialists in the field maintain that background knowledge represents the implicit knowledge or the repertoire of knowledge that the individual has. In order for the learner to be able to use and control such a repertoire, s/he needs to attain certain kinds of metacognitive skills. Metacognition skills are those skills which are necessary for effective thinking when the individual is involved in a wide scope of learning situations including effective reading. In this way effective students are keen on taking care of what they know and understand. They also seek to understand points which are troublesome. They assess their own knowledge repertoire. This awareness leads to proper self-regulation and concentration on thinking rather than rote memorization of the text. Consequently, metacognitive skills enable the students to make use of what they already know to perform the required task according to certain criteria. Those students organize their efforts consciously. The skills they use in organizing their efforts are metacognitive ones. Effective readers, as well, employ metacognitive skills. They are aware of the purpose of reading. They make use of suitable strategies that are in accord with the purpose. Moreover, they evaluate what they have understood afterwards (Zaiat, 1998: 59).

III-Metacognitive Strategies:

Metacognitive strategies have become a subject for investigation and classification. O'Malley et al. (1985) propose the following classification:

a-**Using Advance Organizers**: Making a general but conclusive and comprehensive preview of the organizing concept or principle in an anticipated learning activity.

b-Directed Attention: Deciding in advance to attend in general to a learning task and to ignore irrelevant distractors.

c-**Selective Attention**: Deciding in advance to attend to specific aspects of language input or situational details that will cue the retention of language input.

d-**Self-Management**: Understanding the conditions that help one learn and arranging for the presence of those conditions.

e-**Self-Monitoring**: Correcting one's speech for accuracy in pronunciation, grammar, vocabulary or for appropriateness related to the setting or to the people who are present.

f-**Self-Evaluation**: Checking the outcomes of one's own language learning against an internal measure of completeness and accuracy.

g-**Functional Planning**: Planning for and rehearsing linguistic components necessary to carry out an upcoming language task.

h-**Delayed Production**: Consciously deciding to postpone speaking in order to learn initially through listening comprehension.

In a similar but quite unique manner, Brown (1994) classifies metacognitive strategies into three main categories subsuming beneath them other minor categories.

1-Centering Learning:

*Over viewing and linking with known material.

*Paying attention.

*Delaying speech production to focus on listening.

2-Arranging and Planning Learning:

*Finding out about language learning.

*Organizing the learning situation.

*Setting goals and objectives.

*Planning for a language task.
*Seeking practice opportunities.
*Identifying the purpose of a language task.

3-Evaluating Learning:

*Self-monitoring.
*Self-evaluating.

IV-Metacognitive Models of the Reading Process:

One of the controversial issues in the field of information processing is to explain how readers interact with the text so as to reconstruct the meaning. The bottom-up is one of the models proposed in the area. The term "bottom-up" refers to "processing information based on the linguistic input from the text". It may be referred to as a "text-based model" or an "information-driven type of processing" (Silberstein, 1987: 31). Smith (1983) uses the term "outside-in" to refer to this model because the information comes from outside the reader. This model is referred to as being "data-driven" because it's evoked by incoming data. In the light of this model, reading can be described as a one-way flow of information starting with the visual (graphic) input and proceeding through a series of progressively higher order of processing stages until meaning is derived. Proceeding in this way, learning to read can be regarded as a process in which the reader decodes individual letters of a word to get access to its meaning and then puts words together into phrases then into sentences then into paragraphs and so on.

The top-down model is the second one. It's a way of reading texts which attends to global meaning and is activated largely by existing knowledge of the world rather than the specific linguistic features of the text. This model is referred to as a "knowledge-based", "inside-out", "conceptually-driven" model (Silberstein, 1987: 30). It emphasizes the role of higher cognitive processes that generate meaning hypotheses based on contextual information. The reader is actively involved in deriving meaning directly form the pages using knowledge of syntactic and semantic systems of the language (Richards, 1990: 52). In the light of this model, reading

doesn't result from letter or word identification, but it results from the productive cues. Reading, according to this model, is seen as a constructive process in which the reader is an active processor of information not a passive recipient. S/he uses the phonological, semantic, syntactic and graphic cues in order to facilitate comprehension. Since reading requires an interaction between thought and language, Goodman (1967) calls it a "psycholinguistic guessing game".

The interactive model is the third one. It attempts to describe how the reader "uses and integrates both graphic and contextual information in extracting meaning". It assumes that reading is a "continuous interaction between the reader's skills and the text". It's more like top-down models than bottom-up ones , but it's considered to be a synthesis of the two. Since successful reading requires both top-down and bottom-up processing, interactive reading has come to refer to the interaction between the two types of processing. In the light of the interactive model, high-level decoding and sampling from the textual features happen simultaneously and in a cyclical way (Hadley, 1993: 152). In this way, reading is a process of predicting meaning based on prior knowledge and experience. Such predictions are then verified and corrected as the author's message is carefully translated. Such predictions are formed based primarily on prior knowledge (Bock, 1993).

Instruments and Procedures:

***Sample of the Study:**

The sample was selected randomly from first year secondary school students out of two schools in the Directorate of Beni-Suif. The sample consisted of 140 students out of four classes; two as an experimental group and two as a control one. The sample included both males and females.

***Instruments of the Study:**

I-The Suggested Programme:

A)Bases for Designing the Programme

The researcher designed the programme in the light of:

1-Reviewing pertinent literature in the area of programme design.

2-Reviewing pertinent literature in the area of developing reading.

3-Reviewing pertinent literature in the area of using metacognitive strategies.
4-Identifying developmental characteristics of first year secondary school students.
5-Determining reading skills which are suitable for first year secondary school students.

B)Considerations in Designing the Programme:

In designing the programme, the researcher put the following points into consideration:

1-The nature of the Egyptian society; its values and attitudes.
2-The nature of the subject matter.
3-Students' developmental characteristics.
4-Objectives of teaching English in the secondary stage as specified by the Ministry of Education.
5-Objectives of the present study as specified previously by the researcher.
6-Emphasizing the reader's role in the reading process.

C)Programme Document:

1-Goals of the Programme:

The major goals of the programme were to:

a-Develop reading of first year secondary school students.
b-Help those students better understand the nature of reading.
c-Provide first-year secondary school students with some metacognitive strategies that can be useful in reading.
d-Foster interactive reading.

2-Instructional Objectives of the Programme:

The major objectives of the programme were to develop first year secondary school students' skills in:-

a-Identifying the main idea in a text.
b-Scanning a text for a certain piece of information.
c-Distinguishing the topic sentence and supporting sentences in a paragraph.
d-Suggesting a suitable title for a text.
e-Determining true and false ideas based on reading a text.
f-Drawing inferences in the light of reading a text.
g-Summarizing a text in one's own words.

3-Content of the Programme:

The content consisted of six units, totaling 17 lessons. Every lessen was divided into 3 stages: pre-reading, reading and post reading.

4-Strategy of Teaching the Programme:

The researcher proposed a metacognition-oriented strategy which proceeded through three stages:

a-Pre-reading stage.

b-Reading stage:- *1-First Reading* *2-Second Reading*

c-Post Reading Stage.

5-Teaching Aids Used in the Programme:

The researcher made use of the following aids:

a-The student's book (prepared by the researcher).

b-Visual aids (pictures and flash cards).

c-Handouts.

d-The blackboard.

e-Data show.

f- e. sites

6-Activities Used in the Programme:-

The researcher made good use of the following activities:-

a-Working in pairs and groups.

b-Participating in short class discussions.

c-Presenting previews and discussing them.

d-Showing pictures and flash cards and commenting on them.

e-Drawing and studying concept maps.

f-Brainstorming ideas about the topic.

g-Recalling freely ideas about the topic.

h-Pre-teaching of vocabulary.

7-Methods of Evaluation Used in the Programme:-

Three types of evaluation were used:-

a-Pre-evaluation before conducting the programme through administering the pretest.

b-Ongoing evaluation while conducting the programme via the reading comprehension questions following each lesson.

c-Post evaluation after conducting the programme via the posttest.

8-Timing of the Programme:

The programme lasted for 9 weeks, approximately 2 classes per week. Each class lasted for 50 minutes. The total time spent in conducting the programme was 15 hours. The programme was conducted during the second term in the academic year 2017/2018.

9-Validating the Programme:

The researcher submitted the programme to a jury committee to show their opinions. The researcher put the juries' observations into consideration while preparing the final form of the programme.

10-Pilot Administration of the Programme:

The programme was piloted prior to the real experiment. The pilot study lasted for two weeks and it was administered to 40 students.

11 The Teacher's Guide:

A-Bases for Designing the Guide:

The guide was designed in the light of:

*Reviewing pertinent literature.

*The list of reading skills determined by the researcher.

*Objectives specified by the Ministry of Education.

*Objectives of the suggested programme.

B-Content of the Guide:

1-Theoretical Section

This section included an introduction addressed to the teacher including an overview of the programme.

2-Practical Section:

This section included detailed procedures of teaching the programme.

II-The Reading Test:

a-Goal of the Test:

The test aimed at testing reading of first year secondary school students. It was used as a pre-post test in order to determine the effectiveness of the programme.

b-Objectives of the Test:

The test aimed at assessing students' skills in:

1-Identifying the main idea in a text.

2-Scanning a text for a certain piece of information.

3-Distinguishing the topic sentence and supporting sentences in a paragraph .
4-Suggesting a suitable title for a text.
5-Determining true and false ideas based on reading a text.
6-Drawing inferences in the light of reading a text.
7-Summarizing a text in one's own words.

c-Reading Skills Measured by the Test:

Through reviewing pertinent literature, consulting some specialists, reviewing the objectives specified by the Ministry of Education, analyzing secondary school English teachers' opinions, reviewing the student book and working in the field of English language teaching, the researcher identified the following reading skills as being suitable for first year secondary school students.

1-Identifying the main idea in a text.
2-Scanning a text for a certain piece of information.
3-Distinguishing the topic sentence and supporting sentences in a paragraph .
4-Suggesting a suitable title for a text.
5-Determining true and false ideas based on reading a text.
6-Drawing inferences in the light of reading a text.
7-Summarizing a text in one's own words.

d-Description of the Test:

The researcher designed the test in the light of the goals, objectives and skills previously specified. Questions were of the true-false, and short-answer types totaling 18 questions.

e-Validating the Test:

The researcher submitted the test to a jury committee to show their opinions. The jury members agreed upon the validity of the test. Thus content validity was assured. Moreover, the researcher proved self validity of the test which reached 0.92.

f-Reliability of the Test:

The researcher used the test-retest method with a time separation of 15 days. Reliability coefficient reached 0.85.

g-Facility, Difficulty and Discriminability Indices of the Test:

Facility, difficulty and discriminability indices were computed. They were 0.71- 0.29 - 0.20 respectively.

h-Pilot Administration of the Test:

The test was administered to a pilot sample of 40 students not taking part in the study. The purpose was to prove the suitability of the test, calculate the mean time needed, compute reliability and to diagnose problems that might arise while administering the test.

1)Timing of the Test:

While piloting the test the researcher calculated the time by computing the time taken by the first student to finish the test as well as the last one. The time required was 120 minutes. Moreover, 10 minutes were assigned for test instructions.

Results of the Study:

The First Hypothesis:

Concerning the first hypothesis which states that "there will be no statistically significant differences between the mean scores of the students of the experimental and control groups in the preadministration of the reading test", the researcher used t. test as follows:

Table (1) Terminal Means, Standard Deviations and t. Test Results for the Scores of the Two Groups in the Preadministration of the Test

Group	Number	Means	Standard Deviations	Difference between Means	Free Score	Calculated t.	Tabulated t.	Level of Significance
Exp.	70	23.3	7.34	0.3	138	0.13	2.61	Insig.
Con.	70	23	7.81					

It's obvious from the above table that there are no statistically significant differences between the mean scores of the two groups. This provides a proof for accepting the first hypothesis.

The researcher assumes that such a finding may be attributed to the methods and procedures followed by teachers in our classrooms when teaching reading. The reading class may be the least well-organized one since its procedures go mechanically as follows:

1-Students are given a text.

2-The teacher asks students to read the text silently and to resort to her/him when encountering a difficulty.

3-The teacher reads the text aloud giving its meaning (mostly in Arabic).

4-The teacher asks individual students to read the text aloud.

5-A set time is assigned to answer the questions following the text. If the time isn't enough, such questions are assigned as homework.

Such procedures, as the researcher maintains, don't put into consideration the interactive nature of reading in which the reader plays an active role by drawing upon and making use of various sources of information beyond the text coordinating them with her/his background knowledge. In the light of the procedures described above, students regard the text as the main source of information. This can lead to heavy reliance upon the text neglecting other sources of information which may prevent the reader from using higher cognitive processes.

The Second Hypothesis:

Concerning the second hypothesis which states that "there will be statistically significant differences at 0.01 level between the mean scores of the students of the experimental and control groups in the post administration of the reading test in favour of the experimental", the researcher used t. Test as follows:

Table (2) Terminal Means, Standard Deviations and t. Test Resullts for the Scores of the Two Groups in the Post Administraion of the Test

Group	Number	Means	Standard Deviations	Difference between Means	Free Score	C.t	T.t	Level of Significance
Exp.	70	41	5.7	17.3	138	17	2.61	Sig. at 0.01
Con.	70	23.7	7.30					

It's obvious from the above table that there are statistically significant differences at 0.01 level between the mean scores of the students of the experimental and control groups in favor of the experimental. This indicates that the second hypothesis was accepted.

This result may be attributed in the first place to the programme which the experimental-group students studied. The programme encouraged students to instantiate and reinforce background knowledge about the topics via the strategies used. Background knowledge construction and activation may be said to have facilitated and enhanced the processes of reading by enabling

students to comprehend the new reading material in the light of what they already had of stocks of background knowledge.

The Third Hypothesis:

Concerning the third hypothesis which states that "there will be statistically significant differences at 0.01 level between the mean scores of the experimental-group students in the pre and post administrations of the reading test in favour of the post", the researcher used t. test as follows:-

Table (3) Terminal Means, Standard Deviations and t. Test Results for the Scores of the Experimental-Group Students in the Pre and Post Administrations of the Test

Test	Number	Means	Standard Deviations	Difference between Means	Free Score	C.t	T.t	Level of Significance
Pre	70	23.3	7.30	17.7	138	16.80	2.61	Sig. at 0.01 level
Post	70	41	5.8					

Its' obvious from the above table that there are statistically significant differences at 0.01 level between the mean scores of the experimental-group students in the pre and post administrations of the reading test in favour of the post. This provides a proof for accepting the third hypothesis.

To complement what has already been said in the interpretation of the result of the first hypothesis, it may be assumed that the top-down view of the reading process may be of great preponderance in this juncture. Background knowledge provided, instantiated and reinforced via the metacognitive strategies employed in the programme may be said to have aided students to process reading texts in a top-down manner. This method depends on the formation of expectations, predictions and hypotheses based on prior knowledge and experience. Moreover, the researcher maintains that transfer of the effect of training may serve as a plausible interpretation for this result. It may be supposed that some aspects of the suggested strategies were used by students in dealing with the texts encountered in the test.

The Fourth Hypothesis:

Concerning the fourth hypothesis which states that "there will be no statistically significant differences between the mean scores of the control-group students in the pre and post administrations of the reading test", the researcher used t. test as follows:

Table (4) Terminal Means, Standard Deviations and t. Test Results for the Scores of the Control-Group Students in the Pre and Post Administration of the Test

Test	Number	Means	Standard Deviations	Difference between Means	Free Score	C.t	T.t	Level of Significance
Pre	70	23	7.8	0.7	138	0.11	2.61	Insig.
Post	70	23.7	7.2					

It's obvious from the above table that there are no statistically significant differences between the mean scores of the control-group students in the pre and post administrations of the test. This indicates that the fourth hypothesis of the study was accepted.

The interpretation given to the result of the first hypothesis may aptly function here. The control-group students didn't study the suggested programme. Instead, they had their regular classes which proceeded in the way described earlier. As a result, it may be said that those students dealt with the texts encountered in the test in the same way. They may be said to have been attempting to come up with something off-hand in order to fulfill the requirements encountered in the test.

The Fifth Hypothesis:

Concerning the fifth hypothesis which states that "there will be no statistically significant differences between the mean scores of males and females in the experimental group in the post administration of the reading test", the researcher used t. test as follows:

Table (5) Terminal Means, Standard Deviations and t. Test Results for the Scores of Males and Females in the Experimental Group in the Post Administration of the Test

Group	Number	Means	Standard Deviations	Difference between Means	Free Score	C.t	T.t	Level of Significance
Males	35	41.2	4.5	0.6	68	0.48	2.65	Insig.
Females	35	41.8	4.2					

It's obvious from the above table that there are no statistically significant differences between the mean scores of males and females in the experimental group in the post administration of the test. This provides a proof for accepting the fifth hypothesis.

This result may indicate that difference in gender doesn't render difference in reading. Reading as a cognitive process may be said to depend on the coordination of other cognitive, psychological, technical and methodological variables that may be rarely affected by difference in gender. Since information processing and cognitive processes may be similar in males and females, reading processes may be affected by other factors rather than difference in gender.

The Sixth Hypothesis:

Concerning the sixth hypothesis which states that "the suggested programme will be effective in developing reading skills of secondary school students", the researcher used Blake's formula as follows:

Table (6) Mean Scores of the Experimental Group in the Pre and Post Administrations of the Reading Test, Total Score and the Gain that Occurred

Test	N	X	Total Test Score	Gain
Pre	70	23.3	50	1.01
Post	70	41		

It's obvious from the above table that the ratio of gain lies within the range defined by Blake which is (1-2). This indicates the effectiveness of the programme in rendering what it was intended for.

The effectiveness of the programme may be attributed to a number of reasons. First, following a scientific method in designing

the programme. Second, identifying reading skills beforehand. Third, getting students acquainted with the objectives of each lesson before starting it. Fourth, providing the programme with various activities. Fifth, using metacognitive strategies in teaching the programme. Sixth, using different kinds of teaching aids which helped to make the programme quite interesting. Seventh, using various kinds of evaluation before, during and after teaching the programme.

Recommendations of the Study:

In the light of the main findings of the present study, the researcher recommends that:

1-Metacognitive strategies should be used when teaching reading. Such strategies should be selected according to objectives, level of students, and time allowed.

2-Teachers should try to bridge the gap between what students already have of background knowledge about the topic and what the text offers.

3-Teachers should make use of prereading activities in order to instantiate background knowledge beforehand.

4-Teachers should emphasize the criterion of the familiarity of the subject matter when selecting reading texts.

5-Teachers should be able to diagnose causes of reading breakdown, the most common of which are total or partial absence of background knowledge and lack of its instantiation.

Suggestions for Further Studies:

Following in the same vein of the present study, the researcher thinks that more studies are needed to:

1-Design other programmes using different kinds of metacognitive strategies for developing other language skills.

2-Replicate the suggested programme for other educational stages.

3-Further investigate the difference between males and females in (reading).

4-Compare the relative effectiveness of metacognitive strategies in developing a certain language skill.

Bibliography

*-Abdl-Rehim, S. (1993). "The Effect of Metacognitive Strategies on Enhancing Reading Comprehension among Prospective Teachers of English" Ph. D. Faculty of Education, El-Azhar University

*-Al-Harby , L. (2008). "The Effectiveness of Using Cooperative Learning Method on ESL Reading Comprehension Performance, Students' Attitudes, toward C.L. and Students' Motivation toward Reading of Secondary Stage in Saudi Public Girls' Schools". Ed. D, West Virginia University

*-Al-Mutawa, N. and Kailani, T. (1989). Methods of Teaching English to Arab Students. Longman

*-Boschert, B. (2018). "Metacognitive Prompts: A Reading Apprenticeship Strategy to Improve Metacognition and Reading Comprehension of At-Risk Community College Students in a Reading-Based Class". ProQuest LLC, Ed. D. Dissertation, Delta State University

*-Bransford, J. and Johnson, K. (1972). "Contextual Prerequisites for Understanding: Some Investigations of Comprehension and Recall" . Journal of Verbal Learning and Verbal Behaviour, 11, pp. 171-726

*-Brown, D. (1992). Teaching English as a Second Language. Cambridge University Press.

*-——————— (1994). Principles of Language Learning and Teaching. 3 rd ed. San Francisco: Prentice Hall Regents

*-Brown, G. (1987). "Twenty Five Years of Teaching Listening Comprehension". English Teaching Forum , 14, p. 25

*-Carrell, P.; Pharis, B. and Liberto, J. (1989). "Metacognitive Strategy Training for ESL Reading". TESOL Quarterly . V. 23 n . 4 pp. 647-673

*-Channa, M.; Nordin, Z.; Siming, I.; Chandio, A.; Koondher, M. (2015)."Developing Reading Comprehension through Metacognitive Strategies: A Review of Previous Studies". English Language Teaching, v.8 n.8 p.181-186

*-Chin, M. (2019). "Can L2 Less-Proficient Adult Learners Become Skilled Readers? "International Journal of Teaching and Learning in Higher Education, v.31 n.1 p.1-10

*-David, J. (1995). "Explicit Science Reading Instruction in Grade 7: Metacognitive Awareness, Metacognitive Self-Management and Science Reading Comprehension". Paper Presented at the Annual Meeting of the National Association for Research in Science Teaching. San Francisco.

*-Dirkes, M. (1985). "Metacognition: Students in charge of their Thinking". Roeper Review 8 (2) 96–100.

*-Faiz, R. (2017). "The Effect of a Program Based on Knowledge Navigation on Developing Prep Students' EFL Reading and Writing Skills". Ph. D. Faculty of Education, Ain Shams University

*-Flavell, J. (1976). "Metacognitive Aspects of Problem Solving". In Renick, L. The Nature of Intelligence. Hillsdale, N. J: Lawrance Erlbaum Associate

*-Ford, J.; Smith, E.; Weissbein, D.; Gully, S. and Salas, E. (1998). "Relationships of Goal Orientation, Metacognitive Activity and Practice Strategies with Learning Outcomes and Transfer" Journal of Applied Psychology, v. 83 n. 2 pp. 218-233

*-Goodman, K. (1967). "Reading: A Psycholinguistic Guessing Game". Journal of Reading Specialists, 6: 126-135

*-Groller, K. (1989). "The Use of Advance Organizers in the Learning and Retention of Meaningful High School Reading Material". Ed . D. Lehigh University

*-Hadley, O. (1979). "Pictures and Second Language: Do they Help? "Foreign Language Annals, 12: 107-116

*-Haynes, A. (1982). "A Developmental Investigation of Relationships among Concrete and Abstract Concept Development, Metacognition and Reading Comprehension". Ph. D. University of Maryland

*-Ivers, J. (2007). "Metacognition and Foreign Language Cultural Instruction". Journal of Transformative Education, Vol. 5, No. 2, 152-162

*-Jasim, M. (2019). "The Effectiveness of a Suggested Schema-based Computerized Programme in Developing Creative and Social Thinking Skills among Middle School Students in Kuwait". Ph. D. Faculty of Education, Beni-Suif University

*-Kane, S.; Lear, M.; Dube, C. (2014). "Reflections on the Role of Metacognition in Student Reading and Learning at Higher Education Level". Africa Education Review, v.11 n.4 p.512-525

*-Laviosa, F. (1991). "A Preliminary Investigation of the Listening Problem-Solving Processes and Strategies of Five Advanced Learners of Italian as a Second Language". Ph. D. State University of New York at Baffalo.

*-Lesaux, K. and Kieffer, M. (2010). "Exploring Sources of Reading Comprehension Difficulties Among Language Minority Learners and Their Classmates in Early Adolescence". American Educational Research Journal 2010, doi:10.3102.

*-Levesque, J. (1989). "Facilitating Learning by Listening: A Comparison of Instructional Methods". Ed. D. University of Missouri. Saint Louis.

*-Mahdi, E. (2018). "The Impact of Interaction between the Flipped Classroom and the Cognitive Style on the Development of the Cognitive Performance and Academic Self-Consciousness among Graduate Students in Jeddah". Journal of the Faculty of Education, Beni-Suif University

*-McCarthy, A. and Garavan, T. (2008). "Team Learning and Metacognition: A Neglected Area of HRD Research and Practice". Advances in Developing Human Resources, Vol. 10, No. 4, 509-524

*-Markham, P. and Latham, M. (1987). "The Influence of Religion-Specific Background Knowledge on Listening Comprehension of Adult Second Language Students". Language Learning 37, pp. 157-170

*-Mokhaimar, M. (2001). "Effects of Bottom-up and/or Top-down Processing Strategies on Developing Listening Comprehension in Sophomores at Faculty of Education, Cairo University". M.A Thesis. Faculty of Education, Cairo University.

*-Mueller, G. (1980). "Visual Contextual Cues and Listening Comprehension. An Experiment". The Modern Language Journal. 64, pp 335-340.

*-Nasr, M. (2002). "The Effect of Schemata on Facilitating Reading Comprehension of Third Year Prep School Pupils". M.A Thesis, Faculty of Education at Beni-Suif , Cairo University

*-_____(2006). "The Effectiveness of a Suggested Programme Using Pre and Post Organizers (Spoken Written and Graphic) in Developing Listening Comprehension of Third Year Prep School Pupils". Ph. D Thesis, Faculty of Education, Beni-Suif University

*-O'Malley, J.; Chamot, A.; Stewner, G.; Russo, M. and Kupper, L. (1985). "Learning Strategies Used by Beginning and Intermediate ESL Students". Language learning .v.52 n.l pp. 21- 46.

*-O'Malley, J.; Chamot, A. and Kupper, L. (1989). "Listening Comprehension Strategies in Second Language Acquisition". Applied Linguistics . v.11 n.4.

*-Oxford, R. (1989). Language Learning Strategies. What Every Teacher Should Know. New York, New Bury House Harper & Row.

*-Paulston, C. and Brudder, M. (1976). Teaching English as a Second Language: Techniques and Procedures. U.S.A Foresman and Company.

*-Quinawi, A. (1993). "Effects of Some Teaching Strategies on Developing Creative Abilities through Arabic in Basic Education". Ph. D. The Institute of Educational Studies and Research. Cairo University

*-Richards, J. (1995). The Language Teaching Matrix Cambridge University Press.

*-Silberstein, S. (1987). "Let's Take Another Look at Reading: Twenty Five Years of Reading Instructions". English Teaching Forum .v. 20 pp. 28- 35.

*-Smith, F. (1983). Essays into Literacy. Exter, N. Educational Books.

*-Smith, M. (1989). "A Longitudinal Study of the Development of Reading Comprehension Skills, Metacognitive Reading Skills and Reading Attitudes: Childhood to Adulthood". Ph. D. The University of Wisconsin, Madison.

*-Steil, L., Barker, L. and Watson, K. (1983). "Effective Listening: Key to your Success". In Feyton, C. "The Power of Listening Ability: An Overlooked Dimension in Language Acquisition". The Modern Language Journal . ii, 75. pp. 174 – 175 – 24

*-Swanson, L. and Hsieh, C. (2009). "Reading Disabilities in Adults: A Selective Meta-Analysis of the Literature". Review of Educational Research, Vol. 79, No. 4, 1362-1390

*-Van, R. and Abraham, R. (1990). "Strategies of Unsuccessful Language Learners". TESOL Quarterly, v. 24 n.2

*-Wallace, C. (1993). Reading. Oxford University Press

*-Wang, Y.; Silvestri, J.; Jahromi, L. (2018). "Selected Factors in Reading Comprehension for Deaf and Hearing Adults: Phonological Skills and Metacognition". American Annals of the Deaf, v.162 n.5 p.445-462

*-Winch, G. and Hoogstad, V. (1991). Teaching Reading. A Language Experience. The Macmillan Company of Australia. PTY. LTD .

*-Wolving, A. and Cookley, C. (1982). Listening. Dubuque, IA: Brown.

*-Yen, M.; Wang, C.; Chang, W.; Chen, S.; Hsu, Y.; Liu, T. (2018). "Assessing Metacognitive Components in Self-Regulated Reading of Science Texts in E-Based Environments", International Journal of Science and Mathematics Education, v.16 n.5 p.797-816

*-Zaiat, F. (1995). Cognitive Foundations of Mental Structure and Information Processing . 1st ed . Mansoura, Dar El-Nashr Lil-Jamiaat

*-Zarrabi, S.(2016). "Exploring Metacognitive Online Reading Strategies of Non-Native English-Speaking Translation Students". ProQuest LLC, Ed. D. Dissertation, University of San Francisco