Developing EFL Students' Reading Comprehension and Reading Engagement: Effects of a Proposed Instructional Strategy

Safaa M. Abdelhalim
College of Language and Translation, Imam University, KSA;
Faculty of Education, Helwan University, Egypt

Abstract—**This study investigates the effectiveness of a proposed instructional strategy based on habits of mind and shared inquiry in developing reading comprehension and reading engagement among EFL learners at a KSA university. Integral to the study was the use of two main instruments: reading comprehension test and reading engagement survey. The experimental group received reading strategy and reading engagement training activities in addition to general reading practice, while the control group focused only on developing general reading comprehension skills. The data, coded in terms of a range of measures of literal, inferential, and critical reading skills as well as reading engagement, were subjected to t-tests. The results indicate that after the intervention, although some reading comprehension gains were achieved by the CG, the EG achieved higher levels in reading comprehension skills and engagement. Thus, findings revealed support for the proposed strategy. The findings have significant implications for EFL pedagogy, highlighting the effective impact of strategy based instruction on development of reading comprehension.**

Index Terms—**habits of mind, shared inquiry, reading comprehension, reading engagement**

I. INTRODUCTION

Comprehension as the essence of reading involves "the process of simultaneously extracting and constructing meaning" (Sweet & Snow, 2003, p. 1). Blau (2003) states that with the changing historical and educational contexts, definitions of literacy have changed. The latest form of literacy, which has been called 'critical literacy', requires students to become strategic readers, who self-manage, self-monitor, and self-modify. Readers who are able to select texts they will read, engage in higher-order thinking as they read, move from stage of just summarizing or retelling of a text to the stage of construction and critical reflection on a text. To achieve such a target, learners should be exposed to a wide range of written texts and taught effective reading comprehension strategies (Kirmizi 2009, Billmeyer, 2006).

Grabe (2009, cited in Hamidreza & Hashemi, 2016) stresses the importance of reading comprehension strategies clearly: "Acquisition of better reading strategies is apparently needed to crack the illusion of comprehension in readers who are settling for low standards of comprehension; They need to acquire and implement strategies to facilitate deeper levels of comprehension" (p. 449). Thus, support students' reading comprehension through training on appropriate reading strategies has been a main focus for language instructors. It has often been argued in reading literature that due to the complex and complicated factors involved in reading comprehension in general and in EFL reading in particular i.e., linguistic, cognitive and socio-cultural variables, designing an effective reading instructional strategy is not an easy task (Hudson, 2007).

Billmeyer (2004, cited in Costa & Bena, 2008) assure that although reading strategies are helpful, "the engagement in reading is not the product of strategies alone but a fusion of strategies with mental dispositions"(P.1). These intellectual processes or dispositions frequently referred to as "Habits of Mind' (HoM). Scholars have offered many congruous definitions for HoM. Costa and Kallick(2008) believe that there are at least 16 Habits of Mind (HoM), such as persisting, managing impulsivity, listening with understanding and empathy, thinking flexibly, thinking about thinking, that are indicative of effective and efficient problem solvers who display intelligence when faced with a problem. Costa and Kallick (2008) declare that these HoM are performed in clusters of behaviors rather than in isolation. Billmeyer (2004) adds that HoM are alterable; students can learn to question, reflect, and think interdependently.

When it comes to reading comprehension, Moore and Hall (2012) state that when used intentionally, HoM help students interact with texts in active and purposeful ways. Therefore, Billmeyer (2004) stresses that a major goal of reading instruction must be to support students in developing and habituating these HoM in their reading practices until they become one interdependent unit. Burgess (2012) and Jones (2014) suggest that out of the 16 Habits of Mind explained by Costa and Kallick (2008), the following specific habits apply directly to developing the reading comprehension skills: Persisting, Managing impulsivity, Applying past knowledge to new situations, Listening with understanding and empathy, Thinking flexibly, Communicating with clarity and precision, Striving for accuracy, and Taking responsible risks.

Moreover, practitioners, with an emphasis on collaborative reading practices, have increasingly favored approaches to reading centered on discussion, such as literature circles (Daniels, 2002), book clubs (McComb, 2009), reading apprenticeship (Creech & Hale, 2006), and Questioning the Author (Beck &McKeown, 2006). Shared inquiry as a discussion-based model of reading, developed by the Junior Great Books Foundations (2014), promotes an intellectually stimulating interpretative discussion of difficult questions in complex text (Whitfield, 2013). It is based on the conviction that participants can gain a deeper understanding of a text when they work together and are prompted by a leader's skilled questioning (www.oauifealumni.org).

Research on the motivational aspects of reading has reached that there is a strong and positive correlation between reading engagement, keeping students attentive and involved for extended periods of time, and higher student achievement in reading comprehension (Connor, Jakobsons, Crowe, & Meadows, 2009;Klauda& Guthrie, 2015). According to V. Vaish (2016) and Wigfield et al. (2008) the term 'engagement' as a goal of teaching reading is consistent with a multi-dimensional approach in that it includes behavioral, emotional/motivational, and cognitive aspects. Thus, the engaged reader is assumed to be behaviorally active (reading frequently), internally motivated (liking to read), and cognitively active (uses strategies in reading). In the present study, reading engagement will be operationalized as "a meta-construct subsuming all aspects of reading: not just motivation but a balance of interests, attitudes, motivation, self-regulation, and the ability to use cognitive abilities while reading to become deeply involved with a text."

In a longitudinal study, Klauda and Guthrie (2015) examined the development of reading motivation, engagement, and achievement in early adolescence by comparing interrelations of these variables in struggling and advanced readers. Findings showed that advanced readers showed stronger relations of motivation and engagement with achievement than struggling readers. However, motivation predicted concurrent engagement and growth in engagement similarly for struggling and advanced readers. These results supported the hypothesis that cognitive challenges limit the relations of motivation and engagement to achievement for struggling readers.

As demonstrated from this review of literature, numerous studies Provide evidence for the importance of reading comprehension instruction and reading engagement, however, the field lacks insight garnered from in-depth investigation into strategy that integrates cognitive and collaborative aspects in the EFL context of teaching reading comprehension and how teachers can apply those strategies. Therefore, the present study tries to link reading comprehension to research results, in this case the effectiveness of a proposed strategy based on Habits of Mind and shared inquiry in developing EFL students' reading comprehension skills and reading engagement. As such, this article provides a developmental perspective on reading comprehension and attempts to answer the question of whether the reading comprehension skills and reading engagement of EFL learners can be enhanced over a short period of time by adopting a strategy based on habits of mind and shared inquiry.

II. THEORETICAL BACKGROUND

Reading comprehension is an active cognitive process which involves reasoning to construct meaning from a written text and understanding it effectively and comprehensively (Nakamoto, Lindsey, & Manis, 2008). Enabling EFL learners to deeply and adequately understand the written language, necessitate teaching them the reading comprehension skills that comprises reading proficiency.

Scholars have made attempts to classify these skills incorporating various parameters for their classification. An analysis of the various taxonomies tackling reading comprehension skills (Koda, 2005; Hudson, 2007) reveals three underlying categories: Literal comprehension, Inferential/ interpretive comprehension and Critical comprehension. According to these taxonomies, while literal comprehension focus on decoding explicit information from the text through recognition or recall of its details, interpretive/inferential skills include the use of these details for the analysis, synthesis and classification of the text-based information, enabling the reader to access additional information by mapping the text. At the higher levels of cognitive processes (critical comprehension), anticipations and hypotheses are inferred by the reader beyond the explicit meaning, opinions are formed about the quality and accuracy of the text (Ismail, Yusof, Abdul Rashid & Lin, 2015).

In view of the above discussion, the three skills stated in the afore-mentioned taxonomies were taken into consideration for developing the reading comprehension skills checklist in the present study (see appendix A), since it is helpful for selecting the reading texts and constructing comprehension questions.

A. Reading Strategy Training Research

Several studies have been carried out to investigate the effects of reading strategy training on reading comprehension extending the predictive power of this variable on comprehension. The findings of these studies also indicate that strategy instruction with a focus on comprehension monitoring can help less skilled EFL readers overcome their difficulties in reading (Kalua, 2011). Kazemi, Mohsen & Mohammadreza (2013) highlight that Cognitive views of reading comprehension indicate that reading is an interactive process while comprehension is a constructive process; recommending that comprehension instruction should emphasize teaching students how to use a set of text comprehension strategies and empowering them with a sense of conscious control, or metacognitive awareness.

In their study, Aghaie and Zhang (2012) explored the impact of teaching of some reading strategies on EFL students' reading performance in Iran. The study employed a questionnaire adapted from Chamot and O'Malley's (1994) cognitive and metacognitive strategies framework. Findings revealed that reading comprehension and reading strategy use improved with strategy instruction. Results also showed that strategy instruction contributed to autonomous reading behaviors.

Another Study by Khonamri and Karimabadi (2015) aimed at determining how collaborative strategic reading (CSR) may increase critical reading of EFL students at the intermediate level. Study sample consisted of forty students majoring in English language literature at the University of Mazandaran. The treatment lasted for 10 sessions and every session continued for 90 minutes. Result indicated that students in the experimental group outperformed the students in the control group.

In their study, Al-Qahtani and Lin (2016) investigated the impact of Creative Circles in developing Saudi EFL middle school learners' reading comprehension over the period of a school term. The study sample involved three intact third grade Saudi middle school classes. Researchers used multiple instruments- reading comprehension test, reflective journals and semi-structured interviews. Results indicated an improvement in the experimental group's reading comprehension skills. They attributed the success of Creative Circles to its nature as a collaborative based reading approach, and its focus on direct teaching of reading skills, as well as attention to both low- and high- level reading processes and metacognitive awareness.

The aim of the current study is to examine whether pedagogic intervention can help enhance learner reading comprehension and engagement over a limited period of time by raising learners' awareness about reading comprehension skills and training them on engaging habits of mind and shared inquiry in their reading process. Ellis and Shintani (2014) highlight that combining strategy training and awareness raising is often the preferred approach to learner training.

B. Habits of Mind and Reading Comprehension

Billmeyer (2004) states that there are three broad reading comprehension habits that all readers must develop: self-managing, self-monitoring, and self-modifying. Costa and Bena (2008) point out that there are key habits of mind that help readers in each comprehension habit as follows: Key HoM that help readers self-manage are *applying past knowledge to new situations* and *questioning and posing problems;* while HoM that help readers self-monitor are *thinking about thinking* and *thinking and communicating with clarity and precision*. Finally, HoM that help readers self-modify are *thinking interdependently* and *remaining open to continuous learning*.

Fletcher (2013) considers that along with attitudes and perceptions conducive to learning, HoM form the backdrop for all learning and must always be carefully considered in the learning process. He indicates that one way to make procedural knowledge (i.e., the *how*) visible to more students is by explicitly teaching habits of mind.

Anderson (2010) and Ritchhart and Perkins (2005**,** cited in Burgess 2012) identified six key principles that are evident in using the HoM in teaching and learning. These principles include an understanding that: (1) thinking skills alone are not enough, students must also have a disposition to utilize these skills; (2) the development of thinking and understanding is a constant interplay of sharing and communication between the group and the individual; (3) it is the culture of the classroom that teaches, sets the tone for learning and communicates to students what it actually means to think and learn well; (4) educators need to strive to make students' thinking more visible and foster better learning and thinking through using the right approach (including routines and structures, probing questions and careful documentation) (5) a variety of resources are also needed to 'free the mind' to engage in new and deeper thinking; (6) the need for the development of professional communities.

In their study, Hinton, Suh, and Colón-Brown (2016) argue that teachers can improve students' disciplinary literacy skills within the context of studying historical nonfiction by using additional guidance concerning fostering disciplinary habits of mind. They offer a three-part framework highlighting disciplinary practices such as contextualizing/building context, corroborating/intertextuality, and sourcing/ biographical criticism that ELA and social studies teachers can use when fostering students' responses to historical nonfiction. The framework invites students to begin to experience habits of mind that historians exercise while they inquire about the past, while discovering that the practices are vital to other disciplines as well. They highlighted that the suggested framework can be modified for use in various middle grades and with multiple historical nonfiction selections.

The limited research into HoM and reading comprehension instruction may indicate, on a broader level, a neglect of HoM in classroom-oriented research. Baker (2013) assured that this is unexpected, taking into account the essential role that cognitive based strategies play in reading instruction to EFL learners.

C. Shared Inquiry and Reading Comprehension

Shared inquiry, as a collaborative-based strategy, presents a pedagogically vibrant platform for developing reading comprehension in EFL classrooms. It provides a format of reading instruction that supports cooperation between learners' strategic reading and active engagement with what they read. It uses some principles of other effective teaching methods such as Communicative Approach (CLT) and Task Based Learning (TBL), concerning the development of EFL learners' linguistic fluency, through encouraging peer reading and collaboration in negotiating meaning.

Whitfield (2013) presents some methods and practices of shared inquiry that distinguish it from other ways of conducting text-based classroom discussions, such as: how to manage the interpersonal dynamics of a discussion group; how to instill the habit of careful listening; encouraging good preparation for classroom discussion through reading and note taking; and setting guidelines for close textual analysis of argumentative strategies. He also identifies the following procedures for using shared inquiry in reading class: Reading the text twice, Practicing Active Reading, using factual questions, and then using interpretive questions, followed by evaluative questions. In this last step, the reader examines whether or not the author's point of view is in agreement with his or her own beliefs, values, and experiences.

III. RESEARCH HYPOTHESES

1. There is a statistically significant difference between the mean scores of the experimental group students exposed to the proposed strategy and the control group who received regular instruction on the posttest in favor of the experimental group in overall reading comprehension and in each reading comprehension sub-skill.

2. There is a statistically significant difference between the mean scores of the experimental group students and the control group on the post administration of the reading engagement scale in favor of the experimental group in overall reading engagement performance and in each reading engagement dimension.

3. There is a statistically significant difference between the mean scores of the experimental group students on the pre-test and the post post-test in favor of the posttest in overall reading comprehension and on its sub skills.

4. There are statistically significant difference between the mean scores of the experimental group students on the pre administration VS the post administration of the reading engagement scale in favor of the post administration in overall reading engagement and in each reading engagement dimension.

IV. METHOD

Design
The quasi-experimental design called the non-equivalent group design was used. This technique is identical to the pretest-posttest control group design. However, two intact groups were selected instead of the random sampling method adopted in experimental methods. Random assignment of subjects was not possible because the classes used in the study were intact groups administratively defined in terms of levels, teachers and classes. Since one cannot fully insure random selection of subjects, a control problem might emerge which necessitates the use of a pre-test. The treatment consisted of 10 lessons. Each lesson took two sessions per week lasting (100 minutes). The treatment lasted about 12 weeks (three months).

Participants
Participants were a group of 50 first year female students pursuing a two year English diploma certification, at Deanship of Community Service and Continuous Education Center, Imam University, KSA, during the 2015/2016 academic year. The sample consisted of 44 graduate students who finished their secondary school four or five years ago and did not have the chance to join the university, mostly, mostly due to social reasons, so they joined the university center to study for 2 years (4 semesters) to get a diploma in English language and 6 students (3 in each group) are university graduates in specializations other than English. It is expected that this English diploma will qualify them to join University later and/or find better job in the future. Students' age in both groups ranged from twenty-two to twenty-four years. They are at the pre- intermediate level of proficiency in English Language according to the placement test of the university. The research sample included two intact classes; one class (25 students) was exposed to the proposed strategy, whereas the other class (25 students) was exposed to the regular teaching.

The proposed strategy
This strategy emphasizes task based learning and reflection. Accordingly, explanation of concepts is kept to a minimum and is embedded in guided group discussion. Participants are encouraged to learn through practice first and then followed by discussion and reflection.

Procedures and tasks
Introductory sessions
The first two classes were introductory sessions. The first one was to clarify to the students what are habits of mind. ; develop a broad understanding of each habit and familiarize students with shared inquiry as a discussion based reading model. The second session was to explain what is meant by reading comprehension, its sub- skills and introduce the proposed strategy: its objectives, duration, and teaching procedures.

Procedure of the main lessons
According to the suggested strategy, the main lessons were divided each to six consecutive stages, each of which consists of activities meant to engage and aid students in comprehending a given text (see figure 1).
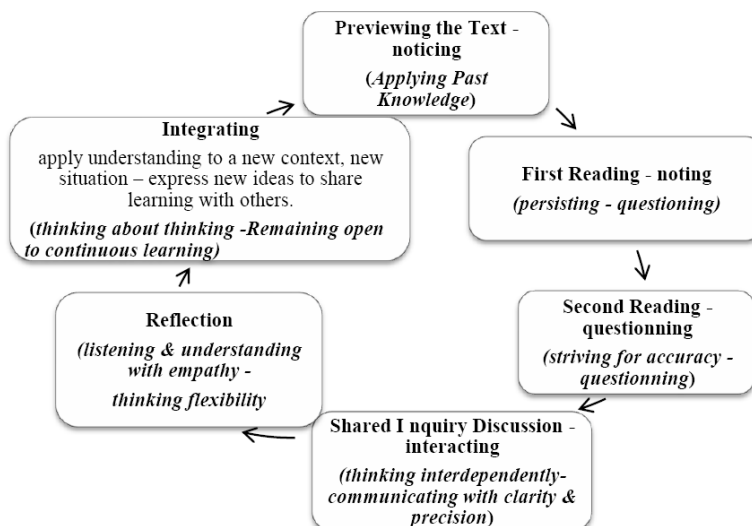
Fig. 1 the teaching procedures of the proposed strategy

Stage (1) Previewing the text (noticing): (habit of applying past knowledge). This stage is an opportunity to give students a purpose for reading, to create interest, and to arouse curiosity. Students scan the text individually and get a basic idea of what it is about. The teacher elicits students' predictions saying: "What questions would you like to ask about this topic?" Then, direct them to activate prior knowledge related to the text, through using "anticipation guide" worksheet and/or completing the first two columns of a KWLQ chart. Students then turn to a partner and discuss their responses.

Stage (2) First Reading (noting): (habits of persisting and questioning). During this stage, students monitor their level of comprehension, take notes, and form questions as they read. Students work individually to read silently the assigned text using active reading and monitoring strategies including: (1) recognizing key words, (2) jot down new words (3) predicting, (4) visualizing (using graphic organizers/ mind maps). They apply 'Text coding' to reflect how they interact with the reading text. The main activities employed during this stage were:

a. Text coding: Initially, students were given one session, spanning 20 minutes, to introduce the coding chart to be used during reading along with a brief explanation for each code. The codes were as follows:

✓ Signaling understanding	X Disagreement	👁 visualizing
👣 Making connection	★ Main idea	☹ Signaling lack of comprehension
? Asking questions	⊢ inferring	

b. Chart of text/ questions: After each section, the teacher asks students to write the main ideas of each on the left side of the chart and questions about specific ideas on the right. They started with -factual questions. Then, they created interpretive and evaluation questions.

Stage (3) Second Reading- questioning: (Habits of striving for accuracy &questioning). During this stage, students are directed to work in pairs following three steps: oral reading, clarify ideas, and summarizing. Students in pairs try to find the answers to the questions they noted during the previous reading stage and discuss specific portions of the text that interest or puzzle them, analyzing and relating them to its argument. Then, in preparing for the next stage "Shared Inquiry discussion", students individually use a two-column note-taking format. In the first column, they record their understanding of the text. In the second column, they take notes of the main ideas stated in the text. Students support their notes by examples, record interpretive and evaluation questions (The Great Books Foundation, 2014).

Stage (4) Shared Inquiry Discussion- interacting: (habits of thinking interdependently and   communicating with clarity & precision). Students work in groups of four or five, each group chose a name for itself and its own leader (the leader role is rotated each lesson). The leader of a shared inquiry discussion prepares the interpretive questions to initiate the discussion, pose them in logical order; builds up on participants' answers through asking for evidence; and inviting additional responses (The Great Books Foundation, 2014). During the group discussion, first, each member of the group shares one entry from the notes of the previous stage (second reading); there is no discussion at this time. Second, each student shares one entry that he would like the group to discuss. Third, the leader of the group wrap up the discussion by asking this overall question: What have we learned based on this analysis of the text? All students are responsible for helping group members experience success with the assigned task.

Stage (5) Reflecting /constructing new knowledge: (habits of listening &understanding with empathy and thinking flexibility). At this stage, Students begin a whole-class discussion in which they brainstorm ideas and opinions about the selected reading. Students are given time to complete "Building Your Answer" worksheet. They should write their new answer to the questions, they posed during the second reading stage, after the discussion. Students then can use self reflective to establish personal meaning of the text and establish an image of themselves as readers. Sometimes teacher provide students with a guiding question to activate their reflective thinking.

Stage (6) Integrating (*habits of thinking about thinking -Remaining open to continuous learning*)**:** Students apply understanding to a new context, new situation – express new ideas to share learning with others. Transferring and applying the reading skills to other settings and situations is cued through well-constructed questions. Also, as a kind of self-evaluation, Students had to think back about their reading performance and answer questions on the self evaluation worksheet to assess how well they performed and reflect more explicitly on their experiences with the suggested reading strategy.

Procedure followed with the control group:

Students in the control group received regular instruction by the researcher, which comprises pre-teaching vocabulary, silent reading, teaching word forms, and idiomatic expressions. Students read the text complying with the rules of silent reading within the framework of reading comprehension exercises. Following this, two-three students were asked to read the text out loud. Subsequently, the teacher had the students do activities like finding out the associations of words, commenting on visual material, recognizing words, completing the text, finding out keywords, and answer MCQ questions.

Data Gathering Instruments

A. The reading Comprehension Test

On the whole, the test subsumed two texts (each 400-460 words in length) that have quite the same readability level of the texts included in the students' text book, followed by multiple choices (M.C.Q.), true/false and short answer questions. The test comprised 40 items measuring the specified reading comprehension skills three times at least for each. Students were demanded to answer the questions in a separate answer sheet.

- Test validity and reliability:

To measure the test content validity**,** the first version of the test was given to 8 TEFL specialists to evaluate it in terms of content appropriateness, number of items and suitability of the test to the students' level. In order to establish the test reliability, the test-retest method was employed with an interval of two weeks. The reliability coefficient was 0.84, which is relatively high.

- Scoring of the test

Scoring did not require another rater for all test items were objective. For multiple choices, or true/false, one score was given for each correct answer; zero for left or wrong answers. For short answer questions, was scored as correct (1 point), partially correct (0.5) or incorrect (0 point). For test specification, see table (1).

B. The Reading Engagement scale (RES)

This scale aimed at assessing student's reading engagement level and the extent to which the adopted treatment influenced this level. The reading engagement 40-item scale was adapted from Mango's (2015) student engagement questionnaire, Martin's Motivation and Engagement Scale (2003), whitaker's (2009) reading engagement survey (RES), Black's (2013) reading engagement survey, Wigfield et al. (2008) reading engagement index (REI).

A four-point Likert-scale was used in correcting the survey's items. Participants were instructed to state their level of agreement with each survey item ranging from 4= Strongly Agree (SA) to 1= Strongly Disagree (SD). For the purpose of the current study, the scale was translated to Arabic to eliminate the language barrier.

The first version of the scale was given to TEFL and educational psychology specialists to make sure that the scale actually measured what it claimed to measure and hence some items were modified. The reliability coefficient of the scale was 0.89 according to Cronbach's alpha, which indicates a high level of internal consistency and reliability. The number of items and average scores of each section is shown in table (2).

C. Focused Group Interview

Focused group interview was conducted individually with 10 students of the experimental group at the end of the study period. The interview focused on students' answers to two open ended questions relating to each variable investigated. The interview data was scribed and used to support and extend the findings on the study

V. Data Analysis and Results

A. Pre-implementation of the Study Tools

First, the results of the pretests were subjected to statistical treatment to find whether there were statistically significant differences in reading comprehension and reading engagement between the control and the experimental groups prior to the treatment, to control variables before implementing the treatment. T-test for independent samples was thus applied. The differences between the means of the two groups are shown in tables (3) and (4) as follows:

Tables (3) and (4) show that there was no statistically significant difference between the experimental group and control one on the pretest in overall reading comprehension performance as well as in all sub-skills and the two groups were almost at the same level regarding their reading engagement level prior to the treatment. This implies that any variance after the treatment might be attributed to the treatment.

B. Comparing the Experimental and Control Groups on the Post- test

The First Hypothesis. In order to verify the validity of this hypothesis, t- tests for independent samples was used to compare the mean scores of the two groups on the post administration of the reading comprehension test with respect to

overall reading comprehension and in each reading sub-skill. Results of the t- tests proved to be statistically consistent with the hypothesis. See table 5.

Moreover, in order to make sure of the effect of the strategy on students' performance in reading comprehension, the effect size of the implemented strategy on students' overall reading comprehension performance as well as in each reading comprehension sub-skill was calculated.

Table (5) shows that the estimated t-values were statistically significant at 0.01 level. Thus, it can be safely said that there was a statistically significant difference between the experimental and control groups on the post- test in overall reading comprehension as well as in all reading comprehension sub- skills in favor of the experimental group. In addition, the effect size values shown reveal that the implemented strategy had a large effect on the performance of the experimental group students in overall reading comprehension performance and in each reading sub skill as compared to those of the control group who received the regular instruction.

The Second Hypothesis. To examine the differences between the experimental group and control one regarding overall reading engagement performance and in each reading engagement dimension, a number of t-tests for independent samples were conducted. Results of the t- tests proved to be statistically consistent with the hypothesis. See table 6.

Table (6) shows that there was a statistically significant difference at 0.01 level between the mean scores of the control and experimental groups in overall reading engagement and in each reading engagement dimension in favor of the experimental group. In addition, the effect size values shown reveal that the implemented strategy had a large effect on the performance of the experimental group students in overall engagement level and in each dimension as compared to those of the control group who received the regular instruction.

C. Comparing the Pre/ Post Performance of the Experimental Group

The Third Hypothesis. To compare pre- and post performance of the experimental group on the reading comprehension test, paired sample t- test was used. See table 7.

Table (7) indicates that there is a statistically significant difference at 0.01 level in overall reading comprehension and in each reading sub-skill between the mean scores of the experimental group on the pre- post test. In addition, the estimated effect size values, indicate that the implemented strategy had large effect on students' mastery of overall reading comprehension as well as its sub-skills. The largest effect size was for "Inferring implicit cause and effect", followed by "Identifying specific details", yet the lowest was for "drawing conclusions". Therefore, the third hypothesis was supported.

The Fourth Hypothesis. To compare the pre- and post performance of the experimental group on the reading engagement scale, paired sample t- test was used. See table 8.

Table (8) indicates that there is a statistically significant difference at 0.01 level between the pre- test vs. post- test means of the experimental group in overall reading engagement level and in each reading engagement dimension. In addition, the estimated effect size values shown indicates that the implemented strategy had a large effect on the experimental group students' overall reading engagement as well as in each of its dimensions on the post –test as compared to the pre- test. It is also clear that the treatment has the largest effect size on "emotional dimension" (0.99), followed by "cognitive dimension" (0.95); while the smallest effect was on "Behavioral dimension" (0.92).

VI. DISCUSSION

Results of the study showed that the experimental group students significantly outperformed the control group students on the post administration of the reading comprehension test and reading engagement scale in over all reading comprehension and reading engagement as well as in each sub – skill and dimension. The proposed strategy provided a means for experimental group students to think collaboratively and effectively. The collaborative act of reading was like a problem solving task in which students were engaged in, using different habits of mind (HoM).

Throughout the six consecutive stages of the suggested strategy, students had to reread the texts, pause to think, restate their understanding of certain points explicitly, ask for explanation or illustration and give the most suitable answer to the posed questions. These behaviors are indications of employing two main HoMs i.e. "Thinking flexibly", "Persisting" and "Thinking and communicating with clarity and precision". This is consistent with Burgess (2012) and Costa (2008) who posited that, HoM are intelligent thinking behaviors used in solving problems. Also, every student felt that she had a role in the classroom, and the opportunity to share her ideas and information.

Moreover, students' participation in shared inquiry discussions and their question generation increased as time passed. By the last session, they were creating questions and predicting answers that were not addressed in the reading text. In the fourth stage of the proposed strategy, students were compelled to work in groups and answer others' questions which they didn't have any idea about thus enhancing their cognitive processing of the material. This is in consistence with the results of Lee's (2000) qualitative research case study which proved that experiencing shared inquiry enfolded two main movements: stimulating thinking through dialogue process and drawing upon the resources of the learning community. This finding is also in line with the findings of the studies done by Khonamri and Karimabadi (2015), and Pan and Wu (2013) which highlight that group discussion and information sharing facilitate students' reading comprehension by establishing supportive learning atmosphere, which encourages interpretations, logical inferences,

and evaluation of the reading material, and eliminating threatening factors such as inhibition, and anxiety. Noticeably, by the end of the treatment and through teacher's ongoing corrective feedback, students could think behind the text and could cater for lack of comprehension by utilizing whatever knowledge they possessed.

In addition, raising students' awareness of the reading comprehension skills from the beginning and throughout the treatment was highly effective. This awareness became part of students' prior knowledge and was activated in every given reading text. As far as literal comprehension skills are concerned, students had noticeably achieved progress in all identified skills. Throughout Previewing stage which includes habit of 'applying past knowledge', throughout first reading and second reading stages, students were told to identify the main idea of each paragraph and pose relevant questions which enhanced their ability to recognize how main ideas are further supported by illustrative details, examples and arguments. This result is consistent with the findings of Zhang, Gu & Hu's (2008) and Zhang's (2010) studies.

As for inferential and critical comprehension skills, students had relatively achieved progress in the identified skills. First of all, students' were trained to realize that raising and responding to questions of this type (inferential and critical) require making use of details stated in the reading texts along with prior knowledge of every kind. Throughout the second reading stage of the suggested strategy, which incorporates two mind habits (striving for accuracy and questioning), students were encouraged to generate and respond to questions (in four categories: factual questions, interpretive questions, evaluative questions, and thinking beyond). It may be said that students' generated questions helped be actively engaged with the reading text.

Also, the questions posed by the group members, during the fourth stage, helped students to develop understanding as they employed higher-order thinking in resolving any ambiguity. This result is consistent with Harvey and Goudvis (2000, cited in Bee, Goh and Kamaruzaman, 2013) who suggest that comprehension and thinking skills can flourish when "students are given a voice - a voice to question, to challenge, to construct and co-construct the meanings around them"(p.38). This echoes also the findings of Lan and Lin's (2011) study, in that these processes served as the stimulus for students to engage in reading collaboratively.

However, the reading sub-skill of "drawing conclusion" got the least effect size as shown in the results which could be attributed to some reasons/ might be due to the fact that students were not used to making judgments based on their intuition. Also, students being totally engaged in grasping the text whole meaning as well as details, felt pressured.

Furthermore, students' progress as far as reading engagement dimensions are concerned was evident. Obviously, progress in some dimensions has exceeded progress in others. Substantially, students had achieved a significant progress with respect to the behavioral, cognitive and emotional dimensions. Particularly noteworthy is the fact that the behavioral dimension has not undergone the same degree of progress. The development of behavioral dimension can be considered a lifelong learning goal that can hardly be achieved in such a short-time. In other words, it should be addressed from an ongoing cumulative learning perspective.

Qualitative findings

Changes in the participants' reading comprehension performance and reading engagement were evidenced and evaluated through focused group interview. In fact, all of the participants in the focus group session mentioned how they experienced development in their reading comprehension skills. In particular, they reported their passive role during reading classes and limited communication between their teacher and other peers prior to the treatment.

Asking students to what extent have they found the suggested reading strategy beneficial? All students agreed that shared inquiry discussions "broadened" their experiences. One of the students commented, "I really liked shared inquiry discussion because more students have more ideas." Another student commented that "students in my group ask questions that make me recognize ideas that I didn't before." In addition, Students highlighted that they learnt how to practice active listening and considering their classmates points of view as a main part in the process of co-construction of meaning.

Asking students about their perceptions of their engagement and involvement with reading process, they reported that through collaboration with others, practicing habits of mind through different stages of the reading process and using various reading techniques enhanced their engagement level in reading outside the class as well as in class. They added that they have become more able to monitor, manage and modify their reading comprehension performance more frequently.

VII. IMPLICATIONS AND FURTHER RESEARCH

In the light of the discussion above about the positive effect of the proposed strategy on EFL learners' reading comprehension, the following recommendations can be suggested:

1. EFL teachers need to provide students with safe and supportive learning environment where they can pose questions and interact freely in the reading class.

2. EFL teachers need to be aware of HoMs and how to integrate them in the reading classes through providing appropriate activities to support inquiring minds and propensity for learning in their students.

3. EFL Teachers are recommended to make use of varied question generation techniques to foster reading comprehension skills.

In light of the present study results, the following studies can be suggested:

1. Further research is necessary to explore the effectiveness of other treatments based on habits of mind in developing listening and speaking skills.

2. More studies are needed with different student populations to investigate the effectiveness of similar treatment in developing reading comprehension.

3. Further research could look into the infusion of habits of mind in different groups of students such as at risk readers in EFL classroom.

APPENDIX. TABLES

TABLE 1
THE READING COMPREHENSION TEST TABLE OF SPECIFICATION

Items	Reading Comprehension Skills	Question Types			Number of items for each skill	Scores assigned to each skill
		M.C.Q	True/false	Short answer		
Literal Comprehension	1. Identifying the main idea of a text.	7, 28, 34		21	4	4
	2. Identifying specific stated information or details	11	3,4,5,6,23,24,25,26	14, 15	11	11
Inferential Comprehension	3. inferring specific details	8, 9	2, 22	16, 17	6	6
	4. Guessing the meaning of unknown words	10, 13, 29, 32			4	4
	5. inferring implicit cause-effect relationships	12, 30, 35	1, 27	18	6	6
Critical comprehension	6. Distinguishing between facts and opinions			19, 36, 37, 38, 39, 40	6	6
	7. Drawing conclusions	31, 33		20	3	3
	Total	15	12	9	40	40

TABLE 2
SPECIFICATION OF THE SELF-REGULATED LEARNING SCALE

Learning engagement dimensions	Number of items	Total Score	Mean score
1- Behavioral	14	56	4
2- Cognitive	10	40	4
3- Emotional	16	64	4
Total	40	160	20

TABLE 3
T-TEST RESULTS COMPARING THE PRE- READING COMPREHENSION TEST MEAN SCORES FOR THE EXPERIMENTAL GROUP AND THE CONTROL GROUP

Skills	Group	M	SD	t-Value	Sig. Level
1. Identifying main idea	Exp	1.84	0.75	0.39	.702
	Control	1.76	0.72		
2. Identifying details	Exp	6.16	1.31	0.109	.914
	Control	6.20	1.29		
3. Identifying specific details	Exp	2.28	1.14	0.251	.803
	Control	2.20	1.12		
4. Guessing unknown words	Exp	.96	0.84	0.171	.865
	Control	.92	0.81		
5. Inferring implicit cause and effect	Exp	1.40	1.04	0.134	.894
	Control	1.36	1.08		
6. Distinguish facts & opinions	Exp	3.56	1.08	0.266	.792
	Control	3.48	1.05		
7. Drawing conclusions	Exp	1.12	0.78	0.184	.855
	Control	1.08	0.76		
Total	Exp	17.32	6.02	0.188	.852
	Control	17.00	6.05		

TABLE 4
T-TEST RESULTS COMPARING THE PRE-ADMINISTRATION OF THE READING ENGAGEMENT SCALE MEAN SCORES FOR THE EXPERIMENTAL GROUP AND THE CONTROL GROUP

Variable	Group	M	SD	t-Value	Sig. Level
1. Behavioral	Exp	19.40	4.60	0.411	.683
	Control	19.96	5.03		
2. Cognitive	Exp	14.16	5.14	0.876	.386
	Control	15.48	5.52		
3. Emotional	Exp	24.12	4.48	0.063	.950
	Control	24.20	4.56		
Total	Exp	57.00	12.66	0.687	.495
	Control	59.64	14.46		

TABLE 5
T-TEST RESULTS COMPARING THE POST- READING TEST MEAN SCORES FOR THE EXPERIMENTAL GROUP AND THE CONTROL GROUP IN OVERALL
READING COMPREHENSION AND IN EACH READING COMPREHENSION SUB-SKILL

Skills	Group	M	SD	t-Value	Sig. Level	Effect size (η^2)
1. Identifying main idea	Exp	3.44	0.71	3.212**	.002	0.18
	Control	2.68	0.95			
2. Identifying details	Exp	9.60	1.19	6.904**	.000	0.50
	Control	7.32	1.15			
3. Identifying specific details	Exp	5.36	0.76	6.390**	.000	0.46
	Control	3.80	0.96			
4. Guessing unknown words	Exp	3.56	0.51	4.869**	.000	0.33
	Control	2.68	0.75			
5. Inferring implicit cause and effect	Exp	5.36	0.76	7.365**	.000	0.53
	Control	3.76	0.78			
6. Distinguish facts & opinions	Exp	5.48	0.77	4.233**	.000	0.27
	Control	4.36	1.08			
7. Drawing conclusions	Exp	2.64	0.49	2.969**	.005	0.16
	Control	2.12	0.73			
Total	Exp	35.40	4.39	6.247**	.000	0.45
	Control	26.64	5.47			

(**) significant at 0.01

TABLE 6
T-TEST RESULTS COMPARING THE POST ADMINISTRATION OF THE READING ENGAGEMENT SCALE MEAN SCORES FOR
THE EXPERIMENTAL GROUP AND THE CONTROL GROUP

Variable	Group	M	SD	t-Value	Sig. Level	Effect size (η^2)
1. Behavioral	Exp	39.36	4.73	10.560**	.000	0.70
	Control	23.52	5.82			
2. Cognitive	Exp	38.80	4.17	18.310**	.000	0.87
	Control	19.84	3.06			
3. Emotional	Exp	59.80	2.26	43.754**	.000	0.98
	Control	30.72	2.44			
Total	Exp	137.96	8.24	26.537**	.000	0.94
	Control	74.08	8.78			

(**) significant at 0.01

TABLE 7
T-TEST RESULTS COMPARING MEAN SCORES OF THE PRE- AND POST- ADMINISTRATIONS OF THE READING COMPREHENSION TEST FOR THE
EXPERIMENTAL GROUP IN OVERALL READING COMPREHENSION AND IN EACH READING COMPREHENSION SUB-SKILL (N=25, DF=24)

Skills	Administration	M	SD	MD	t-Value	Sig. Level	Effect size (η^2)
1. Identifying main idea	Pre	1.84	0.75	1.60	16.000**	.000	0.91
	Post	3.44	0.71				
2. Identifying details	Pre	6.16	1.31	3.44	18.767**	.000	0.94
	Post	9.60	1.19				
3. Identifying specific details	Pre	2.28	1.14	3.08	21.926**	.000	0.95
	Post	5.36	0.76				
4. Guessing unknown words	Pre	.96	0.84	2.60	18.385**	.000	0.93
	Post	3.56	0.51				
5. Inferring implicit cause and effect	Pre	1.40	1.04	3.96	36.768**	.000	0.98
	Post	5.36	0.76				
6. Distinguish facts & opinions	Pre	3.56	1.08	1.92	14.999**	.000	0.91
	Post	5.48	0.77				
7. Drawing conclusions	Pre	1.12	0.78	1.52	14.902**	.000	0.90
	Post	2.64	0.49				
Total	Pre	17.32	6.02	18.08	36.926**	.000	0.98
	Post	35.40	4.39				

(**) significant at 0.01

TABLE 8
T-TEST RESULTS COMPARING MEAN SCORES OF THE PRE ADMINISTRATION VS THE POST ADMINISTRATION OF THE READING ENGAGEMENT SCALE FOR
THE EXPERIMENTAL GROUP (N=25, DF=24)

Variable	Administration	M	SD	MD	t-Value	Sig. Level	Effect size (η^2)
1. Behavioral	Pre	19.40	4.60	19.96	17.043**	.000	0.92
	Post	39.36	4.73				
2. Cognitive	Pre	14.16	5.14	24.64	21.531**	.000	0.95
	Post	38.80	4.17				
3. Emotional	Pre	24.12	4.48	35.68	40.953**	.000	0.99
	Post	59.80	2.26				
Total	Pre	57.00	12.66	80.96	31.074**	.000	0.98
	Post	137.96	8.24				

(**) significant at 0.01

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Safaa M. Abdelhalim, born in August. 1978 in Giza, Egypt. BA of English, Helwan University, 1999, PhD in TEFL, Helwan University, 2008. She is associate professor in Faculty of Education, Helwan University, Egypt and College of language and translation, Imam University, Saudi Arabia. She has published more than 10 papers in Egyptian academic journals including studies in curriculum & instruction, issued by the Egyptian council for curriculum & instruction; Faculty of Education Journal, Aim Shams University; and Journal of Instruction & Educational Technology (JRCIET); and 3 English papers published in international journals and international conference proceedings. Her professional interests are in the domain of applied linguistics including pedagogical aspects of foreign/second acquisition, English language teaching, language testing and teacher preparation.