ENHANCING EFL STUDENTS' SELF CONTROL IN READING THROUGH COGNITIVE DEVICES

Zilola Mardanova Fatxullo qizi
English teacher at Uzbekistan state World Languages University, Tashkent city, Uzbekistan

---

ABSTRACT

This article is intended to give basic information concept mapping technique that is one of the most essential techniques which recently have attracted attention of researchers. Also, there are a many of researches investigating the impact of concept mapping technique on various skills such as reading, writing, listening, speaking and etc.., there are quite few studies on the effect of concept maps on motivational factors which are influential in students' achievement in reading such as self-regulation. This paper is based on investigating concept mapping as a cognitive tool that can contribute to develop self-control of students in a reading course. As we know, reading is the most crucial skill in education. While reading, we can use different methods and techniques that are useful and effective for improving our reading comprehension.

Key words: Methods, self-regulation, concept mapping, motivation, cognitive tool, techniques, reading, motivational factors.

I. INTRODUCTION

Reading comprehension plays a vital role in the academic life of many students. Much research has been done in recent years on how to find ways to improve student reading comprehension. It was found that motivational factors are closely related to the achievements and success of students in academic life. As a result, finding ways that enhance the motivational factors of students seems to be very rewarding. But the question that needs to be answered is what methods or strategies can lead to improved student motivations and thus their achievement.One of the motivational variables that act as a factor contributing to student learning is self-regulation.Despite the importance of this factor, little research has been done on methods and techniques that can improve this trait. One of the techniques that have recently caught the attention of researchers is conceptual mapping. Concept mapping has proven to be a valuable tool for improving the cognitive processing aspects of conceptual knowledge.It meets the requirements of effective conceptual, information and resource knowledge management in one consistent visual display (Cañas et al., 2005, cited in Tergana et al., 2006).

Concept mapping has been shown to be very effective in improving student reading comprehension from many studies (Chapman &Tunmer, 2003; Chularut&DeBacker, 2004). Concept maps also hold great potential for assisting learners in self-directed learning and knowledge management (Tergan, Gräber, & Neumann, 2006).

In the present study, we hypothesized that, through the processes involved in concept mapping, it could facilitate student self-regulation in reading comprehension. Thus, the study is trying to find out if this method can contribute to self-regulation of students in the reading course.

According to Zimmerman (2002), self-regulation is defined as a person's ability to come up with thoughts, feelings and actions that lead to the achievement of his / her goals. Students will have enhanced self-regulation to increase motivation, as this is one of the very important motivational factors. Those who are highly regulated can be compatible with different situations and find solutions by approaching the problem with confidence and purpose (Zimmerman, 2002). Self-regulation requires students to go through three processes: self-observation, self-assessment, and self-response (Bandura, 1986). Four regularly recurring cognitive cycles

are applied in the Pintrich model (2000), which shares some of the processes in common with self-regulation models.

The first stage is associated with planning, setting a goal, and assessing the premise associated with approaching the task.

The second stage involves another self-control process that points to cognitive self-awareness and personal learning strategies.

The third phase deals with various aspects of self-control / regulation and tasks in situations. In the fourth phase, reactions or reflections about the process are manifested. Pintrich (2000) argues that the processes of self-awareness and control / regulation in the second and third stages are the main promising results in the learning process.

Pintrich and Degroot (1990) conducted several studies that led to the heuristic experience of Pintrich (2000). The important influence of self-efficacy beliefs in the use of metacognitive learning and cognition regulation strategies is presented in their research as seeking to find and improve self-regulatory learning in children (Pintrich&Degroot, 1990). Students' performance increases as they use motivational beliefs and learning strategies to self-regulate. This is indicated in the literature (Camahalan, 2006; Dresel, &Haugittz, 2005).

Pintrich (2004) argues that motivational beliefs are very important in the learning process. He also emphasizes that these beliefs should be regulated as self-efficacy so that they can be used in the learning process.In this direction, Zimmerman (2000) proposed three recurring stages in the self-regulation process: foresight (deliberate deliberation), execution (implementation), or volitional control (control of decision-making). The first part refers to those activities that are performed prior to training; for example: student motivation, self-efficacy, goal setting and planning.

In the second stage, students focus on the task to improve their performance; for example, close scrutiny, record keeping, and observation.In the process of self-reflection, they have such processes as self-observation and self-esteem. At this stage, students compare their achievement with a standard or goal and try to find the reason for the differences, if any. They want to know if the difference between their scores and the standard scores is due to their potential weakness or their inadequate effort.

Self-regulatory learning will arise from the student's motivational beliefs and metacognitive and cognitive learning strategies. Schunk and Zimmerman (1997) identified three main stages in the self-regulation process: introspection, self-esteem, and self-response. Planning, time management, attention and focus on learning, the use of cognitive and metacognitive strategies, the creation of a creative learning environment, and the use of social sources are essential in this process.Kesici and Erdogan (2007) mention some factors that influence the assessment of the motivational process: materialization of goals and their results, the formation of positive beliefs about their abilities, assessment of learning and its results, as well as positive experiences that influence learning.

Self-regulation and achievement.

The relationship between self-regulation and achievement has been confirmed in various studies. Pajares (1998) sought to investigate whether there is a relationship between types of goal orientation, self-regulation processes, and school performance, and why the differences between self-regulation and academic performance in their profiles are the result of a combination of learning and goal orientation. 702 college students, that is, 239 men and 463 women, responded to a questionnaire to assess their orientation towards goals and learning. The results showed that, for all of them, there is a systematic link between self-regulation, learning goals and academic performance.

Wang & Pape (2003) examined oral protocol data and strategy questionnaire data from 40 sixth and seventh grade students. The questionnaire was adapted using the interview guide developed by Zimmerman and Martinez Pons (1986), including five scenarios that high school students might encounter in their school work. About 80% of the participants reported some important aspects of academic behavior, such as seeking information and social assistance, goal setting and planning, organization and transformation.

Moreover, there were no significant differences in the total number of strategies reported a group with higher achievement in mathematics than a group with a lower level of achievement.Significantly, both high achievement groups, that is, mathematics, reading, and successful problem solving, reported more examples of strategic behavior. Wang and Pape (2003) considered variability in strategies and strategy categories to be the main reasons for student achievement in math and reading. Their research showed that with a limited number of different strategies and categories of strategies available, even less successful students easily used the same strategies available to them. Similar results have been obtained in other studies (Chamot& El Dinary, 1999).

In another study, Perry et al. (2001) found that academic performance as measured by the latest course grades is positively associated with several metrics such as academic control, intrinsic motivation, self-control, and perceived control. In this longitudinal study, data collection was conducted by researchers at the beginning and end of the school year. A negative correlation was observed between anxiety about failure, anxiety about course, boredom, and graduation grades. Conversely, students with higher levels of academic control were more motivated, used self-control strategies, and had more control over their assignments and lives, and this influenced not only their perceptions but also their grades. As the results of these studies clearly show, self-regulation and its components, such as self-control, are associated with the academic performance of students.

In a recent study, elik et al. (2012) sought to find out the use of communication and information technologies for self-regulation among university students. The results did not reveal significant differences between the use of ICTs by male and female students for self-regulatory learning, or their academic level. In addition, participants reported on the use of ICTs to practice listening, vocabulary and writing skills. The authors continue to propose integrating ICT for self-regulation with teacher support and student learning.

II. METHODOLOGY

A concept map is a graph organization consisting of nodes connected by lines with labels (see Appendix). Concept maps can be used as an information illustration device to show the relationships that exist between conscious concepts (Jacobs-Lawson & Hershey, 2002). Concept mapping is a visualization technique with a long tradition in educational context as a cognitive tool to improve learning. This method was proposed by Novak and Gowin (1984) based on the ideas of Osubel (1963), who defended the idea that subject knowledge

of a person is mentally represented in a hierarchy of concepts. It is proposed to use conceptual mapping to take advantage of the remarkable capabilities of the human visual perception system and the benefits of visual presentation of information. These advantages include (a) ease of recognition, (b) the ability to quickly scan an image and find differences or keywords, (c) a compact presentation, and (d) observation, which seems to be easier to review. (Kommers&Lanzing, 1997, p. 423, cited in Tergan, et al., 2006). The mapping of concepts is based on the principles of two theories; namely, Osubel's theory of assimilation (1963) and the theory of constructivism (Colburn, 2000).

According to Chiou (2008), in a typical conceptual mapping class, the teacher first explains the usefulness of the conceptual mapping tool for teaching, details how conceptual mapping can be used to illustrate the relationships between concepts, and then the students are taught to draw. concept maps according to the procedures suggested by Novak and Govin (1984). After completing the passage, students are asked to use concept cards to represent what they have learned from the passage. The teacher then corrects the concept maps created by the student.

However, there are a number of studies examining the effect of concept mapping techniques on various skills, such as reading, writing, etc., there is quite a bit of research on the effect of concept mapping on motivational factors that influence student reading success, such as self-regulation. With this need in mind, we conducted a study to see if conceptual mapping would yield better results than traditional approaches to teaching reading currently being applied in the Iranian context. Specifically, the present study seeks to investigate whether concept mapping as a cognitive tool can improve student self-regulation in a reading course.

Participants.

From among 120 students who volunteered to participate in the study, sixty sophomores who had registered for English reading comprehension course II were selected in the study. The age range of participants was 19–25 (who turned out to have the same intermediate proficiency level based on the results of Nelson English language proficiency test). The students were randomly placed into the experimental (N =30) and control (N=30) groups. In terms of geographical region, they were from the same location. All of the participants had studied English for six years in public schools and university. The teacher and the textbooks for both classes were the same to avoid confounding effects on the experiment. None of the students reported previous experience in concept mapping.

III. ANALYSIS AND RESULTS

In order to evaluate self-regulation of students, 13 items in MLSQ (Pintrich& De Groot, 1990) which measure this trait were used. In this questionnaire, students are required to report their understanding of items in a likert-type manner. These items range from “completely true of me” to “not at all true of me”. This questionnaire has been used widely in different countries including Iran. It has been proved to have a high index of reliability.

Instructional materials in classes consisted of six passages selected from TOEFL practice tests (Pyle, 2001) and two passages from Readers Digest magazine. The difficulty level of these passages was medium based on the judgment of two experts and piloting on a sample with similar characteristics of participants. Another instrument used was a booklet which was prepared by the researchers in order to teach students how to draw concept maps. It was complied using many sources such as Novak and Gowin, 1984; Llewellyn, 2007).

Procedure.

At the outset of the study students were informed about the aim of the study and necessary consent forms were obtained. In the first phase of the study the homogeneity of students in terms of reading comprehension was insured through Nelson test of English proficiency. In the next phase, the self-regulation in reading measure was administered to all of the students in both groups.

In the learning phase of the study, students in concept mapping group studied the materials using concept maps i.e. they were supposed to draw maps for paragraphs and passages. For both control and experimental groups, the reading materials were the same, however, they were taught in two methods. Students in the control group were taught using conventional method i.e. through individual reading and question-answer type.

This method of teaching reading is prevalent in Iran. The strategy instruction phase followed the following steps adopted from Harris and Graham (1996): "(1) Strategy description, (2) Discussion of goals and purposes, (3) Modeling of the strategy, (4) Student mastery of strategy steps, and (5) Guided practice and feedback" (cited in Talebinezhad&Mousapour, 2007: 76). After familiarizing students with concept mapping, students started drawing maps for passages based on their understanding. The teacher provided feedback on students' performance and helped them correct their mistakes. Upon completion of a 10-week treatment program, the post-test on self-regulation was administered to examine the treatment effect.

IV. DISCUSSION AND FINDINGS

The findings of the study clearly show that the students' self-regulation in reading improved significantly as the consequence of the concept mapping strategy instruction. These results are consistent with the findings of other researchers (Wang & Pape, 2003; Talebinezhad&Mousapour, 2007; Chularut, &DeBacker, 2004; Perry et al., 2002). The literature suggests that when students use motivational beliefs and learning strategies for self-regulation, their successes increase (Camahalan, 2006; Dresel, &Haugwitz, 2005). Planning, managing time, attending to and concentrating on instruction, using cognitive learning strategies, building a productive study environment, and making use of social sources are crucial in learning.

There are some explanations for the outperformance of students in concept mapping group. In concept mapping group, students applied cognitive and metacognitive strategies in order to complete the maps e.g. they decided on important material presented in the passages. This may have contributed to students' improvement in self-regulation. In addition, strategies for evaluating motivational processes like setting performance goals and outcomes, holding a positive attitude about one's capabilities, and evaluating learning, its outcomes, and positive experiences that can affect learning have a considerable role (cited in Kesici& Erdogan, 2007). Students in the concept mapping group used mapping as a cognitive strategy. This strategy may have helped them regulate their learning through different processes which necessitates drawing maps. As results showed this strategy leads to students' success.

In addition, according to Pintrich's model (2000) regarding four phases that incorporates the processes common among models of self-regulation. Phase one involves planning and goal setting as well as the assessment of one's prior knowledge in relation to the task at hand. Phase two focuses on various monitoring processes that represent metacognitive awareness. Phase three involves control/regulation of different aspects of one's self and the task in context. Phase four represents one's reactions or reflections of the process. Considering concept mapping strategy, one can suggest that creating concept maps requires most of these

phases. In the first phase which is the goal setting, students were given some texts and they were required to draw concept maps based on the given texts. In this phase students set a goal i.e. the goal of drawing concept map is for reading the texts. Phase two is monitoring phase. In concept mapping group, after students drew concept maps they were required to revise and reconsider the maps which they created to see if they were in harmony with the reading material. This can be regarded as monitoring phase. In phase three students corrected the mapping parts which they had not considered. So it can be concluded that concept mapping utilized all four phases and enhanced self-regulation of students in reading.

The study has implications for teaching, learning and syllabus design. Teaching concept mapping strategy will bring organization to activities which are often difficult for EFL students to achieve like reading and changes them to pleasant and attractive tasks. In addition, through direct instruction of concept mapping, students will become familiar with this strategy and can apply it for reading and understanding different texts. Teachers can help students organize their understanding of what they read with concept mapping strategy.

Furthermore, teachers can teach students how to connect their ideas and what they read and find the interrelationship among different ideas. With the support of concept mapping technique, students' impetus for engaging in different class activities like reading different texts will be increased. Students' more optimistic attitudes of reading and of themselves as readers may act as a step toward amplifying the quantity and quality of reading. Many English language learners are not able to find out how the content illustrated from passage to passage is related. Course-related content should be utilized to strengthen learners' impetus in concept mapping and disclose the real beneficial effects of concept mapping in improving the quality of different courses.

Teachers can employ various methods to help students see how ideas or concepts relate to one another and fit into a larger picture. Understanding the relationships among concepts helps students grasp them more quickly and efficiently and develop well-structured mental pictures about the content they are learning. From the educational practice standpoint, the study will inform instructional designers and teachers about the important and efficient uses of concept mapping strategies in their instructional design and teaching practice.

V. CONCLUSION

To sum up, the results of this study have clearly demonstrated that the use of conceptual mapping strategies in teaching reading comprehension has benefited Iranian students of English as a foreign language who are at an intermediate level of proficiency. In other words, student self-regulation can be improved by explicitly teaching concept mapping strategies. Therefore, it is very important to use concept maps when helping students to improve self-regulation, which therefore contributes to their reading success.It can be assumed that concept mapping is one of the influential methods in teaching classroom reading, as explicit teaching of concept mapping strategy promotes student self-regulation, which in turn contributes to their reading success. Teachers can increase the likelihood of readers' self-regulation by making reading enjoyable and enjoyable. Providing students with sufficient opportunities for self-regulation is a vital issue in creating such a situation. If students have little or no room to control their reading behavior, their self-regulation will be suppressed. When teaching a learning strategy, teachers should identify the strategy, explain why it is useful, demonstrate its use, give students the opportunity to practice using it in a learning setting, and show them how to evaluate its effectiveness and what to do if it does not work. (Duffyetal. 1986, citedbyTalebinejadandMusapur, 2006).

REFERENCES

1. Ausubel, D.P. (1963). *The psychology of meaningful verbal learning*. Grune and Stratton: New York.
2. Ausubel, D. P. (1968). *Educational psychology: A cognitive view*. New York: Holt, Rinehart and Winston.
3. Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.
4. Bandura, A. (1997). *Self-efficacy: the exercise of control*. New York: Freeman.
5. Cañas, A. J., Carff, R., Hill, G., Carvalho, M., Arguedas, M., Eskridge, T. C., Lott, J. &Carvajal, R. (2005) Concept Maps: integrating knowledge and information visualization, in: S.-O. Tergan& T. Keller (Eds) *Knowledge and information visualization: searching for synergies.* LNCS 3426 (Heidelberg, Springer-Verlag), 193–207.
6. Çelik, S., Arkin, E., and Sabriler, D. (2012). EFL learners' use of ICT for self-regulated learning. *The Journal of Language and Linguistic Studies*, *8*(2), 98-118. http://www.jlls.org/vol8no2/98-118.pdf.
7. Chamot, A. U. & El-Dinary, P. B. *(*1999*).* Children's learning strategies in immersion classrooms. *The Modern Language Journal*, *83*(3).
8. Chapman, J. W. and Tunmer, W. E. (2003). Reading difficulties, reading-related self-perceptions, and strategies for overcoming negative self-beliefs. *Reading & Writing Quarterly*, *19*, 5-24.
9. Chang, K., Chen, I., & Sung, Y. (2002). The effect of concept mapping to enhance text comprehension and summarization. *The Journal of Experimental Education*, *71*, 5-23.
10. Chularut, P., &DeBacker, T.K. (2004). The influence of concept mapping on achievement, selfregulation, and self-efficacy in students of English as a second language. *Contemporary Educational Psychology*, *29*, 248–263.
11. Chiou, C, C. (2008). The effect of concept mapping on students' learning achievements and interests. *Innovations in Education and Teaching International.* 45 (4), 375–387.
12. Dresel, M. &Haugwitz, M. (2005). The Relationship between cognitive abilities and self-regulated learning: Evidence for interactions with academic self-concept and gender. *High Ability Studies*, *17*(2), 201–218.
13. Jacobs-Lawson, J.M., & Hershey, D.A. (2002). Concept maps as an assessment tool in psychology courses. *Methods & Techniques*, *29*(1), *25–29.*
14. Kesici, S & Erdogan, A. (2007). Predicting college students' mathematics anxiety by motivational beliefs and self-regulated learning strategies. *College Student Journal. 27*, 493–504.
15. Narimanova J.Y. The importance of A.Walker's creative work in American literature.
16. Novak, J.D., Canas, A. (2006). The origins of the concept mapping tool and the continuing evolution of the tool. *Information Visualization. 5*, 175 – 184.