The Effect of a WebQuest-Based Program (WQBP) on Optimizing EFL Students' Self-Regulation

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Abstract:

The study aimed at investigating the effect of a webquest-based program (WQBP) on developing Egyptian secondary school students' self-regulation. The participants of the study were 20 students of a governmental secondary school in the town of Temay AlAmdid, Mansoura, Egypt. They were divided onto two groups: experimental group = No 20 and the control group No = 20. The study sought to answer one main question: what is the effect of a proposed webquest-based program on students' self-regulation? Two other sub-questions were posed as well: what are the features of the proposed WQBP that can enhance Ss' self-regulation? And Does the WQBP affect the secondary stage students' self-regulation? The study hypothesized that there would be a significant relationship between the WQBP and the Ss' SR. also there would be a statistically significant difference between the mean score of the experimental group and the control group on the post application of the SRQ in favor of the experimental group. A Self-Regulation Questionnaire (by Pintrich et al's, 1991) was used to measure students' self-regulation. The results were statistically treated using the SPSS package, 12th edition. The results indicated that the WQBP was effective in developing students' self-regulation. The study recommends using webquest in teaching EFL skills and subskills in addition to including it in teachers' professional development programs.

Key words: Webquest – self regulation – TEFL - Blended learning – self-efficacy – motivation, goal setting – monitoring -constructivism – scaffolding

Introduction

Technology has almost shaped our own look to every side of our daily life: education, entertainment, economy,
relationships, shopping, and even our way of thinking. Computer technologies have helped in improving education in all countries especially the developed ones. Due to technology, a lot of new methods and techniques of teaching and learning have emerged such as online learning, e-learning, distant learning, blended learning and flipped teaching.

It has been proved that computer mediated environments and technology enhanced ones encourage learners to learn and increase their own engagement, motivation and improve their attitudes towards the school subject. Technology has also helped teachers to facilitate and provide students with a more student-centered environment or approached through the use of interactive media multimedia resources. One of the most famous effective technological framework of the web is the webquest. WebQuest is a web-based inquiry-oriented learning framework that can be used by teachers to structure student-centered learning in a particular topic or subject using computer-based tasks and pre-selected internet resources. It is originated by Bernie Dodge (1992; 1995; 2001). It is usually constructed around a scenario that should be related to students' interests and usually has certain components: an introduction, task, processes, resources and evaluation.

One area in which the potentials of ICT tools requires further exploration is self-regulated language learning, an active, constructive process in which learners take the initiative in their learning experiences (Kizil & Savran , 2016). The learning activities prescribed in a webquest emphasize higher thinking, critical thinking, social skills and Scaffolded learning. Higher-order thinking skills such as analyzing, creating, evaluating, synthesizing that are prescribed in a webquest are all self-regulated skills.

Self-regulated learning means that students are the masters of their own learning. such student-centered learning approach like webquest aims at getting students be responsible for their own learning. they should be able to guide themselves, evaluated themselves after setting their own goals and seek to achieve
them. So, there is a relationship between webquest and self-regulated learning.

**Review of literature**

**Webquest:**

Webquest is an inquiry-based approach that is based on the constructivist theory of learning that describes learning as an active social learning process where the learner constructs his/her own knowledge by interacting with the learning environment and linking new information to previous knowledge, experience and ideas. Therefore, constructivists argue that the goal of instruction should not be getting learners know certain facts but to enable them to construct new plausible interpretations of these things using the provided links (Duffy & Jonassen, 1992; Asunka, 2017).

WebQuests have, according to Laborda, (2010) some advantages for language learning such as providing opportunities for lexical and language use input through reading that can be used to construct ideas and expressions either by immediate transfer or reinforcement of previously learners language, providing opportunities for experiential learning because the students seek information in a significant way of constructing meaning and to develop higher level thinking skills, involving written and oral language that can enhance oral development as students learn from the reading input as well as from their partners. Moreover, WebQuests provide teachers with an instructional framework to create meaningful online learning activities (Zheng et al, 2008). They also promote social interaction as the students need to communicate their findings in a realistic way. Webquests allow the contextualization of language learning. If students learn vocabulary in context, they tend to learn it better because the vocabulary becomes an active part of what they really need to know. Increasingly, they require previous knowledge to learn. Previous knowledge is used as scaffolding for new foreign language learning. Additionally the fact that students rehearse their practice, try them before the final task and negotiate meanings with their classmates also
permits the scaffolding of new knowledge based on the exposure to new language forms and personal thinking, hypothesizing and trying language forms. Webquests are also motivating. positive feedback such as understanding and being understood, a sense of achievement in performing the task, learning new concepts, contextualizing learning and having life-related learning are all constructive aspects of learning (Laborda, 2010).

Increasingly, webquests encourage cooperative learning and with WebQuests students can integrate their computer skills for their oral communication development through working with their peers. Therefore, it stimulates interactions in the target language. Also, they provide motivation and encourage critical thinking skills. Learners required not only to rephrase information they find, but also to transform it in order to achieve a given task.

Due to such characteristics, WebQuests have been applied extensively to various educational environments, and their related variables in addition to the field of TEFL. WebQuests can improve logical thinking ability in science education (Çigrik and Ergulm 2010); EFL learning (Siko, 2008); critical thinking skills (Vidoni and Muddux, 2002; Puthikanon, 2009); EFL lexical richness (Valesco, 2012); young learners' achievement (Unal et al, 2012); reading skills development (Tsai, 2005; Pulido, 2009; Shan, 2011; Tuan, 2011; ElKhateeb, 2012); reading and writing skills (Mostafa, 2009; Termsinsawadi, 2011; Alshummaimeri, 2012); as a tool of differentiation (Schweizer & Kossow, 2007); teachers' attitudes and reflections (Perkins & McKnight, 2005; Noordin et al, 2008) Mathematics Geometry (McCullers, 2005) teachers' and students' attitudes (Kocak, 2010) EFL writing skill (Chuo, 2007; Alshummaimeri et al, 2011; Alshummaimeri & Bamanger, 2013). It has been proved that WebQuests use in various learning environments influences learners’ learning performance positively. However, very few studies have investigated the relationship between WebQuests and the speaking skill of EFL (Laborda, 2009; Laborda, 2010). Additionally, no studies have investigated the impact of using
WebQuests technique on enhancing the listening skill of EFL learners'.

Most of these studies have proved the positive effect of webquest on enhancing EFL students' language skills especially reading and writing, students' engagement, motivation, attitudes...etc. It has been confirmed through these studies also that webquest confirms student-centered learning and enhanced critical thinking skills and higher order skills such as analyzing, synthesizing and evaluation. hence, webquest is liable to boost self-regulated learning.

Self-Regulation (SR), according to Pintrich (2000), has become an important topic in education nowadays (Steffens. 2008; Ekhlas & Shangarffam, 2012). It is defined as "an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate, and control their cognition, motivation, and behavior, guided and constrained by their goals and the contextual features in the environment." (Pintrich, 2000) Through a review of SRL in language learning literature (Ekhlas & Shangarffam, 2013; Magno, 2009; and Ismail & Sharma, 2012) indicated that using self-regulation has an important role in language learning process and it aims at high responsibility and autonomy of learners. These studies also supported the idea that individuals regardless of their age, proficiency level and background education use different self-regulation strategies. Also, they found that successful learners reconstruct their existing knowledge with new ones and are able to control their behaviors and affects in order to improve their academic learning and performance.

Magno (2009) categorized self-regulation strategies in seven main groups: memory, strategy, goal setting, self-emulation, seeking assistance, environmental structuring, learning responsibility and organizing. According to Bandura (1986 – cited in Ekhlas & Shangarffam, 2013); and Zimmerman (1989 – cited in Ekhlas & Shangarffam, 2013), the developing of self-regulation strategies is dependent on three areas of influences, which determine the direction and the degree of
application of self-regulation strategies. These factors are: personal influences, behavioral influences, and environmental factors.

**WebQuest and Self-regulation**

Results of literature proved that technology, especially the Internet is effective in promoting planning, monitoring and evaluating skills of the students; thus, contributing to self-regulation in their language learning. Behjat & Koleini (2014) pointed out that confidence is one of the blessings of a self-regulated learner due to the fact that through a flexible self-organized program and high motivation, he is able to plan for his own learning. Every individual is well aware of his own learning abilities, potentials, skills and can save the learning materials in his long-term memory; therefore, if he is self-regulated, his metacognition would be at his disposal to enhance his learning.

Duckworth et al. (2009) agreed that stress is a negative factor which can hamper the development of self-regulation. On the other hand, one of the goals of today’s technology, the Internet, is to provide a stress-free setting for learners to foster their skills and abilities in an environment which is so diverse and flexible that every single learner can find his own way through it to achieve what he is after. The web is equipped with different tools such as blogs, wikis, podcasts, e-portfolios, emails, podcasts and WebQuests. Social networks, as a product of the web is considered as an appropriate scene for all learners to share, enjoy and work on the skills they intend to improve independent of their individual differences. Carman (2002) enumerated major features of any Internet-based activity that language learners are involved in. They include being self-paced and performance-based, and having live events, assessment, and collaboration. He added that the most outstanding characteristic of the Internet is that it provides a flexible, anxiety-free environment for students’ learning.

Luzón Marco (2002) proposed that WebQuests as a web-based resource well fits in a learner-centered curriculum specially one which seeks to help students develop autonomous
learning in a stress-free environment. She commented that the use of technology for language learning purposes results in a learning environment in which students take more control of their learning without experiencing common anxieties that they usually have in a language classroom. In such a superb setting, one can see a great shift in the role of the teacher. He is not the knowledge transmitter, but to provide guidance and help students to find useful resources and offer support throughout the process whenever learners feel they need it.

This was also proved by Behjat & Koleini (2014) whose main objective was to find out if the Internet could be used as a self-regulating stress-free environment to enhance students' reading comprehension or not. They assured that the Internet helps students develop learning autonomously and thus in a self-regulated way in a stress-free environment. They concluded that learning a language in an environment in which students take more control of their learning without experiencing common anxieties causes an individual to be motivated enough to move forward in the learning process.

WebQuests has two important features that contribute to the students' learning process: scientific inquiry is fostered and promoted through guidelines (scaffolding) offered throughout the WebQuest to orient students' work, in particular the description of the work that they have to carry out, the steps that they have to follow and evaluation guidelines. These are found in the task, process and evaluation sections of the WebQuest, and cooperative learning has been fostered through defining and assigning roles. Students work in groups. Thus, students' SR can be enhanced.

Based on results of studies that investigated webquest with EFL skills, and its liability to boost SR, it has been also used to influence students' self-regulation. Some of these studies are mentioned below.

**Previous Studies**

Some studies investigated the relationship between webquest and self-regulated learning. Lewis (2006) explored if self-regulated learning skills significantly increased after
completing a WebQuest on self-regulated learning and/or completing self-regulated learning questionnaire. Participants were randomly assigned to three different training modules. Self-regulated learning was measured by the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich et al., 1991. The results of the study did not support the hypothesis that there were significant differences between the treatment and control groups on all but one scale on the MSLQ, time and study environment, was the scale on the MSLQ that was significantly different among the groups. Qualitative responses identified why students chose not to use self-regulated learning strategies and which self-regulated learning methods were most useful. Results also indicated that control beliefs, effort regulation, and rehearsal were predictors of final course grade.

Another study by Odom (2006) who investigated 8th grade African-American students' math academic achievement to answer two questions: (a) Can self-regulatory skills be taught effectively to middle-school or junior high school students? (b) Is technology (including WebQuests) an advantageous medium to use when facilitating self-regulation among adolescent students? Using an online course The quantitative results of this study did not reveal that the course model for self-regulation can significantly facilitate self-regulation. The quantitative results of the study did not provide evidence that the implementation of a self-regulation model, including goal-setting, monitoring, and evaluation, has a significant impact on math achievement. This study did not statistically support the hypothesis that the use of technology is directly and positively related to student achievement. However, from a qualitative perspective, this study did provide evidence that participants in the treatment group of the study perceived the study had an impact on their self-regulation skills and academic outcomes. However, a majority of participants of the study were enthused and satisfied with the outcomes and new skills learned from their participation in the study.

Wang (2011) used a webquest learning model to improve students' autonomy in learning English as a foreign language. The sample of the study was first year college students. All
students in the experimental group showed active and positive attitudes towards language learning. Experimental group members also showed more awareness of their learning strategies.

Hsiao et al, (2012) investigated the correlation between students' self-regulated learning behavior and their achievement when using the WebQuest learning through the self-regulated learning assisted functions and traditional WebQuest learning. The study developed self-regulated learning assisted functions, including self-evaluation and monitoring, goal setting and strategic planning, strategic implementation and monitoring, and strategic outcome monitoring, as proposed by Zimmerman et al (1996), for WebQuest learning. The participants of the study were 6th graders who proceeded to WebQuest learning on the topic of environmental protection soap, and they made use of the learning records in the system. The study examined whether or not self-regulated learning assisted functions in WebQuest learning can enhance learning outcomes. Also, researchers' observation and system recording are scrutinized to investigate learners' self-regulated learning process. The researchers established a WebQuest learning system with self-regulated learning assisted functions; investigated differences between students' learning outcomes from WebQuest learning with self-regulated learning assisted functions, and from traditional WebQuest learning; compared students' self-regulated behavior from WebQuest learning with self-regulated learning assisted functions, and from traditional WebQuest learning.

Koutsogianni (2014) conducted an action research on the impact of using WebQuest as a teaching strategy on students' reading skill, motivation and self-regulated metacognitive strategies. 30 2nd grade of the fourth junior high school Greek Students was the sample of this study. The study sought to answer the following questions: What are high school learners' perceptions about new literacies and how is their reading skills affected by using WebQuest application?, What is the influence of WebQuest on learners'/participants' motivation?, and How can
reading strategies adopted by WebQuest promote readers' autonomy? The researcher designed observation checklists and interviews to collect data. The results showed that there was a positive change in students' literacy skills and a higher intrinsic motivation. There was also a considerable change in students' perceptions about the degree of interest of the reading activities. They obviously found the way of presenting the topics more interesting than the one of the course book, the way of providing knowledge more appealing, the reading texts more entertaining and they felt less stress of being evaluated.

Jahromi et al (2016) investigated the impact of using WebQuest, team-based learning and task-based language learning on Medical Iranian Nursing students' self-regulation, self-direct learning and academic achievement. The participants were divided into two groups. The first group was taught using WebQuest (WQ). The other group was taught by using the Task-Based Learning. The results showed that the WQ group showed higher levels of self-control, self-management and self-regulation after the educational intervention. The study showed also that WQ can change the students' Self-control and self-management in learning as well as its direction. It also increases their own self-regulation. The results also showed that WQ group sees an increase in its students' SR median range.

Despite these studies, the Egyptian EFL context needs a study that investigates the effect of a webquest-based program on developing Ss' SR especially in the secondary stage. This is because students in secondary stage are in need to be aware of their self-regulated abilities to be responsible for their own learning and to be autonomous learners.

**The problem of the study:**

Based on this, the problem of the study can be summarized as follows: Egyptian secondary stage students are in need to be aware of their self-regulated skills in order to improve their EFL academic achievement. Hence, the present study sought to answer this main question:
What is the effect of a webquest-based program on developing secondary stage students' self-regulation?

Two sub-questions evolved from the main question:

- What are the features of the webquest-based program to improve Ss' SRL?
- Does the proposed (WQP) affect the secondary stage students' EFL Self-Regulation?

Research Hypotheses:

The study aimed at testing the following hypotheses:

- There would be a statistically significant difference at the 0.05 level between the mean score of experimental group and that of control group on the SRQ due to the effect of the webquest proposed program in favour of the experimental group.
- There would be a statistically significant difference at the 0.05 level between the mean score of experimental group on the pre and post administration of the SRQ due to the effect of the webquest proposed program in favour of the post application of the SRQ.

Aims of the study:

The study aimed at:

- Identifying self-regulated learning strategies used by Secondary School Students in learning EFL,
- Developing a WQBP and estimating its effect on developing secondary stage students' SR.
- Fostering the students' autonomy to work independently as they respond to specific WebQuests and achieve tasks embedded in them,
- measuring its effectiveness in developing the listening and speaking skills of Secondary Stage Students.

Delimitations of the study

The study was limited to:

- 40 Second Year General Secondary stage students.
A limited duration for implementing the proposed WQP (A school semester, i.e., nearly 3 months).

Research Methodology: Context:

The study was conducted in a governmental secondary school, Temay Alamdid Town, Mansoura, Dakahliya, Egypt. Students study the English language syllabus entitled, "Hello! English for Secondary Schools, Year Two".

Participants:

The sample was selective. Only students who have computer literacy participated in the study. This was determined by a Computer Skills Questionnaire (CSQ) prepared by the researcher. The participants of the study were amongst 2nd year students assigned on two groups:

- The experimental group (No. = 20) received the regular daily traditional teaching by their teacher in addition to the WQP by the researcher.
- The control group (No. = 20) received the traditional teaching only.

All the participants of the study had equal EFL level in terms that they all have studied in governmental schools and had the same English language courses since they were at primary school.

Design

The study adapted the Quasi-experimental design in terms of using two groups: experimental group (n = 20) and control group (n=20). The first group was taught using the webquest.

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1 This is a questionnaire aiming to sort students who are good at using computers and the Internet. It starts with gathering demographics of the students, then, in section one, it seeks student information as to whether students have computers at home or not and what type they are, whether they are connected to the Internet or not, and their experience and attitudes towards computers. Section two gleans information about students' computer skills, i.e. keyboarding skills, file management, word processing and operation systems. Section three seeks information as to skills of using the internet and how to access websites.
program while the control group was taught only using the regular traditional daily classes.

**Instruments of the Study**

To collect data, the following instruments were used:

- **The proposed WebQuest-Based Program (WQP):** The program consisted of eight short-term WebQuests, one WebQuest on each selected unit from the set book for 2nd Year Secondary. The program will be uploaded on a website that will be prepared by the researcher with the help of (a) technician(s). The selection of the themes of WebQuests will depend on the rich content of units and up-to-date themes.

- **A Computer Skills Questionnaire (CSQ) to measure the students' knowledge about computers and their ability to use the Internet.** This questionnaire was prepared in order to select the participants of the study. This questionnaire was prepared by the researcher.

- **The Motivated Strategies for Learning Questionnaire by Pintrich et al (1991).** It is to assess students/participants' self-regulation. It was translated and adopted to suit the Egyptian context and the level of students.

**Definition of Terms:**

**WebQuests:**

Dodge (1997) defines the 'WebQuest' as "An inquiry-oriented activity in which some or all of the information that learners interact with come from resources on the Internet."

**Self-Regulated Learning (SRL):**

Self-Regulated Learning or self-Regulation (SRL) is an academically effective form of learning, through which the learner set goals and make plans before starting to learn; monitor and regulate his/her cognition, motivation and behavior during the learning process; and reflect on his/her learning process (Pintrich, 1995; Pintrich, 2000; Zimmerman, 2001).

**The Intervention:**

The researcher established a website on the Internet for the purpose of this study. It is www.ahmedphd.com and
uploaded the eight webquests on it. The study lasted for three months. At the end of the intervention the researcher used the SPSS package to statistically calculate or estimate the difference between the participants' responses on the SRQ before and after the intervention.

**Results of the study:**

Hypothesis One: There is a statistically significant difference at the 0.05 level between the mean score of the experimental group and the control group on the post administration of the Self-Regulation Questionnaire (SRQ) in favor of the experimental group.

To verify this hypothesis, the researcher used Mann-Whitney test and z effect size formula. The results are shown in the following table:

**Table 1: Comparison between mean score of the study groups on the post application of the SRQ**

<table>
<thead>
<tr>
<th>SCALES OF SRQ</th>
<th>THE GROUP</th>
<th>N. OF CASES</th>
<th>MEAN RANK</th>
<th>SUM OF RANKS</th>
<th>Z. VALUE</th>
<th>SIG.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation Scale</td>
<td>Control</td>
<td>20</td>
<td>14.68</td>
<td>293.50</td>
<td>-3.180</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>20</td>
<td>26.33</td>
<td>526.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning strategies</td>
<td>Control</td>
<td>20</td>
<td>14.25</td>
<td>285.00</td>
<td>-3.392</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>20</td>
<td>26.75</td>
<td>535.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Score on The Whole Questionnaire</td>
<td>Control</td>
<td>20</td>
<td>13.15</td>
<td>263.00</td>
<td>-3.985</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td>Experimental</td>
<td>20</td>
<td>27.85</td>
<td>557.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A closer look at (table 1) reveals that mean score of the experimental group members were remarkably high and alike. They were 26.33 on the motivation scale and 26.75 on the scale of learning strategies. On the other hand the mean score of the members of the control group were noticeably low. They were 14.68 on the motivation scale and 14.25 on the learning strategies scale. This indicates that there were statistically significant differences between the control group and the experimental group in the post application of the SRQ in favor of the experimental group. This means that the WQP was highly effective in developing the control group's self-regulated learning.
Hypothesis Two

There is a statistically significant difference at the 0.05 level between the mean score of the experimental group on the pre and post administration of the self-regulation Questionnaire (SRQ) in favor of the post administration.

To verify this hypothesis, the researcher used Wilcoxon Signed Ranks Test formula. The results are shown in the following table:

**Table 2: Comparing the mean scores of the experimental group on the pre and post administration of the SRQ**

<table>
<thead>
<tr>
<th>The SRQ Scales</th>
<th>Rank</th>
<th>N. of cases</th>
<th>Mean Rank</th>
<th>Sum of Ranks</th>
<th>Z. Value</th>
<th>Sig.</th>
<th>η²</th>
<th>Effect size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motivation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Ranks</td>
<td>0</td>
<td>0.00</td>
<td>0.00</td>
<td>-3.62</td>
<td>5</td>
<td>0.0</td>
<td>81.1%</td>
<td>High</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>17</td>
<td>9.00</td>
<td>153.0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Learning strategies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Ranks</td>
<td>3</td>
<td>2.83</td>
<td>8.50</td>
<td>-3.60</td>
<td>6</td>
<td>0.0</td>
<td>80.6%</td>
<td>High</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>17</td>
<td>11.8</td>
<td>201.5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>0</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Score on the whole Questionnaire</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negative Ranks</td>
<td>1</td>
<td>1.00</td>
<td>1.00</td>
<td>-3.88</td>
<td>6</td>
<td>0.0</td>
<td>86.9%</td>
<td>High</td>
</tr>
<tr>
<td>Positive Ranks</td>
<td>19</td>
<td>11.0</td>
<td>209.0</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ties</td>
<td>0</td>
<td></td>
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<td></td>
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<tr>
<td>Total</td>
<td>20</td>
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</tbody>
</table>

A closer look at table 4 reveals that the mean score of the experimental group members on the post administration of the SRQ were noticeably high and statistically significant when compared with their own mean scores on the pre administration of the same questionnaire. The group's mean score were 9.00 on the motivation scale and 11.85 on the scale of learning strategies. Increasingly, the size effect of the program of webquest was also remarkable high as the z value was (3.886) and the η² was 86.9%. This indicates that the webquest program was very effective.
in enhancing or boosting the participants' self-regulated learning.

**Discussion**

The present study found that the WQP was highly effective in enhancing secondary stage students' self-regulation. It was evidently found that the experimental group performed better on the post application of the SRQ.

Based on the experiment and its findings, WQP enhanced students' self-regulation in terms that they found, analyzed, classified, synthesized and evaluated information they got on the Internet, and integrated new concepts or information into their established knowledge structures (schema). The proposed program also used integrated language learning in terms that students had to listen, then read, speak and write what they have found out in a new paradigm.

In addition, WebQuests engaged learners' interest and motivation, encouraged critical thinking and supported cooperative learning. Working in cooperative learning groups, students improved their spoken language skills through interaction with peers, interviewing and conversing with their peers, negotiating meaning and improved their writing skills when creating information texts in electronic, print and audiovisual formats.

These positive findings and significant differences between the control and experimental group might be due to the efficiency of the WQP. The design of the proposed webquest program had certain features that helped the experimental group do well on the post administration of the pre posttests of SRQ. First, using peer-learning helps learners to correct each other’s mistakes by exchanging their own information. Second, the researcher’s continuous direction to students during their work. The researcher used to guide them, correct them, and assess their work. This direction helps students' see their own right.

Moreover, using the webquest made students depend on themselves and cooperate together in addition to being aware of
what they should do during their learning. They have known how to set a goal for their learning and how they can achieve it. Additionally, using pair work and group work proved to be vital in doing their own tasks well. Finally, the non-traditional role of the teacher during the program made the learning process supporting and interesting. The teacher or the researcher was a guide, a helped, a mentor and a supervisor in addition to Using the students the reflection log to assess or evaluate themselves made them dependent and self-confident.

The present study revealed that the effect size of WQP on students' self-regulation was large as the students of the experimental group outperformed those of the control group on SRQ post administration. These results are in line with literature findings found by (Hsiao et al, 2012 and Odom et al, 2008) which implied that traditional learning environments do not prepare students for the high degree of self-regulated learning in comparison to computer-based and web-based environments (Hartley, & Bendixen, 2001- quoted by Farajhollahi & Moenikia, 2010). Computer-based instruction and technology-based environment have the potential to allow students to study the program at their own rates. They can take charge of their own learning since they can control their own learning process. This was one of the reasons of the success of the webquest program.

As evidenced by this study that students became participants in the learning process not just receivers or listeners. Moreover, they are in charge of their learning. They have to decide on their goals, control their own learning environment, learn at their own pace and monitor their own progress. They can also construct their own meanings, new goals and strategies from information available online and from their schema (Wolters et al., 2003; Pintrich, 2000). This means that the present study is in consensus and agreement with previous literature.

The results of the study are in agreement with the researcher's observations during the experiment, in that students exhibited more confidence while searching for
information about their topics as the days progressed. As a teacher, the researcher was very comfortable knowing the links were already provided and the resources were developmentally appropriate for their age group and were still there online. Some students expressed that the textbook was full of dull information whereas the webquest website had colorful attractive pages and interactive online tools.

**Conclusion:**

Webquest as a teaching strategy is very effective in enhancing students' academic achievement and self-regulation as proved by previous studies.

**Recommendations of the Study:**

Based on the results of the study, the following recommendations should be taken into consideration

- Teachers should help the students become independent learners by using different kinds of cognitive, meta-cognitive, and SRL strategies.
- Educational experts and authorities should familiarize their teachers and instructors with the importance of and knowledge of learning strategies in general and SRL strategies in particular.
- SRL is a very important skill for both teachers and students to know themselves and their capabilities better. It is, therefore, important for success.

**References:**


Odom, S. (2006). The effects of self-regulated learning strategies and technology instructional strategies on the maths achievement of junior high students. A PhD Dissertation, the Graduate Faculty of the University of South Alabama, USA.


