Full Length Research Paper

The effect of given homework upon the instruction of self-regulation strategies that were directed to develop self-regulation strategies

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The aim of this study is to specify the effect of self-regulation strategies upon the instruction of secondary school 5th grade students, whom were given homework to do. In this research, pretest - posttest control group design of experimental method was used. Self-Regulation Learning Strategies Scale (SRLSS), the sub-dimension of the Motivated Strategies for Learning Questionnaire Scale (MSLQS), was used as tool to collect quantitative data, which was originally developed by Pintrich and de Groot (1990) and adopted to Turkish by Üredi (2005). This study includes 62 secondary school 5th grade students from two classrooms studying during the 2012 to 2013 school year. The study was handled upon one topic, lasted for five weeks. During this process, the instruction of self-regulation strategies was practiced by giving homework to the experimental group of students. Homework was used as an instrument to gain the self-regulation strategies. The students responded to forms of watching the results of self-regulation strategies after they finished their homework. The homework and the responded forms were controlled and feed backed by the researcher day by day. As a result of the study, it was performed that instruction by doing homework; for gaining the self-regulation strategies helps experimental group of students to get significant differences.

Key words: Self-regulation strategies, homework.

INTRODUCTION

In recent years, caring about learning and the need of students to regulate their own learning activities has caused the concept of self-regulation to gain importance. Self-regulation means an individual’s judging by comparison according to his on scales by observing his own behaviors and if it’s needed; making fit his own behaviors according to the scales (Senemoğlu, 2012). According to Zimmerman (2002), self-regulation is a process for a student’s leading his feelings, thoughts and behaviors to persuade a goal.

The self-regulation strategies are the operations which the students perform; they think that those operations will be useful for themselves and will help themselves to get the knowledge and tasks which they need (Zimmerman, 1989). These operations are cognitive strategies which planning, watching and changing of cognition, the leading of the students’ effort to succeed an academic task in the classroom, the students’ using cognitive strategies like repeating, making sense and organizing for learning, remembering and understanding (Pintrich and De Groot, 1990). As for Pintrich (1999), he classified the self-regulation strategies as; metacognition strategies (planning, watching and arrangement), cognitive strategies (repeating, articulation and organization) effort
arrangement strategies, seeking help strategies, time management strategies and management of resources strategies. During the self-regulation process the individual himself is active. During the self-regulation process, the students observe and rate themselves. When needed, they refer to a source or they seek the advice of their friends or teacher (Açıkgoz, 2007). According to Zimmerman (2002), the students capable of using the self-regulation strategies are active during the process. Because they know their strong and limited sides, they set goals for themselves and they use strategies related to the topic. Besides, the students using the self-regulation strategies may decide the needs of the topic and what is necessary for it. The students using the self-regulation strategies effectively, gain the ability to use the strategies to set a target, arrange the learning process decide the strategies to realize the targets, practice the strategies, control their learning and academic achievement be capable of rating for their own learning. Those strategies are important for the students’ permanent learning (Zimmerman, 2002). It is an important factor to give opportunities for students to instruct the self-regulation strategies to progress the self-regulation strategies. For this purpose, the students must plan and watch their own learning, besides they must feedback themselves in addition to all those activities, an environment of teaching/learning which must be organized for students to allow correcting their own learning (Güvenç, 2011). One way of teaching, self-regulation strategies is to give homework to the students. It may be claimed that doing homework, may support the learning of self-regulation strategies. Because doing homework teaches the students the habit of studying independently and self-discipline. Doing homework also makes the students to begin and finish the duty they’ve been given at the right time, to the responsibility and gain the ability to organize the process of learning (Cooper, 2006). Homework mainly helps the students in their personal progression and to progress the perception of taking responsibilities (Zimmerman and Kitsantas, 2005).

While doing their homework, students model their own learning and structure their comments. The students organize their learning by deciding which way and method is useful to achieve their targets (Winne, 1995).

When the studies about homework are analyzed, it is observed that in most of these studies, the aim is to specify the effect of time while doing homework for students’ academic and school successes (Keith, 1986; Demirel, 1989; Cool and Keith 1991; Yapici, 1995; Altonji and Thomas, 1996; Holloway, 2000; Schmitz and Baumert, 2002; Sweat and Zahner, 2004; Özcan, 2003; Özen, 2006; Kaplan, 2006; Heitzmann, 2007; Hizmetçi, 2007; Büyüktokatlı, 2009; Atlı, 2012). But, it is also observed that any experimental studies are practiced directed to students’ identifying, learning and usage of self-regulation strategies in a related structure of students’ homework. Because of this reason, it has been regarded significant in this study to research the effect of homework related with social studies lesson, help the students to gain the ability for using the self-regulation studies.

The aim of this study is to specify the effect on the secondary school 5th grade students whom were given homework during instruction process about the lesson social studies and “Realized Dreams” topic while learning the self-regulation strategies. For this purpose, answers were searched to the sub-problems below.

1. Is there a significant difference between the pretest points according to the scale of self-regulation strategies that belong to the students of experimental group and the students of control group?
2. Is there a significant difference between the pretest and posttest points according to the scale of self-regulation strategies that belong to the students of experimental group?
3. Is there a significant difference between the pretest and posttest points according to the scale of self-regulation strategies that belong to the students of control group?
4. Is there a significant leveled difference between the posttest points according to scale of self-regulation strategies that belong to experimental group with the posttest points according to self-regulation strategies that belong to the control group?

**METHODOLOGY**

This study was realized according to the “pretest - posttest control design model” just for specifying the effect of doing homework during the instruction of self-regulation strategies. In the “pretest - posttest control design model” there is two groups, formed by objective assignment. Thus, one experiment and one control group were formed and then measurements were made before and after the experiment.

The pretests which were included in the model and practiced upon groups before the practice, help to specify the levels of similarity of the groups before the experiment and as for the pretests; they help to comment the results (Karasar, 1995; Cohen et al., 2007).

**The study group**

This study includes 62 secondary school 5th grade students from two classrooms studying during the 2012 to 2013 school year in the city of Sakarya, Turkey.

For specifying the groups of experiment and control, the ideas of the teachers of the social studies lesson and the points of pretest that the students got from the scale of self-regulation were referred. There were 30 students in the group of experiment and 32 students in the group of control.

The studies performed in the experimental group consist of two steps. The first step is preparation and the second step is performing. In the preparation step; for supporting the students’ instruction of self-regulation strategies; by using the self-regulation
strategies watching forms which were developed by Zimmerman et al. (1996). The forms as follows were prepared and used; the form for development of ability of listening, the form for development of ability of taking notes, the form for developing the abilities of understanding and summarizing the text that has been read, the form for developing the abilities to get ready for the exams, the form for developing the abilities of using and planning time during the studying process and the form for developing the abilities to summarize what they have read. The forms, which were prepared before the practice, were detailed to the students and they were taught how to fill them. The forms prepared and their purposes are given in Table 1.

Table 1. The forms for watching the self-regulation strategies and their purposes.

<table>
<thead>
<tr>
<th>Used forms</th>
<th>Purposes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form for development of ability of listening</td>
<td>This form is formed of the knowledge given by the teacher in the classroom about a topic and questions which must be asked after an activity of discussion that has been performed in the classroom.</td>
</tr>
<tr>
<td>Form for development of ability of taking notes</td>
<td>This form includes re-arranging of some logical knowledge in an order and the notes of re-writing. This form helps the students to gain the ability of repeating, organizing and arrangement of strategies.</td>
</tr>
<tr>
<td>The form for development of abilities of understanding and summarizing the text that has been read</td>
<td>This form contains the question which develops the students’ ability to write significantly. This form helps the students in targeting, strategic planning, understanding what they read and gaining the strategies to direct the resources.</td>
</tr>
<tr>
<td>The form for developing the abilities of using and planning time during the studying process:</td>
<td>This form helps the students in time management, planning and gaining strategies in organizing effort.</td>
</tr>
<tr>
<td>The form for developing the abilities to get ready for the exams</td>
<td>This form has a content directed to students’ specifying which grade they expect from exam and gaining the abilities to get ready for exams. This form also helps the students in repeating, gaining the strategies for effort management and gaining strategies for seeking help.</td>
</tr>
<tr>
<td>The form for developing the abilities to summarize what has been read</td>
<td>This form is formed of questions about the books that has been read and understanding the content of reading texts and result out the level of concerning the main idea with the content. This form helps the students in arranging, in managing the resources and in gaining the strategies of repeating.</td>
</tr>
</tbody>
</table>

The process of implementation

In this study the instruction of the topic “Realized Dreams” was performed by the teachers of social studies lesson. In the experimental group, social studies schedule, guide and lesson books were given in addition to homework arranged and given for gaining the self-regulation strategies. It was asked to fill the forms for taking under control the levels of learning the self-regulation strategies after finishing the homework. It was required from the students to deliver the forms on the same day that the homework was collected. Every filled form was analyzed, and feed backed if it is both for homework and forms needed. Afterwards, the studies practiced were collected by the researcher regularly and the necessary ratings were done.

In the control group, the students realized their learning by using the traditional approaches (expression, question-answer, demonstration etc.) which are based on the teacher by performing their role as listeners and by doing their homework. The level of practicing was completed synchronously in both control group and experimental group.

The instruments for collecting data

In this study as a sub-dimension of the motivated strategies for learning questionnaire, the scale of learning of self-regulation strategies was used as an instrument to collect quantitative data which was originally developed by Pintrich and De Groot (1990) and adopted to Turkish by Üredi (2005). This scale including 22 items was practiced upon students. While the scale for “self-regulation strategies” measure management of effort strategies with metacognition strategies like planning, watching, controlling the scale for usage of cognitive strategy measure the frequency of usage of the strategies of repeating, making sense and organizing (Üredi, 2005).

In the study of adopting the scale to Turkish by Üredi (2005), Cronbach’s alpha values related with “self-regulation” scale was found out as 0.84.

The analyzing of data

In this study, the data collected were gathered in two phases. The pretest and posttests were practiced upon control and experiment groups. In analyzing the data, t-test, arithmetic mean (\(\bar{x}\)), standard deviation (Ss), frequency (f), percentage (\%) was used as statistical
Table 2. Comparison of pretest points due to the scale of self-regulation strategies which belong to the students in control and experimental groups.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>( \bar{x} )</th>
<th>Ss</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>30</td>
<td>33.20</td>
<td>9.24</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Control</td>
<td>32</td>
<td>34.10</td>
<td>7.86</td>
<td>.68</td>
<td>.602</td>
</tr>
</tbody>
</table>

p<.05

Table 3. Comparison of pre-test and post-test points due to the scale of self-regulation strategies which belong to the students in experimental group.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Tests</th>
<th>( \bar{x} )</th>
<th>Ss</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>32</td>
<td>Pre-test</td>
<td>33.20</td>
<td>9.24</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post-test</td>
<td>59.68</td>
<td>8.86</td>
<td>6.68</td>
<td>.000</td>
</tr>
</tbody>
</table>

p<.05

RESULTS

In this chapter, there are results about the sub-problems of the study related with the data of the study.

Results related with the first sub-problem

The first sub-problem of the study was expressed as: “Is there a significant difference between the pretest points due to the scale of self-regulation strategies that belong to the students of control group and the students of experimental group?” The results related with the sub-problem were displayed in Table 2.

In Table 2, it was found out that before the experimental group began to practice, the average point for scale of self-regulation strategies was (\( \bar{x}=33.20 \)) and standard deviation was (Ss=9.24); the average of points due to the scale of self-regulation belonging to the control group students were (\( \bar{x}=34.10 \)), and the standard deviation was (Ss=7.86). It was calculated with t-test if there is or not a significant difference between the points maintained as results of the pretest practice of the groups; no significant difference was found out between (t=.68) of maintained value and the level of (p<0.05). It may be claimed due to the results that the points according to the scale of self-regulation strategies were almost equal (p=.602, p>0.05) before both of groups began to study. Experimental study was started after specifying that the scale points due to the self-regulation strategies belonging to the groups were equal with each other.

Results related with the second sub-problem

The second sub-problem of the study was expressed as: “Is there a significant difference between the pre-test and post-test points due to the scale of self-regulation strategies that belong to the students of experimental group?” The results about this sub-problem were displayed in Table 3.

In Table 3, before the experimental group began to practice, the average point for scale of self-regulation strategies was (\( \bar{x}=33.20 \)) and standard deviation was (Ss=9.24). It was found out the average of pro-test points belonging to the experimental group of students were (\( \bar{x}=59.68 \)) and standard deviation was (Ss=8.86). It was calculated with t-test if there is or not a significant difference between the points maintained as results of the pretest and posttest practice of the group and a significant difference was found out in favor of pretest results among the maintained (t=6.68) value and (p<0.05) level.

Results related with the third sub-problem

The third sub-problem of the study was expressed as: “Is there a significant difference between the pretest and posttest points due to the scale of the self-regulation strategies that belong to the students of control group?” The results about this sub-problem were displayed in Table 4.

In Table 4, it was found that the arithmetic average of pretest points due to the self-regulation strategies belonging to the control group of students were (\( \bar{x}=34.10 \)) and the standard deviation was (Ss=8.32). It was found that the arithmetic average of pretest points which belong to the control group of students were (\( \bar{x}=43.38 \)) and the standard deviation was (Ss=8.32). In other words, it was commented with t-test if the differences maintained was significant or not between the points of pretest and posttest due to the self-regulation strategies, which belong to the control group of students a significant difference was found out in favor of pretest results.
Results related with the forth sub-problem

The fourth sub-problem of the study was expressed as: "Is there a significant difference between the protest points due to the scale of self-regulation strategies belonging to the experimental group of students and control group of students?" The results maintained about this sub-problem were displayed in Table 5.

In Table 5, it was found that the arithmetic average of posttest points due to scale of self-regulation strategies belonging to the experimental group of students were $(\bar{X}=59.68)$ and standard deviation was $(Ss=8.86)$; the arithmetic average of protest points which belong to the control group of students were $(\bar{X}=43.38)$ and the standard deviation was $(Ss=8.32)$. In other words, it was commenced with t-test if the difference maintained was significant or not between the points of pretest and posttest due to the scale of self-regulation strategies which belong to the control group of students, a significant difference was found out in favour of experimental group in the maintained $(t=2.14)$ value and $(p<0.05)$ level.

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Tests</th>
<th>$\bar{X}$</th>
<th>Ss</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>32</td>
<td>Post-test</td>
<td>59.68</td>
<td>8.86</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Control</td>
<td>30</td>
<td>Post-test</td>
<td>43.38</td>
<td>8.32</td>
<td>2.14</td>
<td>.002</td>
</tr>
</tbody>
</table>

DISCUSSION AND CONCLUSION

In this study, for specifying the effects of homework upon the instruction of self-regulation strategies, the conclusion below was maintained; during the instruction of the topic, it was found out that the difference between the averages of scaled points for self-regulation strategies is significant. Those belong to the experimental group of students whom were given homework and the control group of students, whom weren’t given homework; accordingly it was found out that doing homework at the end of the lessons effects the instructions of self-regulation strategies in the positive way.

The main aim of the study is to specify the effect of the homework upon the instruction of self-regulation strategies when the results of the study is approached due to this purpose, it is observed that there is a positive effect of doing homework regularly by the experimental group of students, upon the instruction of self-regulation strategies. Ryan and Tefler (2011) state that homework contribute to the process of instruction of self-regulation strategies. Kitsantas and Zimmerman (2009) has found out homework are effective instruments as a result of a study they have realized, parallel to the results of the study. These results show parallel with the results of the study.

It is thought that one of the factors which has a positive effect of student learning the self-regulation strategies, is the teacher’s feedback the student about the homework. To feedback the student affects in the positive way in the usage of self-regulation strategies (Pintrich et al., 1993; Kramarski and Zeichner, 2001; Arsal, 2009). According to Smith (2001), to feedback create an idea inside the student that he can develop his ability to learn. In a similar study, Black and William (1998) state that feed backing is effective on self-regulation strategies. Also in this study feed back oriented to homework might have affected the learning of students’ self-regulation strategies.

The students repeat the topics which they have learned in their minds by doing homework; this situation is thought to provide the instruction of especially the self-regulation strategies (repeating, articulating, time management and rating strategies). The home working is effective about the repeating of topics and the usage of students’ self-regulation strategies (Hill, 1992). As for Rosenberg (1989), he states that home working is effective upon students to gain the repeating strategies. With the help of homework, students repeat what they have learned and review them, they brace themselves for the coming lessons and topics; thus they learn to manage the resources and strategies of time management (Paulu and Perkinson, 1995).

SUGGESTIONS

The homework that make positive contribution to the instruction of self-regulation strategies must be given to the students.

The teachers must include actions that consist of instruction of self-regulation strategies inner classroom. Thus they may provide the students to learn and use self-regulation strategies.

Teachers must take into account the self-regulation strategies when giving homework. The teachers must give homework, convenient to strategies which give
opportunities to the self-regulation strategies to be used. The teachers must control the homework they give regularly and neatly must feedback positively. This situation will ease the students to gain self-regulation strategies.

REFERENCES