The Effect of Psychoeducational Group Training Depending on Self Regulation on Students' Motivational Strategies and Academic Achievement

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Abstract

The aim of this study was to determine the effect of psychoeducational group study regarding self regulation in learning on motivational beliefs and academic success of students. Pre and post tests with control group design were used in this study. Participants of the study consisted of 10th grade students at Anatolian High School. 'Motivational Strategies Scale at Learning' and 'Information Form' which prepared by author was used for data collection. ANOVA and ANCOVA models were used for analizing of study data. Th e results of study showed that psychoeducational group study which was given to treatment group during 8 weeks increased motivational beliefs and academic sucssess level of students. Increase of motivational beliefs did not differentiate in terms of gender and study field of students. The results of study were discussed depending on the related literature.

Key Words

Learning, Self-Regulation, Motivational Strategies, Psychoeducation, Academic Success.

In modern and scientific communities, academic ability is considered important. Academic ability can be defined as the ability of comprehending texts, expressing ideas verbally or in written form, reasoning with numbers and solving problems (Türkmen, 2004). According to the results of PISA conducted by OECD in every 3 years with 15-year-old students from 65 countries, Turkey was at the last rank in 2006. According to the data of PISA exam results in 2009, Turkish students ranked at the bottoms in the branches of text comprehension, science and maths (Organisation for Economic Co-operation and Development [OECD PISA], 2009). The problems about students' academic success in our country has been giving a pause to National Education Director, private schools, school administrators, teachers, school psychological counsellors, parents and directing them towards new pursuits intended to enhance academic success.

The concept of self regulation in learning has gained importance with the study of factors causing academic failure of low skillled and underperforming students. In the researches related with the topic, it is pointed out that students with low academic succes have lower level of motivational strategies and use less learning strategies (McWhaw & Abrami, 2001; Paterson, 1996; Pintrich & De Groot, 1990; Soung, 2001; Sungur, 2004; VanderStoep, Pintrich, & Fagerlin, 1996; Wolters & Rosenthal, 2000). Also, researches have shown that self-regulation strategies and motivational strategies are effective in increasing academic achievement (Hwang & Vrongistinos, 2002; Malpass, O'Neil, Harold, & Hocevar, 1999; Pintrich & De Groot, 1990; Soung, 2001; Sungur, 2004; Üredi & Üredi, 2005).

Self-regulation that was firstly conceptualized in Bandura's social cognitive learning theory (Bandura, 1991), has been defined as an active and constructive characteristic feature that an individual creates his own learning objectives, tries to direct his motivation, cognitive and metacognitive competence and limits his objectives by canalizing them in accordance with contextual features around.

The theoretical basis of this study is based on self-regulation model in learning developed by Pintrich, Smith, Garcia, and McKeachie (1993). The main reason for choosing this model is that the efficiency of this model in acquisition of self-regulation skills in studies conducted with primary and high school students from different countriesa has been emphasized in literature (Andrew & Vialle, 1998; Hwang & Vrongistinos, 2002; Paterson, 1996; Pintrich & De Groot, 1990; Soung, 2001; VonderStoep et al., 1996; McWhaw & Abrami, 2001; Wolters & Rosenthal, 2000).

In this study the impact of education depending on self-regulation on motivational strategies is one of the subdimensions of self-regulation and academic success was investigated. Considering the research problem, research questions were determined as: of psychoeducatioal group training for self-regulation in learning applied to 10th grade high school students; *1*) Is there any significant difference in favor of test group in motivational strategies subdimension? *2*) Is there an impact on general academic success of students? *3*) Do the changes in motivational strategies show differences in accordance with the gender of students and field of education?

Method

Research Design

The research is an experimental study with pre and post tests and control groups. Also, it is defined as a split plot or complex design, the model is pointed out to be a design with two way, one of which shows repeated measurements (pre and post tests), the other showing samples from different categories (test-control groups) (Büyüköztürk, 2006). While psychoeducational group training was being applied to test group for eight weeks, control group was not being treated with any applications.

In two sessions different from psychoeducational group training, pre and post tests were conducted to partcipant students in experimental and control groups. In order to take the impact of interaction of experimental and control groups under control,

students were chosen from separate classrooms and they were warned about not to share their experiences and information about this study with their friends out of their groups.

Participants

Experimental and control groups, the participants of the research were formed of 10th grade students studying at Cumhuriyet Anatolian High School in Düzce in 2007-2008 academic year. For determination and selection of research participants, stratification and quota sampling methods were used at first. In quota sampling, a limited population is classified with respect to specific variables anticipated by the researcher according to the aim of the research (Gökçe, 1998). To specify experimental and control groups, fall term average academic achievement of 267 students in total studying (Physical Sciences, Turkish, Maths, Social Sciences) in 10th grade was analysed. Students' average course success was sorted from lowest to highest scores. After this sorting operation, 115 students were determined whose average success is between 2.50-3.50. Out of these two groups consisting 24 participants were formed in such a way that equalizes variables of gender and educational field. Later, experimental and control groups were appointed with simple random sampling method. Students participating in experimental and control groups were numerically matched in terms of gender and field of education.

Nevertheless, the difference between the average academic achievement of experimental and control groups was compared with t-test to test if it is significant or not. Hence, it was found out that the difference between the groups was not significant. The same process was applied for pre-test subscale points of motivational strategies and it was found out that there was not a significant difference between the average scores before processing. In this regard, experimental and control groups were posited to be equal in terms of academic success and motivational strategies before processing.

Process

Except pre-post test treatments, during eight weeks, on hour per week, psychoeducational group training was conducted to experimental group of the research. Group training was carried out in classrooms and guidance hours. A pre-interview was held with the experimental group students, before training they were informed about the aim of training, du-

ration, reguation, program content and voluntary students were included in the training.

For preparing the content of psychoeducational training, relevant theoretical explanations and previously applied self-regulation education (Altun, 2005; Aydın, 2005; Chong, 2005; Morganett, 2005; Schmitz & Wiese, 2006; Üredi, 2005) was benefited from. Before implementation, the researcher conducted similar pilot group training in a class as a matter of post graduate study. Also, some adjustments were made considering the convenience of actvities to use and timing.

General aims that were determined for psychoeducational group training designed as structured activities can be outlined as being informed about self-regulation strategies (cogitive- meta cognitive- managing resources) gain awareness of own self-regulation strategies and develop new skills. In the content of psychoeducational training designed for this pupose; the presentation of self-regulation model was included with its dimensions of cognitive (repetition-interpretation-organization), metacognitive (planning-monitoring-regulation) and managing resources (training time, duration, effort and receiving support from peer groups. In the meantime, activities that intended for process of keeping diary, setting goals (short- medium- long term), difficulties in achieving goals, (insufficient planning, insufficient information, time management error, unrealistic goals, fear of unsuccess and success), time analysis and management, responsibilities, the importance of conception and beliefs in achieving goals and developing skills that enhance classroom performance.

Instruments

Motivational Strategies for Learning Scale: Instrument was firstly developed in 1986 by a research group serving in University of Michigan Higher Education Development and National Research Center. It is a (self report) instrument that specifies students' motivation and learning strategies according to students own answers. The instrument reorganized for high school students by Pintrich et al. (1993), was adjusted to Turkish by Sungur (2004). The instrument consisting of 81 items in total and answered as 7 point likert scale (1-It never reflects me, 7- It exactly reflects me) ; composed of three main subdimensions as motivational strategies, cognitive- metacognitive strategies and resource management strategies, and 15 different dimensions included in these subdimensions. In this

research, motivational strategies dimension, one of the three main dimensions, motivational strategies dimensions are composed of 31 items. From this subdimension, the lowest score is 31, the highest is 217. Sungur (2004) reported internal consistency reliability coefficient of the subscale in question as .62 and .93 for original questionnaire, however; for Turkish questionnaire it was reported as .54 and .89. Nevertheless, in the studies conducted with undergraduate students reliability co-efficient of subscales are reported to vary between .41 and .86 (Büyüköztürk, Akgün, Kahveci, & Demirel, 2004), .67 and .91. (Altun & Erden, 2006). In this study, depending on the studies (Sungur, 2004) previously conducted with similar sample groups, the scale was assumed to be valid and reliable.

Information Form: Information form prepared by the researcher gathers information about age, gender, classroom, and educational fields about participants.

Analysis

For data analysis, SPSS 16 program was used. At first, noisy data were scanned and corrected by means of frequency tables, histogram graphics, and leaf diagrams. In order to test the research hypotheses about motivational strategies and academic success, two way analysis of variance for repeated measurements on one way as well as analysis of covariace in order to test the basic impact of gender and field variables in the results of in favor of experimental groups were used (Tabacknick & Fidell, 2001). Before proceeding to analysis phase, normal distribution of variance (Kolmogorov Smirnov>,05), homogenic distribution of variace (Levene F test) and box plot (Tabacknick & Fidel, 2001) standards were tested for statistical analysis. η^2 was used to specify impact size in reseacrh analysis. Tukey q technique was used in order to determine the source of common impact in situations when there is a significant difference between group and measurement level of significance was extracted as .05.

Results

The Impact of Psychoeducational Group Training on Motivational Strategies

The difference between scores of experimental and control groups (F_{1-68}=2,435) as well as the difference between the groups' pre-post test scores (F_{1-68}= 2,439) have been found insignificant as a

result of two way analysis of variance made to test the sub-problem of the reearch "Is there a significant difference in favor of experimental group in motivational strategies subdimension?." However the common interaction of group and measurement was observed to be significant olduğu (F_{1-68}= 12,681; p=.001). Psyschoeducational implementations applied to experimental group was observed to be effective in enhancing motivational strategies of particitpants in the Tukey q test (q=5.12) conducted to determine the source of common impact between the poles as common impact was extracted significant. Furthermore, width of impact was observed to be medium sized (η^2=,22) in the analysis. In this regard, %22 of the variance observed in motivational strategies can be said to be explained with experimental conditions.

The Impact of Psychoeducational Group Training on Academic Achievement

Looking at the findings related with the hypothesis of " there is an impact of psychoeducational group trainning depending on self-regulation in learning on students' general academic achievement". General academic average of experimental group is X= 68,57 for the pretest, whereas it rises to X=70,92 in the post-test. For control group, academic average value is X=65,95 in the pre-test, while it rises to X=66,57. The significance of this observed difference was tested with two-way analysis of variance conducted for repeated measurements on-one way. As a result of variance analysis, a common impact of group and measurement was observed to to be significant (F_{1-68}= 13,149) Tukey q value (4,52) in the experimental group, was observed to be significant. Impact width of analysis was determined as medium level (η^2=,22). This finding reflects that %22 of the observed increase of academic scores of experimental group can be explained with experimental process.

Impact of Psychoeducational Training on Motivational Strategies Depending on Gender and Field of Education

It was observed that there is not a significant difference in post test scores (F= 19,150, p< ,05) when motivational strategies pre-test scores were taken under control. The basic impact of gender was not found significant for scores of post-test motivational strategies that were organized depending on pre-test measurements taken as common variable for female and male samples from experimental group. Although adjusted mean of female samples was higher than males', this highness was not found statistically significant.

ANCOVA technique was used for specifying whether the changes in motivational strategies differ according to Students' field of education (Social Sciences, Turkish-Maths, Physical Sciences). For this purpose, firstly, adjusted post-test scores according to pre-test were specified. Considering the findings related with this, It was observed the highest mean of score (X=183,78) was in physical sicences and this was respectively followed by fields of Social Sciences (X=176,05) and Turkish-Maths (X=175,29). In the analysis conducted in order to test score differences between fields, it was found that there was not a significant difference depending on fields (F= 1,396, p< ,05). According to these findings, although the mean of students from physical sciences were partially higher than the means of other fields, this difference were not found out to be statistically significant. In this respect, motivational strategies can be said to be independent from field variable.

Discussion

The research findings have indicated that Psychoeducational Group Training has an impact on motivational strategies and academic achievement, but variation in motivational strategies does not differ according to gender and field of education. Among studies from literature, in the studies conducted by Pintrich and De Groot (1990) with primary school students, Zimmermann and Martinez-Pons (1990) with primary and highschool students, it was found that there was an increase in motivational strategy level of students who had taken training for self-regulation in learning. Also, in his study to compare self-regulation model depending on problem and conventional instruction model about "excretory system" in high school Biology lesson, Sungur (2004) concluded that self-regulation training increased motivation regarding Biology lesson. These findings reflected that training about self-regulation, general or content focused, had a positive impact on motivational strategies of students from different levels, also comprised of goal orientation, focusing on aim, value of subject, learning strategies and self-efficacy, motivational strategies were important predictors of self-regulation (Lemos, 1999; Rozendaal, Minnaert, & Boekaerts 2001). In this respect, these strategies can be said to be increased with convenient instruction. However, in this study, the finding of significant increase in motivational strategies in favor of experimental group

gave rise to a thought that in a way, their motivation might increased in order to enhance students' final grades as psychoeducational group training was carried out in the second term.

Again looking at the findings related to academic achievement in literature, in the studies conducted with primary school students, (Broussard & Garrison, 2004; Pintrich & De Groot, 1990; Rozendaal et al., 2001; Wolters, 1999; Wolters & Pintrich, 1998), it was observed that there was a significant increase in general academic achievement level of students who used self-regulation strategies in learning. Also, in the studies conducted with high school and undergraduate students, (Canca, 2005; Malpass et al., 1999; McWhaw & Abrami, 2001; Rao, Moely, & Sachs, 2000), similary, it was emphasized that academic success of students were increased and self-regulation was an important factor predicting academic success. Some studies based on self-regulation and comparing conventional instruction (Paterson, 1996; Sungur, 2004) put forward that instruction depending on self-regulation enhanced course achievement. In a similar study, (Ommundsen, 2003) it was observed that with training of self-regulation, students used their abilities better than before in physical education lesson. Regarding this and similar research findings, students' raising awareness of self-regulation and acquiring specific skills can be said to contribute to their benefiting more efficiently from process of instruction.

The research finding of indifference of motivational strategies according to gender and field of education partially showed similarity with some other research findings. In the studies conducted by Miller (2000) with high shool students and Perry and Drummond (2002) with primary students for Maths lesson, a sigificant difference acording to gender could not be found in self-regulation skills and increase of success in Maths. However, differently from the finding of this research, some research findings in literature reflect that there is a difference in motivational strategies regarding gender and female and that students use more motivational strategies in comparison with males (Pajares & Graham, 1999; Zimmerman & Martinez-Pons, 1990). Yet, in a research of Wolter and Pintrich (1998) it was observed that female students' motivation was lower than males. These contrary findings in literature related to gender, give rise to a thought that new researches are needed about this matter. On the other hand, the similarity of attainments in female and male students' motivational strategies might have resulted from inclusion of students as

research participants studying in Anatolian High School with a high level of achievement. The fact that Anatolian High School students are registered with high grades after chosen by secondary education exam, must be taken into account.

Loking at the field of education, although adjusted mean of participants in science field are higher than the other fields, the difference has been found significant in literature, if experimental researches related to the subject area are analysed. Some other researches can be found that support this finding. In the study of Zimmermann and Martinez-Pons (1990) no correlation was found between the sense of self-efficacy and self-regulation strategies in learning of students from Turkish- Maths classes. Similarly, in Wolter and Pintrich (1998)'s study with primary students, they concluded that students' attainments of self-regulation training program were independent from fields (Maths, Social Sciences and English fields). In his study, Miller (2000) analysed whether the correlation between self-regulation in learning and achievement differs in accordance with English and Maths fields. As a result of the research, it was found out that self-regulation strategies in learning had a positive impact on Maths and English fields, but the difference of benefiting level from self-regulation strategies was not found to be significant accordaing to fields. In this respect, the conclusion that students' level of benefiting from self -regulation strategies is independent from their field of education was supported by research findings about the subject in literature. However, this finding might have resulted from the provision of sudents' surpassing a specific success level in choosing a field and thus they are on a high level of success.

As a result, it can be said that psychoeducaitonal group training increases students' motivational strategies and academic success, but this increase does not differ according to gender and field. Depending on these findings, not being satisfied with effective and efficient study techniques, trainings to more comprehensively develop self-regulation can be suggested to be given place to the planning of psychological guidance and counselling service. For this purpose, studying with smaller groups rather than larger ones cen be said to be more functional. Studies like these are likely to at the same time contribute to academic success.

However for the generalization of research findings, it must be taken into account that participants are comprised of Anatolian High School students, thus they represent a group of students whose motiva-

tion is already high. Also, the fact that motivaitonal strategies include only one dimension of self-regulation must be considered. In order to determine which self-regulation model that Turkish samples benefit from, it can be said that studies comparing efficiency of different models are needed.

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