The effectiveness of self-awareness and self-regulation training on positive & negative affect and Academic Self-Regulation in female students

Pantea birang Khojasteh pour
Department of Educational Psychology, Saveh Branch, Islamic Azad University, Human Science College, Saveh, Iran.
(pantea_kh@yahoo.com)

Asghar Jafari, PhD
Department of counseling, Islamic Azad University, Abhar Branch, Abhar, Iran.

Masoumeh Behbodi, PhD
Department of counseling, Islamic Azad University, Rodehen Branch, Rodehen

Abstract

Present study aimed to determine the effectiveness of self-awareness and self-regulation training on positive & negative affect and Academic Self-Regulation in female students of guidance schools in Karaj. This research was accomplished using semi experimental and pretest-posttest with control design. 30 subjects were selected by using multiple cluster sampling method and randomly assigned in groups of experiment and control. Data were collected by questionnaires of positive-negative effects and self-regulation and were analyzed by covariance and t tests. Research findings indicated that interventions based on self-awareness and self-regulation training can significantly increase positive affect and self-regulation in students (p<0/05) and this interventions can significantly reduce negative affect (p<0/05). Research results provided some evidence that self-awareness and self-regulation trainings are appropriate skills on recovering positive effects and self-regulation in students and significantly reducing negative effect. Therefore, in order to reconstruct negative-positive effects and self-regulation, it may be useful, recover self-awareness and self-regulation.

Key words: self-awareness, self-regulation, positive & negative effects, academic Self-Regulation

Introduction

Emotions are an essential part of the dynamic system of human character. Characteristics and emotional changes, the way to establish an emotional connection and understanding and interpreting the emotions of others, have an important role in the development of personality, moral development, social relationships, identities, and their meaning (Lotfabadi, 1380). Lazarus (1966, according to Brown et al.) believes that the emotion is due to the cognitive evaluation of the consequences of one's behavior would create when that the incidents be assessed as harmful or threatening. In his comments, and other cognitive theorists, emotional reactions are changing constantly that are affected by person thinking and understanding.

Watson & Tellegen (1985) has divided emotions on two positive and negative dimensions. It means that how much a person feels dissatisfaction and unpleasant. Negative emotion is a dimension of internal disappointment and lack of doing a pleasant job, following that bad behaviors like anger, sadness, resentment, inferiority and guilt, fear and anger arise. The second dimension is positive emotion that is a kind of active energy, high concentration and working a pleasure job. Positive emotion includes huge spectrums of positive behavior like happiness, a sense of empowerment, enthusiasm, desire, passion and confidence.

Positive emotion is a state of activation energy, intense concentration and ability to work enjoyable and decreased positive emotion is associated with sadness and depression (Watson, Clark & Tellegen, 1988). Affection is the strong emotion of a person at any point in time will experience. Intensity of feeling of pleasure is very different. In addition, feeling of the energy or arousal is different. If the feeling intensity be strong and it has a special reason it is called behavior. Alongside of positive emotion, negative emotion is a public dimension of internal disappointment and not to do an enjoyable work following that Mood avoiding disorders states, such as resentment, inferiority, guilt, fear, and anger arise and when negative affect is reduced, leading to a state of peace (Watson, Clark & Tellegen, 1988).
Emotion regulation process helps individuals to control their emotional states and analyze it. Besides that, they do other works to control or change its intensity (Dembo & Eaton, 2000). Pintrich(2000) states that positive affecion is one of the positive congestive fields and results of studies shown positive emotion causes creativity, Cognitive flexibility, efficiency in decision making and problem solving and By strengthening the immune system plays a role in improving health. Beside that in term of psychological health shows that positive emotion, Relocate by neutralizing the damaging effects of negative emotions. Positive affect increases creativity and flexibility in problem solving as well as the efficiency and accuracy of decision making and dialogue, and improves other indicators of thought (Carnovil& Isel, 1988: Esterada, Isen & Yong, 1977; Esterada, Isen & Yong, 1994; Hert, Melton, Mack Donald& Harakioz, 1996; Isen, Daimon& Noviki, 1987; Isen& Meniz, 1983; Li & Seternetal, 1999; All quoted by Isen, tarsanlated by Zarabi, 2005).

Affecting emotions, learning and academic achievement are known as 'academic emotions". Academic emotions tied directly to academic activities and academic outcomes, Pleasure derived from learning, fatigue classroom teaching and frustrations, and anger due to difficult assignments are Examples of emotions related to academic activities (Otman, 2010). The effect of emotion on learning and academic achievement is caused by a number of mediating cognitive and motivational mechanisms, including motivation, learning strategies, cognitive resources, and above all, self-learning.

Self-awareness is an Emotional intelligence factors that By Goleman's model of five the emotional cluster competency in 1995 is presented including emotional self-awareness, self-confidence and proper self-assessment. Self-regulation refers to the capacity of individuals to modify their behavior Proportional to changes in the external environment and internal conditions, and includes a person's ability to organize and control their behavior to achieve different learning objectives and is composed of two components, motivation strategies, and learning strategies (Hosseini, 2012). The autonomy will focus on High-level cognitive activities of the individual (Felavel, 1979; translated by Maher, 1999). Zimmerman et al. (2000) believe that autonomy learning has three dimensions 1- Metacognition (Evaluation of self, environment and location) 2- Goal setting 3- Observer of his own actions.

Skerava & Broks (2000) know Self-regulated learning as students' ability to understand and control their learning it is very important for the success in their courses and make them successful learners. Autonomy in learning theories argue that students can use different learning strategies and motivational to do Lots of work to develop their own learning. With Autonomy in learning methods, students with a means to control their thoughts and emotions on learning, objectives and adopt the correct perspective in order to take responsibility for the completion and evaluation of their work. Self-regulation involves attention, and awareness of different ways of learning that Students to become familiar with the school's Environmental and other factors involved in the learning process to employ the best learning way. In method Autonomy in learning Unlike traditional methods of learning Students have a comprehensive knowledge of the learning process Unlike some people think, the acquisition of knowledge and attitude towards training Reinforcing the students' academic ability and improves their performance at school(Pintrich, 2000).autonomy in psychology had developed by Deci & Ryan (2000) at university of Rochester. In this theory, intrinsic motivation introduces as a tendency toward spontaneous interest, Study and learns new skills and experience. Zimmerman et al. (2000) believe that autonomy learning has three dimensions: 1- Metacognition (Evaluation of self, environment and location) 2- Goal setting 3- Observer of his own actions. In another place divides autonomy to the other dimensions: 

1) self-control, prevention of emotional disorders and impulsive
2) conscientiousness; accept responsibility for personal performance
3) Adaptability, flexibility in accepting change and its Control
4) innovation, adaptation and exposure to ideas, solutions and new information

Pintrich (2004) knows Autonomous learner someone who is active in their learning, so determine a goal for itself, Informed of his progress towards the target And will adjust his cognitive, motivation and behavioral functions and uses early experiences for consistency with the goals and efforts.

The use of learning strategies is an important factor in learning, performance and behavior of students in classroom. Researchers have also found that if students could learn autonomously will progress In terms of performance and achievement (Pintrich& Degrout, 1990), Comprehension and endurance to perform tasks (Shank, 1983). Shank (1983) believes that learning autonomously it is only possible when the learner, review and monitor their learning activities. Research conducted has shown that there is a significant relationship between autonomy and academic achievement of students.

The acquisition of self-regulated learning skills may help explain individual differences. Successful students have shown adapted self-regulated learning strategies and motivate patterns (Such efforts to succeed, enjoy challenging work, good use of learning strategies, setting specific goals and demonstrate a high level of feeling
Internships) during tasks. In contrast, unsuccessful students are working less and less interest in carrying out their activities. They are unable to set specific objectives and learning strategies, Have low self-training and rarely reach higher levels of success (Artini, 2008).

The use of learning strategies is an important factor in learning, performance and behavior of students in classroom. Researchers have also found that if students could learn autonomously will progress In terms of performance and achievement (Pintrich & Degrouit, 1990), Comprehension and endurance to perform tasks (Shank, 1983). Zimmerman (2002) believes that Autonomous students are those who in term of self-motivation and behavior Participate actively in their own learning process. Zimmerman believes during the cognitive stage, autonomous learners; learn Planning, organization, self-monitoring, self- at various stages of learning. In Motivational stage, learners find themselves as individual autonomous-efficacy, and self-perception of intrinsic motivation. And in behavioral level, Learners, select, organize, and even create physical and social environments That is conducive to optimal learning.

Researches show Aside from the self-regulating learning strategies that students use their general ability. Other results have shown that all students use autonomy strategies equally. However, the main difference is that students with high achievement Compared to those who have low achievement in their reports often refer to the guidelines of academic assignments (Bandora, 2000; Zimmerman, 2008). researchers Motivational aspects of learning such as students, desire to learn, Their confidence level of learning, Outcome expectations, Emotional aspects such as feelings about themselves as learners, and students learning task and Learning how to control negative and positive emotions suggests As the most important aspects autonomous and life-long learning (Pery et al. ,2008). These findings are in line with comments of Stenberg (2005) Believes that, knowledge about how to use motivational factors in a given situation, which is a manifestation of a person's intelligence that helps to show Capabilities to their specific contexts and situations. In other words, these people rather than tend to show outsiders learning outcomes, In order to maintain and enhance their motivation in learning, are using Motivational benefits of self-regulation techniques. In this line the results of Janson et al. (2003) research’s shows that Most gifted children compared with children of average intelligence, Motivation strategies in the face of homework is boring and unattractive.

Research in the autonomous Learning Strategies Questionnaire (Pintrich& Degrouit, 1990) were used, the relationship between emotions and learning strategies and self-management education approved. On the other hand, students for autonomous learning must have a relatively stable and clear concept and in a particular dimension, such as academic self-concept, and they believe that the ability to control their own motivational and contextual factors and cognitive processes. Zimmerman(2008) believes that For autonomy, positive beliefs about his capabilities is essential If people have a good understanding of themselves, Greater use of autonomous learning and academic performance will be better.

Research of Muis (2008) To investigate the regulation of the relationship between cognitive processes and problem solving in mathematics Was conducted on 200 students from sixth to eighth grade indicated the use of Most the students in the design, monitoring, control and use of logical argument and judge for problem solving. The results of Pery et al. (2008) research Showed that the use of strengthening exercises and exercises that will increase autonomous learning, increasing the academic performance of elementary school children. Danker et al. (2014) in Meta-analysis were include of 58 studies in the field of academic autonomy in elementary and junior high school students Concluded that the interventions effect of this type of educational way Have examined the academic achievement Generally indicated a positive impact on student achievement is enormous and this impact have seen in students with different learning levels.

The research results of Walters (2004) showed that one of the main differences between successful and unsuccessful students is that most people make use of motivational regulation strategies. Malpas et al (1999) and Martinez - Tack (1996) also found the most successful students through promises of reward or punishment for taking their lives in their motivation. Successful students know how to motivate themselves and even if they do not like the assignment, using the strategies, to create motivation in their own.

Sayah et al (2013) investigate the relationship between emotional intelligence, metacognition and self-regulation on academic achievement in high school students, and the results are shown Emotional intelligence, metacognition and self-regulation has a significant relationship with academic achievement, also The father's education with happiness variable, age and education of mother and paternal age has a significant relationship with task performance. One study showed that the natural position as examinations could be an emotional experience to create success or failure. The results also showed that in competitive situations, such as exam, Positive affect and negative affect are independent of each other (Mohammadi, 2011). Therefore in this study the role of the consciousness and skills of self-regulation variables in emotional and cognitive behavior, Researchers are pursue to investigate whether self-awareness and self-regulated learning is.
affected in students' academic self-regulating positive affect and negative affect? Accordingly, the following hypothesis was formulated. The research model is shown in Figure 1.

1) Self-awareness and self-regulation training is effective in positive affect of female students.
2) Self-awareness and self-regulation training is effective in negative affect of female students.
3) Self-awareness and self-regulation training is effective in educational Autonomy of female students.

![Figure 1. Conceptual model of the research](image)

**Methodology**

Due to the nature of the research and its objectives, in this study, a semi-experimental pre-test - post-test control group was used. The population was all girl students in academic school year of 2011 school girls were enrolled in the city of Karaj. Number of students in the second semester of 2011 were enrolled in school was 1024. Multi-stage cluster random sampling method was used. That is at the beginning of among Karaj city areas three areas were randomly selected. Finally, among existed classes in these schools 2 classes were selected randomly. Due to the possibility of loss of subjects in experimental researches, Research on the two classes (about 37 students) was conducted. The final volume of the sample in this study was 30 subjects for each group. For collecting data in this study, the following tools were used:

Positive and Negative Affect Scale (PANAS)

This scale is a 20-item self-assessment tool is designed to measure both the mood of the "Negative affect" and "positive affect" (Watson et al, 1988). Each subscale is 10 items. Items on a five-point Likert scale (1 = very low, not at all to 5 = very much) The subjects are ranked (Bakhshipour, Dezkhkam, 2003) Cronbach's alpha coefficient for this scale in research of Abolqasemi (2003, quoted by Golparvar and Karami, 2011) is achieved 85% That is indicated internal consistency of the scale. The reliability coefficient of the questionnaire in Abolqasemi study (2003, quoted by Golparvar et al., 2011) is 59%.

Autonomous Learning Questionnaire (SRQ-A)

This questionnaire has 14 questions that is designed by Bofared et al. (195) and normalized by Kadivar (2000). The questionnaire asked four key activities will include: Reasons for doing homework, having good behavior on school grounds, reasons and reasons of course work, answering questions in class. This questionnaire is composed of four regulatory styles; these include style of external regulation, the regulation of breaking style, identical regulation and self-regulation style. The overall Cronbach alpha reliability coefficient based on Cronbach alpha of the questionnaire is 71%, the reliability of the cognitive subscale is 70% and the cognitive subscale is 68% were reported in Kadivar research (2000). The reliability of the test on research of Gholami (2002) is reported 63%; Nikdel (2005) 67%.

In this study, after pretest, 8 group sessions, self-awareness and self-regulation, each session lasting one and a half hour 2 sessions per week as an educational intervention and control groups were not getting in to Intervention. After finishing and also three months after the intervention, two groups were tested as a post-test and follow-up. For ethics in the research process in a review session content and training in self-awareness and self-regulation was presented to the controls. In this study analyzes the data results the descriptive statistics of mean and standard deviation of frequency diagram and for testing hypotheses, statistical methods of analysis of covariance and t-test were used.

**Findings**

In this phase firstly in table 1 we will study statistical traits of variables of research in pre-test, post-test and follow-up steps.
As the findings outlined in Table 1 show Scores on these variables in the experimental group in the pre-test compared to the post-test and follow-up have changed As well as differences in scores between the control and experimental groups are visible.

Analysis of covariance was used to evaluate research hypotheses. Covariance tests needed to establish the conditions and assumptions such as linear variables and the same regression slope that In the case of the present study the assumptions was establish. Covariance analysis results are presented in Table 2.

Table 2. Summary results of covariance analysis for the post-test scores on positive affect

<table>
<thead>
<tr>
<th>source of changes</th>
<th>Square</th>
<th>DOF</th>
<th>F</th>
<th>Mean square</th>
<th>significance level</th>
<th>Eta coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>806.01</td>
<td>1</td>
<td>806.01</td>
<td>34.19</td>
<td>0.001</td>
<td>0.52</td>
</tr>
<tr>
<td>Group</td>
<td>240.03</td>
<td>1</td>
<td>240.03</td>
<td>10.18</td>
<td>0.001</td>
<td>0.47</td>
</tr>
<tr>
<td>Error</td>
<td>1296.81</td>
<td>55</td>
<td>23.57</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>69673</td>
<td>57</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table shows the results that the calculated $F_1, 55 = 10.18$, is bigger than the $F$ in level of 0.01. In other words, there is a significant difference between the compared Averages. Therefore, we can conclude that there is a significant difference between the average of “positive affect” in control and experimental groups. In other words, we can say that Self-education and self-regulation could increase the positive affect of female students in the school. So the first research hypothesis was confirmed.

Eta coefficient is 0.47, which shows the relationship between self-awareness and self-regulation and positive affect is 0.47. In general, it can be concluded that interventions based on self-learning and self-regulation has been able to significantly increase positive affect of female students. To determine the lasting effects of the applied interventions and also to eliminate the effect of expected, at follow up positive affect subjects using the “t- Student test for independent groups” were analyzed; the results are given in Table 3.

Table 3. Summary of t-test results for positive affect in the pre-test and follow-up steps

<table>
<thead>
<tr>
<th>Source of changes</th>
<th>Difference of averages</th>
<th>Count</th>
<th>Standard deviation</th>
<th>DOF</th>
<th>t-value</th>
<th>significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test and Prevention phase</td>
<td>-0.11</td>
<td>30</td>
<td>0.079</td>
<td>29</td>
<td>-8.13</td>
<td>0.001</td>
</tr>
</tbody>
</table>

According to the results in Table 3, and with regard to the significant difference between the mean pre-test and follow-up procedures, we can conclude that between the mean of positive emotion on pre-test and follow-up steps, there is a significant difference. So we can conclude that positive affect at follow-up compared to pre-test increased. In other words, the results indicate that the interference effects caused by acts of self-awareness and self-regulated learning have continued to the follow-up phase.

Analysis of covariance results for surveying hypothesis 2 of educating self-education and self-regulation of negative emotion in female students are given in Table 4.
Because the calculated F, F (1, 55) = 4.15, is greater from the F of table in the level of 0.05. Hypothesis 0 is rejected and opposite hypothesis (HA) was confirmed. Thus, according to the findings contained in Table 4 the first hypothesis was confirmed and it was concluded that there was no significant difference between the means of comparison. We can conclude that the average “negative affect” There is a significant difference between the control and experimental groups. In other words, we can say that self-education and self-regulation has been able to significantly increase negative affect female students. Eta coefficient is 0.47, which indicates the relationship between self-awareness and self-regulation and negative is 0.22. In general, it can be concluded that interventions based on self-learning and self-regulation has been able to significantly increase negative affect female students. In order to determine the lasting effects of the applied interventions and also eliminate the effect of expectation in follow-up step The negative emotion of the subjects using t-student test for independent groups “were analyzed, the results are shown in Table 5.

According to the results in Table 5, and with regard to the significant difference between the mean of pre-test and follow-up procedures, we can conclude that between the mean of negative emotion there is a significant difference in the steps of pre-test and follow-up. So we can conclude that negative affect in the follow-up to the pre-test has increased. In other words, results indicate that the interference effects caused by acts of self-awareness and self-regulated learning have continued to the follow-up phase. Table 6 shows the summarises of the results of covariance analyze to investigate the scores of academic autonomy, in post-test for Test and control groups that this is the third hypothesis of research.

As we can infer from the results of table 6, calculated F, F (1, 55) = 10.06 is greater than the F of table at the level of 0.01 And concluded that there was a significant difference between the means of comparison. According to data collected and considering the significant of to the Opposite hypothesis can be concluded that the average "academic autonomy" There is a significant difference between the control and experimental groups. In other words, we can say that self-awareness and self-regulated learning has been able to significantly increase the autonomy of schoolgirls. Eta coefficient 0.42, which indicates the relationship between self-awareness and self-regulation, and positive affect is 0.47. In general, it can be concluded that interventions based on self-learning and self-regulation has been able to significantly increase the autonomy of schoolgirls.

In order to determine the lasting effects of applied interventions as well as to eliminate the effect expectation in the pursuit of academic autonomy of subjects using the "t- student test for independent groups" were analyzed, the results are given in Table 7.
Table 7. Summary of t-test results for academic autonomy in the pre-test and follow-up

<table>
<thead>
<tr>
<th>Source of changes</th>
<th>Difference of averages</th>
<th>Count</th>
<th>Standard deviation</th>
<th>DOF</th>
<th>t-value</th>
<th>significance level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test and Prevention phase</td>
<td>2.68</td>
<td>58</td>
<td>5.84</td>
<td>58</td>
<td>3.5</td>
<td>0.001</td>
</tr>
</tbody>
</table>

According to the results in Table 7, with regard to the significant difference between the mean pre-test and follow-up procedures, we can conclude that the pursuit of academic autonomy and pre-test, which means that there are significant differences. Therefore, we can conclude that in the academic autonomy is increased in follow-up step as compared to the pre-test. In other words, results indicate that the interference effects caused by acts of self-awareness and self-regulated learning education has continued to follow up.

Conclusion

results this study indicate that self-awareness and self-regulated learning in an increase in positive affect and reduced negative affect and increased autonomy in female school students is effective. In the first step, based on the findings it was concluded that self-awareness and self-regulated learning has been increased positive affect and reduced the negative affect in female students. The result of the research corresponded to the findings of Hunter et al (2003), Waterman and colleagues (2008), Santrak (2008), the Fall (2007), attitudes and colleagues (2007), Goudarzi (2006), Rumi et al. (2010).

In explaining this result, we can say that the feelings and emotions associated with the recognition of individuals in most cases, these two basic dimensions of personality are strongly influenced by each other and behaviors are shaped differently. Awareness training to increase their awareness of body parts and internal dimensions of the body are emphasized One of a series of new knowledge than he achieves that can have new decision in life. Which helps to a raise in awareness and more efficient and rational decisions and choices on the other hand, such a sense of control over one's life and individuals will feel less anxious and This makes a pleasant emotional experience. Furthermore, self-regulated learning to balance the emotions, enhancing the ability to manage emotions and expressing emotions is emphasized and People are able to gain exposure to stress in an appropriate way to deal and takes away from the anxiety and stress of life thus be able to experience positive and pleasant emotions.

Another result that emerged from this research is that Self-education and self-regulation makes Female students to increase academic autonomy. The results of this study are consistent with results of, Ka (2010) and Duncan et al. (2014), Pellias (2014) and Vandevelde, Van Keer & Wever (2011). Since academic autonomy refers to the ability of the students that causes of their academic activities such as setting goals, metacognition (self-evaluation, environment and situation) and observer of activities to do well. Training based on self-awareness and self-regulation that conducted on students in the study helped them probably due to changes in cognitive and emotional dimensions promote their academic autonomy.

In general it can be concluded that self-awareness and self-regulation skills training program because the students in term of the psychological aspects and become more aware of their own mentality and may also be focused on the factors amplifiers and attenuators, because they are trying to do the activities that will increase their level of overall satisfaction. In addition to raising awareness of the changes that happens to their students probably felt, they would increase their control over the They feel more in control with psychological well-being and thus has a direct relation to the experience of positive emotions. Students also awareness raise about themselves so they can improve their psychological well-being, including internal capabilities that can include evaluation of the dimensions of their activities, their independence and autonomy that they wanted to promote.

According to the material, it is recommended that the training program focused on strengthening prevention activities for students take self-awareness and self-regulation in to account. Also recommended for counselors and psychologists who work with students to reinforce their positive affect, to start learning them academic autonomy and self-consciousness.

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