The Effects of Irrational Beliefs on Academic Motivation and Academic Self-Efficacy of Candidate Teachers of Computer and Instructional Technologies Education Department

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Abstract

Irrational beliefs are improper solutions developed by the person himself for his personal problems. They occur in person’s mind. These beliefs affect person’s life. The purpose of this research is to investigate the effects of irrational beliefs on academic motivation and academic self-efficacy of students. Independent variable of the study is irrational beliefs. Dependent variables are academic motivation and academic self-efficacy. Survey method was used in the study. The sample of the study consists of 161 second and third year students attending at Sakarya University, Faculty of Education, Department of Computer and Instructional Technologies Education. It was found out that there were no differences between irrational beliefs of students in terms of gender. And we found positive relationship between irrational beliefs and academic motivation, and negative relationship between irrational beliefs and academic self-efficacy of students. At the end of the research some suggestions has been presented on irrational beliefs, academic motivation and academic self-efficacy.

Keywords: Irrational beliefs, academic motivation, academic self-efficacy.

1. Introduction

Irrational beliefs and behaviours were first mentioned in the literature as the rational emotive behaviour theory. Another psychologist, Ellis put forth this theory in 1955 (Dryden, 2005). The rational emotive behaviour theory is
about the personal problems of the individuals and the basic solutions they developed against them. People get caught up with certain emotions that they cannot exactly define when they are creating these solutions (Ellis & Dryden, 1997). A series of irrational thoughts that people have about themselves, others and the world they live in underlie the emotional disturbance suffered (Dryden & Branch, 2008). These behaviours mentioned as irrational beliefs in the literature include the negative emotions of the individuals that are not based on a specific logic regarding certain situations. The individual with such behaviours think that she will necessarily experience that negativity under the influence of the emotions with unknown reasons. Thus, these behaviours take the individual towards a failure that she herself causes (Ellis & Dryden, 1997). In addition, irrational behaviours also trigger the emotional problems of the individuals such as anxiety, depression and distress. Ellis called this situation as “ABC process”. The stages of this process are the Activating Experience (A): the state of experiencing the negativity; Emotional Consequence (C): the emotional consequence caused by the individual herself in a negative situation; and the Irrational Belief (B): the process consisting of creating the emotional consequence between these two situations, i.e. after a situation is experienced. An incorrect previous prejudice of the individual about the situation experienced leads to the individual’s coming to an emotional conclusion in stage B. At this stage, this prejudice dominates and the individual makes an emotional inference under the effect of incorrect thoughts. Thus, the formation process of the irrational belief is completed (Bortolotti, 2010).

Irrational beliefs are firm, inconsistent with the reality, illogical, and contain extremism (Dryden & Branch, 2008). Whether these emotions are right or wrong cannot be perceived clearly. However, the individuals sometimes may understand that these emotions that they have created are incorrect as a result of their experiences (Gert, 1998). Thus, it may be very hard to get rid of these emotions.

Irrational beliefs occur in two negative situations. In the first case, certain events taking place in one’s life lead to emotional-behavioural disorders and settle in one’s life as irrational beliefs. In the second case, a new irrational belief emerges against a negative event resulting from a previous irrational behaviour (DiGiuseppe, 2010). Here, it can be understood that new irrational beliefs may emerge in the negative environments created by the individuals with their experiences, alongside with the negative events that take place. The school environments, where the individuals spend an important part of their lives, are important for this situation to occur. Because David and DiGiuseppe (2010) argue that the socio-cultural environment of the individual underlies the irrational beliefs. The human brain does not distinguish between the rational or irrational behaviours by its nature and this distinction settles in our perception from the environment we live. In other words the frame of mind of an individual is shaped with the information received from the environment. Thus, the experiences that a student had in the past and the past events regarding education greatly affect to what extent that student will display irrational behaviours.

Irrational behaviours seem not to distress the individual as much as the delusions in their minds and to consume the cognitive resources like them. However, as behaviour, a delusion is more complicated than irrational behaviours. Thus, a person can realize her delusion, but may not realize her irrational behaviour (Bortolotti, 2010). The irrational beliefs of an individual also affect her self-respect negatively (Vandervoort, Divers and Madrid, 1999). The concept of self-respect is closely related to how a person views herself (Burger, 2006). Thus, when the self-respect is affected negatively, this may also harm the belief of self-sufficiency of an individual. According to Bandura (1997), self-sufficiency is the belief that one has the competencies required for organizing and realizing the steps in order to realize the targets she has set for herself. Based on this definition, it can be said that self-sufficiency emotions can be weakened with the false thoughts that one creates by oneself. According to Karabulut & Kuru (2009), the tendency of the individuals to become successful creates a more positive point of view for solving the problems they face in life. In this case, the sense of competence of the individuals towards achieving the afore-mentioned targets, in other words, their self-sufficiency may be affected positively.

Irrational thoughts result from the situation when the thought that a belief about a situation that is actually incorrect is right outweighs the thought that it is wrong (Gert, 1998). Thus it cannot be realized and handled easily. This is observed among the students as well. The findings that the irrational beliefs of the students were found to be high in the research carried out by Hamamci & Coban (2008) with 282 high school students, and that irrational behaviours, i.e. cognitive distortions, increase the test anxiety in the research of Wong (2008) carried out with 138 university students are examples to this situation.

That the level of irrational beliefs of the individuals is above a certain level may affect their success negatively as well (Davies, 2008). In the researches carried out by Fleet et al. (1991), a positively high relation was found between
the high self-expectations, which is a dimension of irrational belief, and other oriented perfectionism and self-oriented perfectionism created with the effect of other people. The increase of the perfectionist thoughts drags the students into panic, stress and depression, and it is known that this leads to their unsuccessfulness (Burns, 1980). Findings that seem to support this situation were also obtained in the researches of Dilmac et al. (2009). The more irrational beliefs the more demand for success was observed in the research. It was also found that the excessiveness of this demand triggers the fear of being unsuccessful among the students and lead to a decrease in their success.

This can also affect academic motivation. In the research carried out by Bridges and Roig (1997) with 195 university students, it was found that the irrational beliefs of the students increase their tendency of academic procrastination. Such an effect is seen to be important for revealing its relation with academic motivation. Because academic motivation is necessary for academic success (Pajares & Urdan, 2002).

In the light of the studies in the literature, it can be said that irrational beliefs have various effects on certain characteristics of the students. Among these characteristics, academic motivation and academic self-sufficiency were examined within the scope of this study.

2. Method

Information on the research model, working group, measuring instruments, applications, materials, collection and analysis of data of this research are presented in this section.

2.1. Research Model

This research was carried out in accordance with one of the quantitative research methods, the cross-sectional screening model. According to Fraenkel & Wallen (2006), a one-time measurement is made in the cross-sectional screening model in order to determine the status of the variables at a certain time. In the research model, irrational beliefs of the students are the independent variables, while academic motivation and academic self-sufficiency are the dependent variables.

2.2. Working Group

The working group of the study consists of 158 2nd, 3rd, and 4th grade students in total. 92 of them are male and 66 are female. They have been enrolled in Sakarya University Faculty of Education Department of Computer and Instructional Technologies in the spring term of the 2012-2013 academic year.

2.3. Data Collection Tools

For data collection in the research, daily behaviours scale was used in order to determine the irrational behaviours of the students, academic self-sufficiency scale was used to determine their academic self-sufficiency and academic motivation scale was used to determine their academic motivation.

2.3.1. Irrational Belief Scale

The scale consisting of 15 items was developed by Turkum (2003) and prepared in five point likert scale format. A score between 15 and 75 is taken from the scale. The increase in the score taken from the scale means that the level of irrational beliefs increases as well. The reliability of the scale was determined by calculating the internal consistency coefficient and test-retest reliability coefficient. The item-scale correlations in the scale are between .50 and .52, and the internal consistency coefficient of the scale was calculated as .75. The reliability coefficient obtained with the retest method is .81. Higher points show higher reliability of the scale (Buyukozturk, 2009)

2.3.2. Academic motivation scale
The scale was developed by Bozanoglu (2004). First, a scale consisting of 80 items were applied to 757 high school students. As a result of the factor analyses performed, a new scale consisting of 20 items was obtained. 19 items are scored as positive and 1 item is scored as negative in the scale. A score between 20 and 100 can be taken from the scale and higher points shows higher academic motivation (Bozanoglu, 2004).

2.3.3. Academic self-Sufficiency scale

The “Academic Self-Sufficiency Scale” developed by Jerusalem and Schwarzer in 1981. It was adapted into Turkish (Yılmaz, Gurcay & Ekici, 2007). After the completing translation of the items in to Turkish scale was applied to 672 university students. As a result of the factor analysis, it was found that the scale adapted into Turkish is one-dimensional in compliance with the original scale and has 7 items. For example, the Cronbach alfa reliability value was determined as .79 (Yılmaz, Gurcay & Ekici, 2007). The higher points taken from the scale show higher reliability. The Cronbach alfa values of 0.00 to 0.40 are not regarded as reliable, 0.40 to 0.60 are moderately reliable, 0.60 to 0.80 are quite reliable and 0.80 demonstrates high reliability (Buyukozturk, 2009).

2.4. Data Analysis

In the context of the research, Pearson correlation analysis was used in order to measure the relation between irrational behaviours and academic motivation, and between irrational behaviours and academic self-sufficiency, and the regression analysis was applied in order to reveal the cause and effect relation between these variables. Furthermore, the t-test was applied for the comparisons of dependent variables according to groups that between the students had upper %27 points and lower %27. In these analyses, the level of significance was taken as .05.

3. Findings

First, it was revealed whether there is a significant correlation among irrational behaviours, academic motivation and academic self-sufficiency.

<table>
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<tr>
<th>Table 1. The correlations among irrational behaviors, academic motivation and academic self-sufficiency</th>
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<td>Irrational Behaviours</td>
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<tr>
<td>Academic Motivation</td>
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<tr>
<td>Academic Self-Sufficiency</td>
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In the light of the findings at Table 1, a low level and positively significant relation was found with the irrational behaviours of the participants and their academic motivation, r=.209, p<.05. In other words, the academic motivation of the students increases with the irrational behaviours of the students increase.

It is seen that there is a moderate positive relation between the academic motivation and academic self-sufficiency of the students, r=.353, p<.05. In other words, the academic self-sufficiency of the students increases when their academic motivation increases.

In addition to these findings, while the difference between 27% of the upper group among the students showing irrational behaviours and 27% of those in the lower group is significant for academic motivation, it does not show a significant difference for self-sufficiency.

<table>
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<th>Table 2. The results of the regression analyze among irrational behaviors and academic motivation</th>
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<td>Variable</td>
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<tr>
<td>(Constant)</td>
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<tr>
<td>Academic Motivation</td>
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R=.207, R²=0.043
F(1.28=7.008), p=.000
After the relation between the dependent and independent variables were revealed in the research, the data were subjected to regression analysis in order to establish the cause and effect relation. While the dependent variables in this analysis are academic motivation and academic self-sufficiency, the independent variables are irrational behaviours. When the results of the analysis are examined, it is understood that irrational behaviours are an important predictor of academic motivation which can be seen in Table 2 (R=0.207, R^2=0.04, F(1,28)= 7.008, p<.01). It is observed that 4% of the total variance is explained with irrational behaviours.

4. Conclusion and Suggestions

According to the findings obtained in the research, it can be seen that there is a low level of positive significant relation between the irrational behaviours of the participants and their academic motivation. According to this result obtained, the academic motivation of the students increases at a low level as the level of irrational behaviours of the students increases. Accordingly, the incorrect beliefs of the students about themselves and others positively changes together with academic motivation. Correlation results are not enough to find out cause and effect relation. Therefore, we have found a very interesting result but we need to make further studies to understand positive relationship between irrational beliefs and academic motivation.

It was determined that there is a moderate level, positive correlation between the academic motivation and academic self-sufficiency of the students. According to these finding, the beliefs of the students that they can achieve something academically motivate them to achieve success at a moderate level. Here, it can be understood that there might be different factors affecting the students academically.

In the research, it was determined that irrational beliefs do not pose any difference in terms of the gender. This finding is consistent with the finding obtained by Civitci’s (2006) research regarding gender. In addition, there is no relation between the irrational behaviours and academic self-sufficiency of the students. With the limitations of this research shows that irrational behaviours do not affect academic self-sufficiency.

Further studies were needed to understand relations between these variables. It seems there is no effect of gender on motivation and self-sufficiency but with more participants multiple correlations and regressions can be used to find relations. Beside this type of quantitative studies, qualitative studies can be performed to understand students’ affective characteristics with irrational beliefs more deeply.

References


