



Studying the impact of metacognitive beliefs and self-regulatory strategies on students' educational motivation

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ABSTRACT

The aim of this study is to investigate the effect of metacognitive beliefs and self-regulatory strategies on students' educational motivation. The statistical population of the study is all students in secondary girl schools in the second zone in Tehran that 363 of them were selected from simple random sampling as a sample of research. The results obtained from the regression test showed that metacognitive beliefs and self-regulatory strategies have an effect on academic motivation. The results of the Pearson correlation test between components of cognitive beliefs and educational development showed that there are significant positive correlation between academic progresses with components of trust to memory and positive beliefs about negative relationship concern with components of being unruliness, cognitive self-awareness and need to control thoughts. Also, the results of correlation test between the components of incentive strategies and educational development showed that there are significant positive correlation between academic progress with motivational beliefs, cognitive and metacognitive strategies. The results showed that with increasing metacognitive beliefs and self-regulatory strategies, educational progress has also increased.

Keyword:

cognitive beliefs, self-regulatory strategies, educational development, secondary school students.

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Introduction

Motivation is the primary concern of most teachers as well as principals. The motivation issue is not confined to education, but also it is the important issue in the psychology, management, health and socio-economic fields. In fact, the place and role of education systems in educating the interested, responsive, useful and effective human resources for community organizations and the development of qualified citizens for society makes the importance of motivation in those systems more and more important and prominent (Tella, 2007). Motivation is one of the most important powerful sources that affects learners' behavior at school and determines the strength and stability of behavior. Motivation helps the learner in achieving the goal and gaining the ability to carry out the necessary activities in certain situations (Akbas and Cohn, 2007). Motivation is an important factor which is sometimes necessary for learning and often its importance is more than general intelligence (Kaveh, 1389). In this case, Akbas and Cohn (2007) note that emotional factors such as motivation have important effects on academic progress and considered as important components of education. One of the variables studied in this case is metacognitive strategies. Metcalfe and Shimamura (1994), consider metacognition as a tool to manipulate and order the cognitive processes. Brown (1980) defines metacognition as an individual's awareness of its activities or cognitive processes and methods for regulating the cognitive processes. As cognitive strategies are learning strategies, metacognitive strategies are measures to monitor cognitive strategies and to guide them. The main cognitive strategies can be placed in three categories as planning, monitoring and ordering. Metacognition plays a key role in successful learning (as mentioned by Sadeghi and mohtashami, 1389). One of the variables studied in this case regarding educational motivation is self-regulation. Cole, Logan and Walker (2011) define self-regulation as psychic attempts to control the internal state, processes and functions in order to achieve higher goals. Thus, self-regulated learners are distinguished by attributes such as self-innovation, dominating to learning the goal and being good self-based documents (Zimmerman, 2015).

2-1 stating the issue

In current world, assessing the quality of education is one of the main concerns of the educational system and nations seek to optimize their education system by looking at each other's functions and appropriate adaptations. Questions like, "What is the class and the effective school?", "What educational system is more productive?", "Which country is superior in education?" and "What is the attribute of this superiority?" have been raised in recent decades and in many cases, academic progress has been raised as a response. But in the past two decades, education professionals have focused on the two fundamental factors of academic development while studying effective factors on academic progress, which are the two "cognition" and "motivation" the factors. In fact, the school is a formal education situation and students need to learn effective learning in order to be successful and achieve the cognitive goals of the education system and the key to effective learning is to be motivated (Mohammadi Darvishi Baghal, Hatamizaeh, Asadzadeh and Ahadi 1392). The leaning

motivation in school refers to the behaviors that lead to learning and progress (Biyabangard, 1384), and why and how students are motivated to learn in different learning situations (Phadelmoola, 2010). In general, teaching metacognitive strategies helps people with getting to study, inner control, positive attributes, motivation for progress, creativity and self-building and self-reliance and reinforce sense of self-confidence in life and enables them to identify the problems and analyze their activities and to act freely and independently and to provide best solutions in different fields (Mohammadifar and Malekian, 1394). Another variable that is considered in the present study in relation to academic motivation is self-regulatory strategies. The results of various research (Aker and Octamis, 2010; Lee; 2009; Abbasi; Dargahi; 1394; Mohhamadi Darvish Baghal; Hatami; Asadzadeh; Ahadi; 1392; Mohamadamini; 1392) have shown the effect of self-regulation strategies on academic motivation. According to Bandura (1997), self-regulation is the application of abilities and capabilities of self-guidance, self-control and autonomy (quoted from Abbasi and Dargahi, 1394). Pintrich (1991) defines self-regulatory learning as an active and structured process by which the learner adjusts and controls the goals of learning, recognition, motivation and behavior (Mossolidz and Philippo, 2005). Zimmermann and Shank (2004) believes that self-regulating learners begin and direct their learning processes in terms of metacognition, motivation and behavior. In the field of motivation, these learners consider themselves as efficient, effective and capable. Significant amount of research done on motivation of learners suggests that researchers are interested in this field. According to the above, the researcher is to examine whether metacognitive beliefs and self-regulatory strategies affect students' academic motivation?

Importance and necessity of research

School and university are educational institutions that can play a vital and influential role in the prosperity of graduates' talents. In fact, a school or university is a specialized and professional organization that provides proper planning for utilizing talent, creating skills, and enhancing creativity. nowadays, a wide range of academic behaviors and outcomes such as academic backwardness, poor academic achievement, dropout, low academic performance, and inadequate communication with educational environments are considered as threats to the health of teenagers and young people, and make parents, teachers, education specialists and society concern (Heydari, Asgari, Saedi, Moshak, 1394). Processes which strengthen and direct behavior arise from the forces within the individual and the environment. Motivation is also an internal process that manages and strength behavior, so motivation is a general term for identifying the common ground between needs, cognitions and emotions and about students, the motivation for academic achievement is of great importance. With this motivation, individuals feel to move to pursue needed move to successfully complete their education, achieve a goal, or achieve a certain degree of adequacy in their work, in order to finally achieve the necessary success in learning and studying (Noohi, Hoseini, Rookhsarizadeh, Saboori, Alishiri, 1391). In this research, the motivation of academic progress in relation to

metacognitive strategies is investigated. Paris and Vinnoguard (1990) have pointed out that metacognition can motivate students and improve learning (quoted by Mohammadiar and Malekian, 1394). Welolk (2010) from the viewpoint of information processing theory, sees metacognition as executive control processes such as attention, reading and training, organizing and manipulating information. The term metacognition is a person's knowledge of their cognitive processes and how they can be used properly to achieve learning goals. Metacognition is a multifaceted concept and this concept includes knowledge (beliefs) of processes and strategies that assess, monitor or control cognition (Karami, Zaki and Rostami, 1391). What distinguishes self-regulating learners from others is that they consider themselves responsible for their actions, and believe that learning is an active work; they are also self-motivated and employ some strategies that will help them achieve their educational goals. (Yasmie Nejad, Taheri and Golmohammadian, 1392).

Research Methodology

This research is a field-oriented approach. Field research: In this study, standard questionnaires were used to study the effect of meta-cognitive beliefs and self-regulatory strategies on student's academic motivation. Therefore, the tool used in this study is a questionnaire.

CONCLUSION AND DISCUSSION

The purpose of this research was to "investigate the effect of metacognitive beliefs and self-regulation strategies on student's academic motivation". The report was compiled in five chapters. The first chapter presented generalities of necessity of research, the objectives and research questions and a brief description of the specific vocabulary. In the second chapter, theoretical bases, background of research and related studies were explained. The methodology for conducting research and explanations about the method and tool for collecting information was presented in the third chapter. The results of the information analysis were presented in tables and charts in the fourth chapter. The present chapter, as chapter 5, summarizes the results of the research as well as discussing the results and after a general conclusion, expresses the limitations that the researcher encountered during the implementation of this research. Finally some suggestions are presented in the form of scientific and practical recommendations.

Discussion and Conclusion on the Study of the Effect of Metacognitive Beliefs and Self-Regulatory Strategies on Students' Academic Motivation

First hypothesis: metacognitive beliefs affect students' academic motivation. The results of regression test showed that metacognitive beliefs have an effect on students' academic achievement. Also, the results of the correlation test between the components of meta-cognitive beliefs and academic progress indicated that only the components of positive beliefs about concern and assurance were related to academic progress and in other components such a relationship was not found. Therefore, it can be said that when metacognitive beliefs increase, students' academic progress also increases. The results are in consistent with Amini's research (1386), which showed that there is a positive and meaningful relationship between metacognitive beliefs and academic progress. Barzegar and colleagues (1393) also in one research showed that there is a meaningful relationship between the orientation of the target

orientational function, mastery-avoidance, metacognitive reading strategies, and internal motivation. There was a meaningful relationship between the orientation of the target orientational function, function-avoidance and external motivation. Also, other results of this research show that there is a significant relationship between the orientation of the orientational function, mastery-tendency and motivelessness. In addition, in this study it was concluded that the orientation of target orientational function, mastery-tendency, metacognitive reading strategies and internal motivation can predict external motivation and motivelessness. According to the obtained results, the goals of progress and metacognitive reading strategies are related to academic motivation and in educational situations these variables should be taken into account. So, in the end, the research is consistent with the results of our study. Golestani et al. (1392) also found that the relationship between the components of meta-cognitive beliefs, cognitive uncertainty and the uncontrollability of concerns with academic proclivity is related. Golestani and colleagues (1392) in their research also showed that there is a relationship between the components of metacognitive beliefs, cognitive uncertainty and the uncontrollability of concerns with academic procrastination. Abolghasemi and colleagues (1388) showed that there are meaningful negative relationships between the unbalanced metacognitive beliefs and the academic achievement of students who has anxiety about test. The results are consistent with the present study. This finding is also supported by research findings (Orson and colleagues (1994); Jennifer (1994); Thazien and colleagues (1999); Williamso and colleagues (2002); Winman & Spence (2005) on which metacognitive beliefs, cognitive trust and positive beliefs about academic success have a meaningful relationship. Metacognitive beliefs are the same knowledge of specific strategies that are useful in planning, monitoring and regulating learning and thinking. A person's metacognitive beliefs affect the performance of students in terms of positive or negative and if these beliefs are negative, they have an adverse effect on the performance of the students. But the reason for the positive and significant relationship between metacognitive beliefs and academic progress is that people with high metacognitive power notice the relationship between realities of the problem, check their chosen solution, analyze complex problems in more detailed levels and control their thinking by questioning themselves. Metacognition also includes a stable knowledge of the beliefs related to cognitive system and knowledge of the factors that influence the functioning of the cognitive system and regulates the current cognitive state and leads to awareness of it. Therefore, as these people have a positive beliefs about their cognitive beliefs so they trust in their abilities in starting or completing their tasks. This increases the positive effects of motivation to initiate and sustain the task, so in this situation the student is attracted to the task and involved in it, which ultimately increases academic motivation.

Second hypothesis: Self-regulation strategies affect students' academic motivation.

The results of regression test showed that self-regulation strategies affect students' academic achievement. Also, the results of the correlation test shows a positive and meaningful relationship between all the components of self-regulation strategies and the academic achievement.

According to the coefficients, the most effective and relevance is the component of the metacognitive strategies. Finally, it can be said that by increasing self-regulation strategies, students' academic progress increases. The results are consistent with the research of Amini (1392) that the training of self-regulation learning strategies and problem-solving has a positive and meaningful effect on academic motivation and self-efficacy of the students, which increases the academic motivation and self-efficacy of the students with negligence. Mohammadi Darvish and colleagues (1392) showed that self-regulation strategies training increases internal motivation, self-efficacy and reduces test anxiety. The results are consistent with Mohammadi Darvish and colleagues (2013). The results were also in consistent with Mohammadifar and malekian (1394) that the effect of education on educational motivation sub-factors are meaningful, so learning strategies can be taught to students and teaching these strategies can increase educational motivation and self-regulation. Also, the results are consistent with the researches of Lee (2009), Osvalandr and Tob (2009), Acer and Octamys (2010), which their studies showed that cognitive and metacognitive learning strategies are effective in increasing the motivation of academic progress. The reason for explaining this finding is that self-regulation strategies enables students by planning, teaching and organizing in a more task-based way to do their tasks and daily activities. Through these guidelines, students can check and review their failures and ultimately improve the active learning. Students can also learn about the usefulness of specific strategies for effective problem-solving and effective learning through self-regulation. Therefore, teaching self-regulatory learning by using cognitive and meta-cognitive strategies as well as proper resource management strategies is trying to increase the students' learning and understanding and thus, improve the academic progress of students.

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