

Examining the Relationship between Learning Strategies and the Four C's of Academic Resilience among School Students

Vidhu Mohan¹, Mohita Verma²

¹Department of Psychology, Punjabi University Patiala, India (Corresponding Author)

²Department of Psychology, Punjabi University Patiala, India

Abstract: *The purpose of the present study was to examine the relationship between self regulated learning strategies (elaboration, organization, meta cognitive self regulation, time management) and four C's of academic resilience (confidence, control, composure and commitment) of students. The sample consisted of 162 adolescents from various public schools of Patiala, Ludhiana (Punjab) and Chandigarh. Motivated Strategies for Learning Questionnaire (MSLQ, Pintrich et al., 1991) and Motivation and Engagement High School Scale (Martin, 2012) were used to assess learning strategies and the four C's of academic resilience respectively. It was hypothesized that dimensions of learning strategies would positively correlate with self belief (confidence) and persistence (commitment) and would negatively correlate with anxiety (composure) and uncertain control respectively. Pearson product moment correlation coefficient was used to analyze the data. Implications of the findings have been discussed.*

Keywords: Self regulated learning strategies, Academic Resilience, Adolescents

1. Introduction

Students, today, are confronted with host of academic challenges that they have to overcome to succeed. Being persistent in the face of these challenges is what defines the psychological construct of resilience (Connor & Davidson, 2003). Empirically, researches (Luthar, 1991; Meece et al, 2006; Masten et al., 1999) point towards personality, gender, parenting, school as being significant determinants of academic resilience. Despite strong theoretical associations of self regulated learning strategies with various academic outcomes, little research has been conducted on exploring linkages between self regulated learning strategies with academic resilience. Self regulated learning strategies have been proved (Pintrich & Garcia, 1991; Zimmerman, 2002) to be significantly correlated with academic outcomes. Keeping in mind, the significance of self regulated learning strategies in the domain of academics, it becomes essential to explore as to how do this factor is related to academic resilience.

Academic Resilience

Resilience is defined as the ability to be competent despite threatening situations and refers to the ability to bounce back from psychological harm (Civita, 2000). In the context of academics, resilience is the ability of a student to deal effectively with academic setbacks, stress and study pressure (Finn & Rock, 1997). Academically resilient students are those who manage to sustain high levels of academic motivation and performance despite stressful events that put them at risk of school failure (Martin & Marsh, 2009). Resilient students are purported to have social competence, problem-solving skills, mastery, autonomy and a sense of purpose (Masten, Best & Garnezy, 1990; Rutter, 1987). In terms of Wang, Haertel, & Walberg (1994), "Academic resilience is the heightened likelihood of success in school and other life accomplishments despite environmental adversities brought about by early traits, conditions, and

experiences." It is a natural survival instinct, in some individuals', it shines bright and in some, resilient spark is snuffed out. The leading difference between a resilient and non resilient individual is how instantly a resilient individual recovers from failures and moves on in his life.

Martin (2001, 2002, 2003a, 2003b) has worked extensively in the area of academic resilience. He has developed a model of motivation - the Student Motivation Wheel that reflects thoughts, feelings and behaviors underpinning academic engagement at school. Martin has talked about four components that measure academic resilience. This framework of academic resilience was used in the present study. The four components of academic resilience as described by Martin (2003a, 2003b) are as follows:

- a) **Self-Belief-** It is the belief and confidence of students in their ability to do well in their academic assignments, to face the challenging situations and to perform to the best of their ability (Martin, 2003a). The belief of students in them plays a significant role in their academic endeavours.
- b) **Persistence-** According to Bandura (1986), persistence is characterised by a refusal to give up when faced with difficulty. Persistence refers to the ability of students to understand the problem and finding out answer for the problem, even when that problem is difficult or challenging.
- c) **Anxiety-** Anxiety is a major psychological problem in school going children and adolescents. Anxiety is a normal response of a student to stressful situations such as examination fear, speaking in front of group, entering into new social scenarios.
- d) **Perceived Control-** Perceived control of tasks is another motivational variable that appears to affect student's academic achievement. In academic context, perceived control refers to the student's perception of control over their academic performance (Menec et al., 1994).

Academic Resilience goes a long way in enabling a student to face the obstacles in the domain of academics. It also equips a student to cope effectively with academic setbacks, stress and study pressure. A number of factors have been reported (Luthar, 1991, Alpert & Haber, 1960; O'Brien, 1991) to be significantly correlated with academic resilience. The present study assessed the role of self regulated learning strategies in academic resilience.

Self Regulated Learning:

There has been a drastic change in the concept of educational system in previous years, so that nowadays self regulated learning has become a major focus of research. Self regulated learning is an important aspect of student learning and academic performance in the classroom context (Corno & Rohrkemper, 1985). Learning to learn is an ability to pursue and persist in learning, to organize one's own learning through effective management of time and information. Learners use variety of learning strategies that helps in learning and applying the content. So, Self-regulated learning refers to the process of learners actively taking control and responsibility for their learning. Students, who use self regulated learning, have a clear idea of how and why a specific self regulatory strategy should be used. Pintrich (2000) defined, "self regulated learning as an active, constructive process whereby learners set goals for their learning and then attempt to monitor, regulate and control their cognition, motivation and behavior, guided and constrained by their goals and the contextual features in the environment."

Students use of self-regulated learning strategies are positively related with high achievement, motivation and academic delay of gratification. It refers to the utilization of cognitive, meta-cognitive strategies and resource management in order to facilitate and promote learning (Pintrich & Degroot, 1990). According to Flavell (1979), "metacognition is the knowledge about and cognition of phenomena."

Learning strategies are essential for academic development. The learner requires the will and skill to learn to master the strategies (Weinstein, 1994). Skills refers to the use of different cognitive and meta-cognitive strategies by students that include planning and organizing for learning, goal setting, self-monitoring, self-evaluation, time management and resource-management strategies. Will refers to students motivational orientation in terms of goals, value, and expectancies. Based on a combination of commonly used classifications (Boekaerts, 1997; Weinstein & Mayer, 1986) there are following four main categories of strategies, such as, **Metacognitive strategies**, which help students to plan, monitor and modify their learning (Zimmerman, 2002). In **Cognitive strategies**, students learn, remember and understand the material (Corno & Mandinach, 1983; Zimmerman & Pons, 1986) which are meant to increase encoding, retention and comprehension of course material. Students who use **Motivational strategies**, perceive themselves as competent, self efficacious and autonomous (Pintrich, 1988). Students management and control of their efforts in academic events has been proposed as another important component, i.e., **Management strategies**. In management strategies, learners focus on the learning

environment and are used to create optimal learning conditions (Corno & Rohrkemper, 1985). The enhancement of these strategies leads a student to a higher level of achievement in academics.

2. Literature Survey

Previous researches (Bandura, 1986; Schunk, 1985; Zimmerman, 1997; Rutter, 1987; Pintrich, 2005) have reported an association between academic resilience and various components of self regulated learning strategies. Momeni and Karimi (2010) found a positive relationship between the learning strategies used by resilient individuals and non resilient individuals in a research on 317 students from Razi University and found the degree of resilience is higher in successful students as compared to unsuccessful students, which also implies that self regulated learning strategies are more used by resilient students than non resilient ones (Momeni & Karimi, 2010). Thus, students who are resilient and believe in their ability to complete a task are more inclined to apply self regulated learning strategies to improve and enhance their learning (Bandura, 1986; Schunk, 1985; Zimmerman, 1997; Rosenthal & Bandura, 1978).

Need of the Study

In today's highly competitive era, it is essential that students are well equipped to deal with pressures and demands related to studies. In other words, to be able to cope with adverse situations in academics, students must be academically resilient. Because academic resilience has a critical role in academic achievement, it becomes essential to explore the correlates of academic resilience so that interventions in the domain of academics can be made more effective. There are researches that have explored significant role of self regulated learning strategies in determining anxiety related to academic performance (Alpert & Haber, 1960; O'Brien, 1991), control beliefs of students (Lopez & Little, 1996) etc. However, not much researches have been conducted on role of self regulated learning strategies in academic resilience. Self regulated learning strategies are associated with better adaptation in the face of stressful situations. The regulation of positive emotions has been linked to resilience to such extent that they counteract negative emotional experiences and enhance positive thoughts and actions. Students with better self regulatory abilities, have greater control on their emotions, thoughts and behaviour during stressful situations and experience greater resilience, than their counterparts with poorer self regulation. This shows that Self regulated learning strategies are indeed a crucial predictor of academic success. Thus, the present study aimed at assessing the relationship of Self regulated learning strategies and academic resilience.

Objectives

To assess the relationship between, meta-cognitive self regulation, time management, elaboration and organisation dimensions of self regulated learning strategies with academic resilience (i.e. self-belief, persistence, anxiety and uncertain control).

Hypothesis

- Elaboration, Organization, Meta-Cognitive Self Regulation, Time Management dimensions of self regulated learning strategies would positively correlate with self-belief and persistence dimensions of academic resilience.
- Elaboration, Organization, Meta Cognitive Self Regulation, Time Management dimensions of self regulated learning strategies would negatively correlate with uncertain control and anxiety dimensions of academic resilience.

3. Method

Design: The present study aimed at assessing the relationship between self regulated learning strategies and academic resilience, where academic resilience is predictor and self regulated learning strategies is a predicted variable. Pearson product moment correlation coefficient was used to analyze the data.

Sample: The sample consisted of 162 adolescents drawn from various public schools of Patiala, Ludhiana (Punjab) and Chandigarh. A total of 200 questionnaires were distributed, 38 questionnaires were incomplete and could not be used, leaving a total of 162 questionnaires available for analysis. Prior consent of the respective school principals and participants was taken. The age range of the subjects was 15 to 20 years, with the mean age of 17.5 years.

Measures: Following measures were used for the present study:

Academic Resilience: Motivation & Engagement Scale High School (MES-HS) 12th edition (Martin, 2012): The Motivation and Engagement Wheel is a multidimensional conceptual framework that represents salient cognitive and behavioural dimensions relevant to motivation and engagement. For the present study, MES-HS (high school) version has been used. It is a 44 item instrument that measures eleven factors. Responses are marked on seven point Likert scale ranging from 1 ('Strongly Disagree') to 7 ('Strongly Agree'). Each student's response to the four items on each motivation area are aggregated and converted to a raw score out of 100. For the present study, four factors (self belief, persistence, anxiety and uncertain control) that assess academic resilience (Martin 2003a, 2003b) were taken up. The reliability of all factors is as follows: Self belief (Cronbach's alpha = .77), persistence ($\alpha = .81$), anxiety ($\alpha = .77$) and uncertain control ($\alpha = .79$).

Motivated Strategies for Learning Questionnaire (MSLQ, Pintrich et al., 1991):

This scale has been designed to measure student's motivational orientations and their use of different learning strategies. MSLQ comprises of 15 subscales in which six subscales are related to motivation and nine are related to learning strategies section. This instrument is completely modular, thus scales can be used together or individually, depending on the needs of the researcher. Keeping in mind the objectives of the present study, three (elaboration, organisation, meta cognitive self regulation and time management) out of nine learning strategies were assessed.

It is a 7 point Likert scale, in which students rate themselves from 1(not at all true of me) to 7(very true of me). In MSLQ, some items are negatively worded and must be reversed before a students' score is computed. High scores indicate greater level of the construct being measured. Pintrich & DeGroot (1990) reported the following reliability coefficients for internal consistency of the subscales: critical thinking($\alpha = .80$), metacognitive self regulation($\alpha = .79$), peer learning($\alpha = .76$). It has been suggested (Pintrich et al., 1993) that MSLQ has good internal reliability.

4. Results and Discussion

In order to analyze the association between independent variable, self regulated learning strategies (Elaboration, Organization, Meta Cognitive Self Regulation, Time Management) and dependent variable, i.e. academic resilience (self-belief, persistence, anxiety and uncertain control), Pearson Product moment was computed.

The results of the present study have been shown in Table No. 1. It is the correlation matrix depicting relationship between Self regulated learning strategies (Elaboration, Organization, Meta Cognitive Self Regulation, Time Management) and dependent variable that is Academic resilience.

Correlation Analysis

Table 1: Correlation between Self Regulated Learning Strategies and Academic Resilience.

	Elab	Org.	MSR	TM	SB	Per	UC	Anx
Elab	1.00							
Org.	0.67**	1.00						
Msr	0.66**	0.62**	1.00					
TM	0.48**	0.40**	0.44**	1.00				
SB	0.46**	0.48**	0.43**	0.36**	1.00			
Per	0.43**	0.46**	0.38**	0.43**	0.36**	1.00		
UC	0.10	-0.02	0.07	-0.04	-0.11	0.10	1.00	
Anx	0.13	0.19*	0.22**	0.03	0.13	0.20*	0.31**	1.00

** $p < 0.01$, * $p < 0.05$

Elab-Elaboration, Org.-Organisation, MSR- Meta-Cognitive Self Regulation, TM-Time Management, SB-Self Belief, Per-Persistence, UC-Uncertain Control, Anx-Anxiety

As shown in Table no 1, there was a significant correlation between dimensions of self regulated learning strategies (Elaboration, Organization, Meta Cognitive Self Regulation, Time Management) and dimensions of academic resilience (self belief, persistence, anxiety and uncertain control).

The correlation for elaboration and self belief was $r = 0.46$ ($p < 0.01$), for organisation and self belief was $r = 0.48$ ($p < 0.01$), for meta-cognitive self regulation and self belief was $r = 0.43$ ($p < 0.01$) and for time management and self belief was $r = 0.36$ ($p < 0.01$). This means that higher the elaboration, organisation, meta-cognitive self regulation and time management, more is the self belief in students.

The next finding of the present research reveals the significant positive correlation between the dimensions of self regulated learning strategies (elaboration, organisation,

meta cognitive self regulation and time management) and dimension of academic resilience i.e. persistence. The correlation for elaboration and persistence was $r = 0.43$ ($p < 0.01$), organisation and persistence was $r = 0.46$ ($p < 0.01$), meta-cognitive self regulation and persistence was $r = 0.38$ ($p < 0.01$) and for peer time management and persistence was $r = 0.43$ ($p < 0.01$). This means that higher the elaboration, organisation, meta-cognitive self regulation and time management, more is the persistence in students.

The next finding of the present research reveals the significant positive correlation between the dimensions of self regulated learning strategies and academic resilience i.e. anxiety. The correlation for organisation and anxiety was $r = 0.19$ ($p < 0.01$), metacognitive self regulation and anxiety was $r = 0.22$ ($p < 0.01$). The correlation for elaboration and time management with anxiety did not come out to be significant. The next finding of the present research reveals the no significant correlation between the dimensions of self regulated learning strategies (elaboration, organisation, meta cognitive self regulation and time management) and dimension of academic resilience i.e. uncertain control.

5. Discussion

The aim of the present study was to assess the relationship between self regulated learning strategies with academic resilience. The independent variable in the present study was self regulated learning strategies. It was hypothesized that various dimensions of self regulated learning strategies would be significantly correlated with academic resilience. The findings show that most of the dimensions of self regulated learning strategies are significantly correlated with dimensions of academic resilience. The findings get support from previous researches (Momeni and Karimi, 2010) showing that self regulated learning strategies are significantly related to academic resilience. Degree of resilience is higher in successful students as compared to their counterparts, implying that self regulated learning strategies are used more by resilient students than non-resilient students. Academically resilient students, because they think that they are master of their learning, persist in challenging situation (Mc Tighe, Washburn & Liew, 2009). They have the ability to regulate their own behavior in order to maximize the amount of learning that can take place.

The hypothesis for the study was "*there would be positive correlation between dimensions of self regulated learning strategies and self belief.*" The findings for the present study can be explained on the basis of research carried out by Pintrich et al. (1991). The students who use self regulated strategies are intrinsically self motivated and prove to be autonomous learners. Such learners successfully make use of cognitive and meta-cognitive strategies and they are always engaged in self regulated learning as well, knowing what to do, how to do and when to do. Thus, those students are more likely to persist in a task than students who do not believe they can perform the task. Having confidence in oneself supports the individual's ability to build and maintain healthy relationship with their peers. Thus, students who rely on self regulated learning strategies have a higher sense of self-belief.

The next hypothesis was that "*there would be positive correlation with dimensions of self regulated learning strategies and persistence.*" The findings are in line with previous researches (Fincham & Cain, 1986 ; Paris & Oka, 1986; Schunk, 1985). Students who believe they are capable, engage in more meta-cognition, use more cognitive strategies and are more likely to persist at a task than students who do not believe that they are capable of performing the task. Such students set goals for themselves to manage their activities to be more persistent. However, when faced with academic challenges, these students are more likely to show adaptive motivational patterns, persistence and problem solving strategies (Dweck, 1986; Mueller and Dweck, 1998) than students who believe intelligence to be a fixed and uncontrollable trait. Another justification for the finding comes from the research done by Furman & Buhrmester, 1985; Parker & Asher, 1993). Students show persistence when they share learning experiences and provide emotional support. Thus, they are likely to be persistent in their task when they create a climate of comfort and feel need for relatedness.

It was hypothesized that "*there would be negative correlation between dimensions of self regulated learning strategies and anxiety.*" The research done by Gall (1985), lends significant support to the findings. Learners often perceive test taking as unpleasant or threatening. Too much anxiety prior to or during a test can cause distraction and disorientation. The finding get support from various researches (Alpert & Haber, 1960; O'Brien, 1991). Paradoxically, evidence showed that anxiety can be beneficial to learning. A moderate amount of anxiety can increase motivation, produce a heightened state of alertness as well as concentration, consequently improve performance. However, high level of anxiety can have detrimental effects on academic performance. Another rationale for the finding comes from the research done by Benjamin et al. (1981). Although high anxious students seem to be as effortful and persistent as low anxious students, they appear to be very ineffective and inefficient learners who often do not use appropriate cognitive strategies for achievement. They are not persistent and avoid difficult tasks. The findings are in line with other previous researches (Hembree, 1988; Pajares & Urdan, 1996). Students are less inclined to take risk, study ineffectively, memorize details and have poorer performance when they are highly anxious. For these reasons, anxiety is believed to be negatively related to self-regulated learning (Malpass, O'Neil, & Hocevar, 1999).

It was hypothesized that "*there would be negative correlation between dimensions of self regulated learning strategies and uncertain control.*" The findings can be explained on the basis of previous researches (Connor and Slear, 2009; Neil and Dass, 2001). Individuals with high uncertain control often perceive a lack of sense of control over their academic performance. They are mostly unsure of whether their efforts would be instrumental and bring success. Such a perception of lack of control has an adverse effect on their critical thinking. Such students are less motivated to improve competence in a task because they believe that their personal actions do not control outcomes and they are not able to use meta cognitive strategies.

Another justification comes from the research done by Menec et al., (1994). Sense of control functions as a coping response but when a student is high on uncertain control, his coping with adverse academic situations is affected. Since personal control is strongly associated with emotional well-being, reduced impact of stressors, enhanced ability to cope up with stress and improved performance (Thompson & Spacapan, 1991). Thus, it can be inferred that those with high uncertain control have low efficacy beliefs.

6. Conclusion

The findings of the present research have significant implications in the area of academics and counselling. By using self regulated learning strategies, students develop various skills, like, effort, persistence, planning, organization etc. whereas non resilient students don't use such strategies and are resistant to do academic work. Such students can be helped by teachers and parents in replacing their self defeating thoughts with self enhancing ones.

7. Future Scope

The findings of the present research have significant implications in the area of academics and counselling. By using self regulated learning strategies, students develop various skills, like, effort, persistence, planning, organization etc. whereas non resilient students don't use such strategies and are resistant to do academic work. Such students can be helped by teachers and parents in replacing their self defeating thoughts with self enhancing ones. Despite the important findings and implications of the present research, there are some **limitations**, which are discussed below:

- The study has not compared individual's with high and low levels of self regulated learning strategies on academic resilience.
- The study has not assessed gender differences.
- The study has not assessed difference between government and private school students.

Following are some **suggestions** for future research:

- Future research should assess gender differences.
- Future research should also obtain teacher ratings of students about their academic performance.
- Future research can also take into consideration role of family and peer group in academic performance.

References

- [1] Alpert, R., & Haber, R., (1960). Anxiety in academic achievement situations. *Journal of Abnormal and Social Psychology*, 61, 207 - 215.
- [2] Bandura, A. (1986). *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs: Prentice Hall.
- [3] Bandura, A., & Rosenthal, T. L. (1978). *Psychological modeling: Theory and practice*. In S. L. Garfield & A. E. Bergin (Eds.), *Handbook of psychotherapy and behavior change (2nd ed.)*. New York: Wiley.
- [4] Benjamin, M., McKeachie, W. J., Lin, Y. G., & Holinger, D. P. (1981). Test anxiety: Deficits in information processing. *Journal of Educational Psychology*, 73, 816-824.
- [5] Boekaerts, M. (1997). Self-regulated learning: A new concept embraced by researchers, policy makers, educators, teachers, and students, *Learning and Instruction*, 7, 161-186.
- [6] Civita, M. (2000). *Promoting resilience: A vision of care. Reclaiming children and youth*, (2), p. 76-78.
- [7] Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: the Connor-Davidson Resilience Scale (CD- RISC). *Depression and anxiety*, 18(2), 76-82.
- [8] Connor, B., and Slear, S. (2009). Stress and its relationship to emotional intelligence and resiliency. *The International Journal of Learning* 16 (1), 249-260.
- [9] Corno, L., & Mandinach. E. (1983). The role of cognitive engagement in classroom learning and motivation. *Educational Psychologist*, 18, 88-10.
- [10] Corno, L., & Rohrkemper, M. (1985). The intrinsic motivation to learn in classrooms. In C. Ames & R. Ames (Eds.), *Research on motivation: Vol. 2. The classroom milieu*, (pp. 53-90). New York: Academic Press.
- [11] Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41, 1040-1048.
- [12] Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive- developmental inquiry. *American Psychologist*, 34, 906-911.
- [13] Fincham, F., & Cain, K. (1986). Learned helplessness in humans: A developmental analysis. *Developmental Review*, 6, 25-86.
- [14] Finn, J., D., & Rock, D., A., (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology*, 82, 221-234.
- [15] Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationships in their social networks. *Developmental Psychology*, 21, 1016-1024.
- [16] Gall, M. D. (1985). Study for success: The most essential study skills for school and college. Eugene, OR: Damein.
- [17] Hembree, R. (1988). Correlates, causes, effects, and treatment of test anxiety. *Review of Educational Research*, 58(1), 47 - 77 .
- [18] Lopez, D. F., & Little, T. D. (1996). Children's action-control beliefs and emotional regulation in the social domain. *Developmental psychology*, 32.
- [19] Luthar S., S. (1991). Vulnerability and resilience: A study of high-risk adolescents. *Child Development*, 62, 600-616.
- [20] Malpass, J. R., O'Neil, J. H., & Hocevar, D. (1999). Self-regulation, goal orientation, self- efficacy, worry, and high-stakes math achievement for mathematically gifted high school students. *Roeper Review*, EBSCO Host, Academic Search Elite (0278-3193).
- [21] Martin, A. J. (2001). The Student Motivation Scale: A tool for measuring and enhancing motivation. *Australian Journal of Guidance and Counselling*, 11, 1-20.
- [22] Martin, A. J. (2002). Motivation and academic resilience: Developing a model of student enhancement. *Australian Journal of Education*, 47, 88-106.
- [23] Martin, A. J. (2003a). How to motivate your child for school and beyond. Sydney: Bantam.

- [24] Martin, A. J. (2003b). The Student Motivation Scale: Further testing of an instrument that measures school students' motivation. *Australian Journal of Education*, 47, 88-106.
- [25] Martin, A. J. (2012). Motivation and engagement: Conceptual, operational and empirical clarity. Section Commentary in S. Christenson, A. Reschly, & C. Wylie (Eds.). *Handbook of Research on Student Engagement*. New York: Springer.
- [26] Martin, A. J., & Marsh, H. W. (2009). Academic resilience and academic buoyancy: Multidimensional and hierarchical conceptual framing of causes, correlates and cognate constructs. *Oxford Review of Education*, 35, 353-370.
- [27] Masten A., Best K., Garmezy N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2, 425-444.
- [28] Masten A., S., Hubbard J., J., Gest S., D., Tellegen A, Garmezy N, Ramirez M. (1999). Adaptation in the context of adversity: Pathways to resilience and maladaptation from childhood to late adolescence. *Development and Psychopathology*, 11, 143-169.
- [29] McTigue, E. M., Washburn, E. K., & Liew, J. (2009). Academic Resilience and Reading: Building Successful Readers. *The Reading Teacher*, 62(5), 422-432.
- [30] Meece, J., L., Anderman, E.M. Anderman, L.H. (2006). Classroom goal structure, student motivation, and academic achievement. *Annual Review of Psychology*, 57, pp. 487-503.
- [31] Menec, V. H., Perry, R. P., Struthers, C. W., Schonwetter, D. J., Hechter, F. J., & Eichholz, B. L. (1994). Assisting at-risk college students with attributional retraining and effective teaching. *Journal of Applied Social Psychology*, 24, 675-701.
- [32] Momeni, K. H. & Karimi, P. (2010). Resilience in the students. *Proceedings of the Fifth National Conference on Student Mental Health*. Tehran: witness. 350-349.
- [33] Mueller C., M and Dweck C., S. (1998). Praise for intelligence can undermine children's motivation and performance. *Journal for Personality and Social Psychology*, 75(1), 33-52.
- [34] Neill, J. T., & Dias, K. L. (2001). Adventure Education and Resilience: The Double-Edged Sword. *Journal of Adventure Education and Outdoor Learning*, 1(2), 35-42.
- [35] O'Brien, T. V. (1991). Test anxiety in college students: A review of the recent research and an endorsement of a multimodal approach. *Community Junior College*, 15, 271-283.
- [36] Pajares, F., & Urdan, T. (1996). Exploratory factor analysis of the Mathematics Anxiety Scale. *Measurement and Evaluation in counseling and Development*, 29, 35-41.
- [37] Paris, S. G., & Oka, E. (1986). Children's reading strategies, meta-cognition and motivation. *Developmental Review*, 6, 25-86
- [38] Parker, J. G., & Asher, S. R. (1993). Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. *Developmental Psychology*, 29, 611-621.
- [39] Pintrich, P. R. (1988). A process-oriented view of student motivation and cognition. In J. S. Stark & L. Mets (Eds.), *Improving teaching and learning through research. New directions for institutional research*, 57 (pp. 55-70). San Francisco: Jossey-Bass.
- [40] Pintrich, P. R. (2000). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. Pintrich, & M. Zeidner (Eds.), *Handbook of self regulation* (pp. 452-502). New York: Academic Press
- [41] Pintrich, P. R. (2005). The role of goal orientation in self-regulated learning. In M. Boekaerts, P. R. Pintrich, M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 452-502). San Diego: Academic Press.
- [42] Pintrich, P. R., & De Groot, E. V. (1990). Motivational and self-regulated learning components of classroom academic performance. *Journal of Educational Psychology*, 82, 33-40.
- [43] Pintrich, P. R., & Garcia, T. (1991). Student goal orientation and self-regulation in the college classroom. In M. Maehr, & P.R. Pintrich, *Advances in motivation and achievement: Goals and self-regulatory processes*, vol. 7. Greenwich, CT: JAI Press.
- [44] Pintrich, P., R., D., A., F., Smith, T. Garcia and W., J., McKeachie, (1991). A manual for the use of the motivated strategies for learning questionnaire (mslq). Ann Arbor: University of Michigan, National Center for Research to Improve Postsecondary Teaching and Learning.
- [45] Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57, 316-331.
- [46] Schunk, D. H. (1985). Self-efficacy and classroom learning. *Psychology in the Schools*, 22, 208-223.
- [47] Thompson, S. C. & Spacapan, S. (1991). Perceptions of control in vulnerable populations. *Journal of Social Issues*, 47, 1-21.
- [48] Wang, M. C., Haertel, G. D., & Walberg, H. J. (1994). Educational resilience in inner cities. In M. C. Wang & E. W. Gordon (Eds.), *Educational resilience in inner-city America: Challenges and prospects* (pp. 45-72). Mahwah, NJ: Lawrence Erlbaum.
- [49] Weinstein, C. F. (1994). Strategic learning, strategic teaching: Flip sides of a coin. In P. Pintrich, D. Brown, & C. Weinstein (Eds.), *Student motivation, cognition, and learning* (pp. 257-274). Hillsdale, NJ: Lawrence Erlbaum Associates.
- [50] Weinstein, C., E., & Mayer, R., E. (1986). The teaching of learning strategies. In M.C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 315-327). New York: Macmillan.
- [51] Zimmerman, B. J. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary educational psychology*, 22, 73 - 101.
- [52] Zimmerman, B.J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41, 64-70.
- [53] Zimmerman, B. J., & Pons, M. M. (1986). Development of a structured interview for assessing student use of self-regulated learning strategies. *American Educational Research Journal*, 23 (4), 614-628.