CHAPTER - I
INTRODUCTION

In a rapidly changing world with exciting technological advances, education has become very vital. It is education that determines the level of prosperity, welfare and security of people. Not only the well being of citizens, but also the economic growth and prosperity of countries are contingent upon their having a successful educational system. Developing and maintaining educational initiatives for children to enable them to meet these challenges is a major concern being faced by all sections of society including educators, parents, teachers, principals and community groups.

To adapt to this age of information and the explosion of knowledge, students will have to assume more self-direction and initiative in learning. This process allows the individual to draw on personal motivational resources to manage and perform. This ability to regulate one’s learning and motivate oneself towards desired goals is particularly critical at the secondary school level.

Inspite of the fact that schools and colleges impart uniform classroom instructions to all students, wide range of differences are observed in their scholastic achievements. It is a well-known fact that every year many students experience the trauma of failure, which has an adverse effect on their personal adjustment, shown by an increase of frustration and loss of interest in work (Gupta, 1993). In fact, it appears as if the whole system of education revolves round the academic achievement of students though various other outcomes are also expected from the system. Despite the vigorous research effort, what makes students achieve is still far from being fully explained.

The early generation of researchers attempted to identify intrapersonal and interpersonal factors, which played a significant role in influencing academic behavior. A considerable amount of initial research was devoted to explore the relationship between the intrapersonal variables of intelligence and motivational orientation and academic performance. Specifically it was found that children with high intelligence and motivation earned better grades. Likewise, a number of studies also started pursuing other intrapersonal factors such as creativity, cognitive styles, personality, self-perception and study habits in relation to academic achievement. The results of these were not consistent and conclusive in nature. A parallel body of researchers during this period initiated their
work on interpersonal variables which impact the academic achievement of children, such as culture, family size, income, parental attitudes, styles, involvement, school systems, conditions, classroom environment, teachers’ functioning attitudes towards teaching and so on. Specifically it was found that culture, family and school were potent factors in determining academic performance.

The second generation of research however is devoted to understanding the process through which some of intrapersonal and interpersonal factors affect children’s academic achievement. This research body is moving from theoretical explanation to intervention and can generate new notions of improving academic achievement. A major concept being used to explain the mediating role between inter-intrapersonal factors and academic achievement is self-regulation.

Recent developments in the field of motivation research suggest that self-regulation may hold the key to understanding student achievement. Self-regulation refers to students’ “self-generated thoughts, feelings and actions which are systematically oriented toward the attainment of goals” (Zimmerman, 1994, p.9). Children who are self-regulated, despite living in challenging environments have been found to achieve more academically (Brody & Flor, 1998).

Two kinds of self-regulation are autonomous and controlled regulations. Autonomous regulation is motivation controlled by internal forces (a sense of volition and psychological freedom from excessive external pressure), whereas, controlled regulation is motivation controlled by external forces (a sense of resistance, pressure and obligation). In the educational domain, autonomous regulation is associated with use of optimal learning strategies and higher school grades (Yamauchi, Kumagai, & Kawasaki, 1999; Vansteenkiste, Simons, Lens, Sheldon, & Deci, 2004). One of the most significant affective goals of education is the capacity to be self-regulating or autonomous with respect to the learning process (Thomas, 1980; Deci & Ryan, 1985; Zimmerman & Martinez-Ponz, 1986, 1988).

Drawing on motivation theory, there is an indirect links of many variables such as intelligence, culture induced parenting factors (such as acceptance, autonomy support, behavioral control, involvement and structuring), parenting styles and classroom environment (such as student involvement, rule clarity, organization) to academic

Currently researchers have also found evidences that indicate the effect of intelligence on academic achievement through motivational variables (control understanding, perceived competence, self-regulation, need for achievement and competitive striving). Self-regulation has emerged as an important factor among these motivational resources. It seems that intelligent children are more autonomous in their academic activities as compared to the less intelligent ones. Intelligent children are capable of doing academic tasks on their own without depending upon external sources.

In recent years, researchers have not been contented to document a simple, direct relationship between parenting styles and academic achievement (Grolnick & Slowiakczek, 1994; Leung & Kwan, 1998). They postulate more complex conceptual models in which autonomous regulation mediated the relationship between parenting styles and academic achievement. Authoritative parenting in the West seemed best for equipping children to meet the challenging academic contexts and an appropriate level of autonomy, encouraging children to take responsibility and regulate themselves. Authoritarian and permissive parenting styles appeared to fail to enable children to develop a range of self-directing, self-monitoring and self-regulating abilities in academic contexts (Lamborn, Mounts, Steinberg, Dornbusch, 1991; Steinberg, Lamborn, Dornbusch, & Darling, 1992a; Ginsburg & Bronstein, 1993). But, the findings of several studies in Asian countries indicated that there is no relationship between parenting style and academic achievement and some of them repeat the Euro-American findings (Kim, 1996; Chen, Dong, & Zhou, 1997; Trama, 1998; Mehrafrooz, 1999; Kim, 1999; Chao, 2001; Garg, Levin, Urajnik, & Kauppi, 2003).

Educational psychologists increasingly have directed attention to classroom environments that foster self-regulation (Ryan & Connell, 1989; Zimmerman, 2000; Brody, Dorsey, Forehand, & Armistead, 2002; Jeon & Reeve, 2004). Although the current literature is more theoretical than empirical, some common themes run throughout all nations. It was found that elementary and high school classrooms in which clear rules and expectations are established in advance, daily activities are organized and
predictable, and students are involved in classroom decision and planning processes, to enhance students’ self-regulation and, ultimately, academic achievement (Connell & Wellborn, 1991; Skinner & Belmont, 1993; Brophy, 1998; Zimmerman, 2000).

In Eastern cultures that embrace collectivistic values, internal control is a less salient for people than individualistic societies (Schwartz, 1994). The studies available on the above for the Asian culture are rare. Iran and India are Asian countries, which do have some common social practices but differences do exist within the two cultures, which are distinct. These challenges led the researcher to conduct a cross-cultural study on the effect of parenting styles, classroom environment and intelligence through the mediating role of academic self-regulation on academic achievement.

The present research proposes to identify parenting styles and classroom environments that exert an indirect influence on academic performance through their effect on academic self-regulation in the two Eastern countries viz., Iran and India. In other words, the present study wants to explore specific forms of parenting styles and classroom environments that are autonomous supported factors, with respect to academic achievement for Iranian and Indian adolescents.

1.1 Intelligence

Students have been differentiated on the basis of intelligence. Some students are able to solve problems quickly, while others need a longer time for problem solving. Some students catch the viewpoints quickly, while others need a considerable amount of time to grasp. Also, every teacher has an intuitive sense of intelligence and use informal classroom cues and assignments to measure students’ abilities. This ability helps teacher design learning activities, which best match a student’s level.

Racial and ethnic differences in intelligence have been studied for many years. For example, some researchers found that Asian American and Euro-American children tend to score higher on intelligence tests than African-American and Native-American children (Herrnstein & Murray, 1994; Neisser et al., 1996). Other researchers also have indicated the role of culture and cultural differences on intelligence (Weinberg, 1989; Brooks-Gunn, Klebanov & Duncan, 1996; Singelman, 1999).
Sternberg (1986) defined intelligence as the capacity to acquire knowledge, the ability to think and reason in the abstract, and the capability for solving problems. Gerow, Brothen and Newell (1989) defined intelligence as the capacity to understand the world and the resourcefulness to cope with its challenges. It is obvious from the views of researchers described above that there is no agreement as regards the exact definition and nature of intelligence. In brief, it may be said that intelligence is a general ability possessed by each individual which influences and directs his/her general orientation in life.

1.1.1 Theoretical orientation of intelligence

One of the oldest work and theories on intelligence refers to Charles Spearman (1927). On the basis of Spearman’s two-factor theory, all tasks require two types of abilities—a general ability or ‘g’ and a specific ability or ‘s’. General factor for intelligence, or ‘g’, is responsible for all intellectual tasks, while the specific ability, or ‘s’, is responsible for specific activities.

Guilford (1967) proposed a structure of intellect model that describes intelligence as the intersection of five cognitive operations, four content areas, and six products. Cognitive operations are the basic mental processes such as evaluation, convergent production, divergent production, memory, and cognition. Content areas refer to the type of figural, symbolic, semantic and behavioral material. Products refer to these six categories: units, classes, relations, systems transformations, and implications. Therefore, his theory consists of 120 theoretical factors clustered into three major categories of contents, operations and products.

This theory was useful in future research and theory building on adult learning due to focus on both multiple and interacting factors of intelligence. This viewpoint is in sharp contrast with the school curriculum. Since schools insist on memorizing facts, definitions, and values, they ignore other important factors, such as evaluation, divergent thinking, and search for relationship. However, the complicity of the model makes it difficult to apply in a classroom.

Several years later, Cattell (1971) expanded the description of intelligence. He proposed a two-factor theory of intelligence—fluid and crystallized abilities. General
reasoning ability, particularly the process of perceiving relations in figural and spatial material is called fluid intelligence, whereas “crystallized intelligence is the product of acculturation-education, training and practice such abilities as verbal and quantitative reasoning, sequential memory, vocabulary and reading comprehension.” (Silverman, 1998, p. 33). Cattell’s theory of fluid and crystallized abilities strongly influenced some of the later theories, for example, on the basis of this theory; Gardner (1983) proposed the theory of multiple intelligences.

Gardner proposed seven major, and relatively independent dimensions of intelligence. These include linguistic, logical-mathematical, spatial, musical, bodily-kinesthetic, interpersonal, and intrapersonal dimensions.

Linguistic dimension: Knowing the meaning of words, having the ability to use words to understand new ideas, and using language to convey ideas to others.

Logical-mathematical dimension: Understanding relations that can exist among objects, actions, and ideas, as well as the logical or mathematical relations that can be performed on them.

Spatial dimension: Perceiving objects accurately and imagining the appearance of an object before and after it has been transformed.

Musical dimension: Comprehending and producing sound, varying in pitch, rhythm, and emotional tone.

Bodily-kinesthetic dimension: Using one’s body in highly differentiated ways, as dancers, craftspeople, and athletes do.

Interpersonal dimension: Identifying different feelings, moods, motivations, and intentions in others.

Intrapersonal dimension: Understanding one’s emotions and knowing one’s strengths and weaknesses (Gardner, 1983).

Later he added another form of intelligence called naturalistic intelligence that involves the ability to recognize important distinctions in the natural world. It can also be applied to manmade objects in our consumer society. He believed that three intelligences—linguistic, logical-mathematical, and spatial— are included in psychometric theories of intelligence. However, other dimensions of intelligence are not in psychometric approaches. He proposed that there are no differences between a gifted athlete, a talented
dancer and a child who writes well or is skilled at math (Gardner, 1995).

Gardner’s theory (1983) posits important implications for education. It highlights that schools should foster all intelligences, not just the linguistic and logical-mathematical intelligences. Also, teacher should capitalize on the strongest intelligences of students. For example, some of them may best understand different cultures by studying their dance, while others by studying their music.

Early work of Sternberg’s theory (1985) has focused on problem solving on intelligence tests. Later, he has changed this theory into what he called the triarchic theory because it includes three parts or subtheories. He proposed that intelligent behavior involves skillfully adapting to an environment.

Sternberg’s theory of intelligence has three aspects or parts: componential subtheory, contextual subtheory, and experiential subtheory. Contextual subtheory emphasizes the role of external environment in determining what constitutes intelligence behavior in a situation. What is intelligent behavior at home may not be intelligent behavior in the neighborhood. Also, what are intelligent behaviors for children growing up in the Shahra desert may not be intelligent for children growing up on an isolate Island in the Pacific Ocean. Each culture defines what it means to be intelligent. Therefore different cultures have different definitions of intelligent behavior.

Experiential theory emphasizes on how a person’s experience combined with insight and creativity affects how he thinks. On the basis of this subtheory, intelligence is revealed in both new and familiar tasks. For new tasks, intelligence is associated with the ability to apply existing knowledge to a new situation. For familiar tasks, intelligence is associated with the automatic processing using a few mental resources.

Componential subtheory emphasizes on basic cognitive processes called components. It describes the internal analytical mental mechanisms and processes involved in intelligence. People use the following processing components to solve problems: a metacomponent, a performance component, and a knowledge-acquisition component. Metacomponents organize and manage the other aspects of intelligence. Performance components work with problems to produce solutions. Knowledge-acquisition components allow learning new information. This theory is very useful in informing both the theory and practice of learning. It is in contrast to the psychometric
approaches, because Sternberg’s theory identified intelligence in terms of processes.

One of the major applications from Sternberg’s theory is the notion that intelligence is much more than performance on standardized tests and achievement in schools. A second major application is the notion that intelligence can be taught (Sternberg, 1986, 1988). Sternberg believed that teachers and parents could help foster metacognitive processes by asking children various kinds of questions. To learn efficiently and succeed in school, students must be aware of what they know, what is important to know.

In conclusion, a short review of these theories shows that environmental factors have a critical role in shaping and increasing intelligence. The quality of schooling during the elementary years seems to be a major determinant of children’s intellectual development.

1.2 Parenting styles

Parents have a unique early role in shaping and forming their child’s growth and development. Parenting style provides a family socialization context in which parents reach their goals and transfer values to their children through parenting practices. Darling and Steinberg (1993) defined parenting style as “constellation of attitudes toward the child that are communicated to the child and that, taken together, create an emotional climate in which the parent’s behaviors are expressed”.

In Asian culture, parents have high power parenting, emphasizing obedience by the child, and have higher expectations than western parents. The Asian parents are very supportive and take pride in their children’s education and inner drive. Asian American children spend more time on homework than any other ethnic group (Muller & Kerbow, 1993). However, western culture has opposite characters in parenting styles and expectations. American children spend much less time on homework and receive less help from their parents (Stevenson, Lee, & Stigler, 1986). These cultural differences in parent’s behaviors have different impact on children’s academic outcomes.
1.2.1 Theoretical orientation of parenting styles

The child’s perception of his parents is dependent on his early experiences with them. Kazma (1981) believed that the important thing is not just how a parent loves a child but how the child perceives this love. To date, some theorists have tried to classify parenting styles into different categories. The following review of recent work illustrates some of the dominant theories in this area.

1.2.1.1 Dimensional approach

In this area, parenting style is assumed to consist of different dimensions that are in contrast to each other. On the basis of prior parenting behavior researches, Becker (1964) identified three dimensions of parental behavior, including warmth versus hostility, restrictiveness versus permissiveness, and anxious emotional involvement versus calm detachment.

**Warmth versus hostility:** This dimension is defined at the warm end by accepting, affection, approving, understanding, child-centered, frequent use of explanation, positive response to dependency behavior, high use of reasons in discipline, high use of praise in discipline and low use of physical punishment. The hostility end of the dimension is defined by the opposite characteristics.

**Restrictiveness versus permissiveness:** it is defined at the restrictive end by many restrictions and strict enforcement of demands in the areas of sex play, modesty behavior, table manners, toilet training, neatness, orderliness, care of household furniture, noise, obedience, aggression towards siblings, aggression towards peers, and aggression towards parents, whereas the permissive end comprises of opposite parenting fields.

**Anxious emotional involvement versus calm detachment:** This dimension is defined at the anxious end by high emotionality in relation to child, protectiveness, and solicitousness for the child's welfare.

1.2.1.2 Typological approach

The most insightful and fascinating work on types or styles of parental behavior has been by Diana Baumrind (1991). She identified three parenting styles: authoritative, authoritarian and permissive.
**Authoritative parenting:** Parents in this group have clear control along with high expectations; they listen to their child and also provide a loving environment. They are assertive but not intrusive and restrictive. Their disciplinary methods are supportive, rather than punitive (Baumrind, 1991). Steinberg, Elmen and Mounts (1989) found that children in these families have better academic achievement and social adjustment. These children tend to be more competent, industrious, self-reliant, persistent and determined. Different researches highlighted that authoritative parenting was positively associated with grades and these children do better in school (Steinberg, Mounts, Lamborn, & Dornbusch, 1991; Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg, 2001).

**Authoritarian parenting:** Authoritarian parents are described to have high control and high maturity demands with relatively low communication and low nurturance. They are dictatorial parents who expect and demand obedience, however without a climate of warmth. These children may grow up to be less reliant, less socially poised, less persistent, less socially competent, with lower self-esteem and high anxiety (Berk, 2000). They do not have a positive view of their own abilities and they don’t have a close relationship with their parents; however they may obtain good grades.

**Permissive parenting:** The permissive style is responsive but undemanding. This is an overly tolerant approach. Parents use the minimum amount of punishment and make few demands for mature behavior. Although they are warm and accepting, they are mainly concerned about not stifling their child’s creativity. These children may grow up to be disobedient, rebellious, with lower school performance and more prone to misbehavior. Berk (2000) found that there is a relationship between permissive parenting style and dependent, non-achieving behavior, especially for boys.

**1.2.1.3 Integrative approach**

The two previous approaches are approximately similar in coverage to some extent. However, there are some differences. In order to integrate the similarities of the dimensional approach and typological approach as well as to overcome their respective disadvantages, researchers have attempted to merge a new approach that could be generalized to regular family setting. Firstly, Maccoby and Martin (1983) defined parenting style as a function of two dimensions, i.e., responsiveness and demandingness.
Parental responsiveness refers “to the extent to which parents intentionally foster individuality, self-regulation and self assertion by being attuned, supportive, and acquiescent to children’s special needs and demands” (Baumrind, 1991, p.61). Parental demandingness refer to “the claims parents make on their children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys” (Baumrind, 1991, p.62).

Later, Maccoby and Martin (1983) proposed a typology of four parenting styles: authoritative-reciprocal style, authoritarian-autocratic style, indulgent-permissive style and neglecting style.

**Authoritative-reciprocal style**: In this pattern, children are required to be responsive to parental demands and parents accept a reciprocal responsibility to be as responsive as possible to their children’s reasonable demands and points of view. Parents and children are responsive to the demands of each other but parents are expected to respond only to the reasonable demands from their children.

**Authoritarian-autocratic style**: In this pattern, parents’ demands on their children are not balanced by their acceptance of demands from their children. Rules are not discussed at by any consensus or bargaining process. Parents attach strong value to the maintenance of their authority and suppress the efforts their children make to challenge it.

**Indulgent-permissive style**: This is a dimension of parental variation that is brought to the fore when the child engages in some form of behavior that threatens others or otherwise contravenes some social norms.

**Rejecting-neglecting parents**: These parents disengage from their children’s lives. They are disorganized and do not monitor or supervise their children. They are the least emotionally involved of the four parenting groups.

In other words, parenting style with high responsiveness and high demandingness corresponds to authoritative parenting style; parenting behavior with low responsiveness but high demandingness corresponds to authoritarian parenting style; parenting behavior with high responsiveness and low demandingness corresponds to indulgent parenting style.
Since most of the parenting style researches and cross-cultural studies on parenting behavior have been done on the basis of Baumrind’s typology, this research follows this typology.

1.3 Classroom environment

Good (1959) believed that classroom environment is the sum total of all the physical, social, emotional and mental factors that contribute to total teaching learning situation. In classroom environment factors like communication, inter-personal relations and group behavior are discussed. The classroom is a learning environment where interactions occur among students, teachers, and learning takes place (Talton & Simpson, 1987). “Classroom psychological or social environment refers to the climate or atmosphere of the class as a social group that potentially influences what students learn” (Walberg, 1991, p. 255).

Arends (1994) defines an effective learning environment as one where students have positive attitudes toward themselves and their classroom group. Students display a high degree of achievement motivation and involvement in academic tasks. McRobbie, Roth and Lucus (1997) believed that the nature of the classroom environment and psychosocial interactions could make a difference in how the students learn and achieve their goals.

There are cultural differences as well in classroom environment. Biggs (1991, 1996) believed that western culture has good standard of learning environment where teaching methods involve student-centered activity, self-regulation, cooperation and other group work. Secondly class size is small, classroom climate is warm; high cognitive level outcome is emphasized, assessment is classroom based and conducted in a non-threatening atmosphere. Finally, since the level of expenditure on education in this culture is more than in other cultures, it might be expected that this could have a significant positive impact on academic performance. In Asian countries education is viewed as a once in a lifetime opportunity and is a highly prized commodity in their culture (Stevenson, 1983). Asian culture has a learning environment where teaching methods are not varied; learning is rote-based and teacher-centered, class size is big, classroom climate is not so warm and students use low-level cognitive strategies. These
learning environments have shown separate and unexpected results on academic achievement.

1.3.1 Theoretical orientation of classroom environment

The classroom plays an important role in students’ cognitive and effective development (Walberg, 1968; Fraser & Walberg, 1991). Historical perspective of this concept is seen in Lewin’s (1936) field theory, which defined behavior as a function of person and environment. According to this theory, human behavior is the result of two interdependent influences, the person and the environment. Others extended Lewin’s work to develop a need-press theory. Needs and press interact to produce and guide behavior. In the schools, students and teachers have particular needs and the school’s press either satisfies or frustrates these needs. Murray (1938) distinguished two types of press. The beta press refers to the individual’s own perception of the environmental situation but the alpha press refers to the environmental situation as it is observed externally.

The modern period of learning environment research belongs to the late 1960s when Moss and others began on independent lines of research on the assessment of psychological environments. Moos (1979) proposed the personality of the environment. It means environment could also be characterized in terms of personality. The same as persons, social environments can have qualities such as warmth, rigidity and restriction. Therefore, he proposed that classroom environment included three dimensions: relationship, personal growth, and system maintenance and change.

Relationship dimensions refer to the extent to which people are involved in the environment and support and help each other (such as involvement, affiliation, teacher support, peer cohesion and conflict resolution). Personal development dimensions refer to the extent to which personal growth and self-enhancement tend to occur (such as task orientation, competition, achievement and interdependence). System maintenance and change dimensions refer to the extent to which the environment is orderly, clear in expectations, maintains control and response to change (such as organization, rule clarity, rule setting and teacher control).

Moos (1979) believed that students’ perceptions provide an important perspective
on educational setting. Therefore, Moos and Trickett (1986) developed psychosocial scales to access the dimensions of various types of environment. They developed the classroom environment scale, which measured psychosocial characteristics of classroom environment. The scale consists of the following subscales: involvement, affiliation, teacher support, task orientation, competition, order and organization, rule clarity and teacher control.

Fraser, Fisher and McRobbie (1996) combined scales from past questionnaires with contemporary dimensions to bring new concept of classroom environment. They believed that psychosocial aspects of classroom environment include student cohesiveness, teacher support, involvement, investigation, task orientation, cooperation and equity.

Student cohesiveness: The extent to which students, know, help and are supportive of one another.

Involvement: The level of students’ interest in class activities, involving participating in discussion, doing additional works and enjoying the class.

Teacher support: The teacher’s support level, which helps students, relates to how much the teacher interacts with students, trusts them and is interested in the students.

Task orientation: The extent to which it is important to complete planned activities and to stay on the subject.

Investigation: The extent to which there is emphasis on the skills and their use in problem solving.

Cooperation: The extent to which students cooperate rather than compete with one another on learning tasks.

Equity: The extent to which the teacher treats student equally (Fraser et al., 1996).

New researches have focused on the effect of these aspects on academic achievement. The present study focuses on psychosocial aspects of classroom environment.

1.4 Academic self-regulation

Self-regulation is the ultimate goal in learning. It is the conscious use of strategies for encoding-activity, organization, and elaboration without direction from others. Self-
regulation refers to the analysis of causes of behavior. In other words, the behavior is self-determined and self-initiated or it arises as a result of interpersonal / intrapersonal forces that include an element of pressure.

One of the complete analysis of the characteristics of the self-regulated learner has been proposed by Zimmerman (1994). He believed that self-regulated learners use cognitive and metacognitive strategies and are intrinsically motivated. Cognitive strategies are defined as the behaviors and thoughts in which students are engaged in while studying. Metacognitive strategies are defined as individuals’ knowledge about their own cognitive processes such as planning and monitoring to control their own progress toward their educational goals. Also, they are intrinsically motivated, focused upon the task at hand, and thoughtfully control emotional difficulties (Zimmerman, 1994, 2002).

Butler and Winne (1995) proposed that self-regulation is a learning style for students, comprising of strong abilities like setting goals for developing knowledge, and choosing balancing strategies against unwanted situations by determining goals. Boekaerts (1997, p.171) defined self-regulation as “the process whereby students activate and sustain cognitions, behaviors, and effects, which are systematically oriented toward attainment of their goals”. He proposed that self-regulated learning has a six-component model: content domain, cognitive strategies, cognitive regulatory strategies, metacognitive knowledge and motivational belief, motivational strategy use and motivational regulatory strategies.

According to Kovach (2000) self-regulated learners set academic goals, select appropriate learning strategies to achieve these goals, and continually monitor goal process. Importance of self-regulation is due to practical applications in learning. Since self-regulatory learners can monitor, evaluate, or manage their learning effectively, so many of researches have focused on the study of this variable and its relationship with other psychological variables.

1.4.1 Theoretical orientation of academic self-regulation

Sometimes two students are similar in abilities, but they act very differently. One jumps into assignments, participates eagerly in class, and gets good grades; other
hesitates on assignment, seldom join in discussion. What can explain these differences?

When a student pays attention, turns in his work, and studies for test, we say he is motivated. If he does not do these things, we say he is not. However, this notion is not true absolutely, since it shows that these persons have different goals. Motivation is a vast and complicated concept. It not only increases individual energy and activity levels, but also directs individuals toward certain goal.

1.4.1.1 Self-Determination Theory

According to self-determination theory, humans in different cultures learn and adopt different practices and values for the issue of autonomy and competence. Deci and Ryan (1985) believed that people from all cultures share basic psychological needs for autonomy, competence, and relatedness. They proposed that these innate psychological needs are the basis for people self-motivation and personality integration. They wanted to know environmental factors that hinder or undermine self-motivation and social functioning.

“Self-determination theory is concerned not only with the specific nature of positive developmental tendencies, but it also examines social environments that are antagonistic toward these tendencies” (Deci & Ryan, 2000, p. 69). Self-determination theory has identified several different types of motivation in which each of them has specifiable consequences for learning, performance and personal experience.

Therefore, self-determination theory differentiates types of behavioral regulation in terms of the degree to which they are self-determined or autonomous. Extrinsic motivation is a kind of less autonomous activity; self-determination theory differentiates types of extrinsic motivation in terms of the degree to which they are autonomous or internalized. This theory has two subtheories, which are Cognitive Evaluation Theory and Organismic Integration Theory.

1.4.1.2 Cognition Evaluation Theory

Cognitive evaluation theory, which is considered a subtheory of self-determination theory, proposed “interpersonal events and structure (e.g., rewards, communications, and feedback) that conduce toward feelings of competence during action can enhance
intrinsic motivation for that action because they allow satisfaction of the basic psychological need for competence” (Ryan & Deci, 2002, p.58). Some factors such as optimal challenges, effectance promoting feedback, and freedom from demeaning evaluations can facilitate intrinsic motivation. Findings show that positive performance feedbacks enhance intrinsic motivation (Harackiewicz, 1979).

People, who experience satisfaction of the needs for competence and autonomy, have high level of intrinsic motivation. The majority of the researches show the effects of environmental events on intrinsic motivation, which has focused on the issue of autonomy versus control. For example, many researches have demonstrated that autonomy-supportive teachers facilitate greater intrinsic motivation, curiosity, and the desire for challenge in their students (Ryan & Grolnick, 1986).

Moreover, other researches demonstrated that children of parents who are more autonomy supportive to be more autonomous than children of parents who are not autonomy supportive. In conclusion, the cognitive evaluation theory proposed that classroom and home environment could facilitate or forestall intrinsic motivation.

However, so many of the educational activities prescribed in schools are not designed to be intrinsically interesting. Thus, how can they motivate students to value and self-regulate such activities, without external pressure? Self-determination theory proposed Organismic integration theory for answering this question.

1.4.1.3 Organismic Integration Theory

Organismic integration theory identified different forms of extrinsic motivation and the contextual factors that either promote or hinder internalization and integration of the regulation for these behaviors (Deci & Ryan, 1985). These different forms of extrinsic motivation lie along a continuum of relative autonomy or internalization. External, introjected, identified and integrated regulations are in order from the least to the most internalized (Ryan & Deci, 2000). At the end of this continuum is external regulation (the person behaves to obtain external rewards or to escape punishment or reward loss). This kind of regulation is the only kind of motivation recognized by operant theorists (Skinner, 1953). A second type of extrinsic motivation is introjected regulation that is more internalized form (the person behaves to experience self or other approval or
avoid feelings of guilt). A more autonomous, or self-determined, form of extrinsic motivation is identified regulation (the person behaves with a sense of choice and volition, perhaps she/he does not enjoy the action). The most autonomous form of extrinsic motivation is integrated regulation (when identified regulations have been fully assimilated to the self). The continuum underlying types of extrinsic motivation is not a developmental continuum. Relationship between different types of extrinsic motivation and some psychosocial variables has been studied. For example, findings show that more autonomous extrinsic motivation is associated with better performance and higher quality learning (Grolnick & Ryan, 1987; Miserandino, 1996).

One of the main targets of Organismic integration theory is to find the methods that promote autonomous regulation for extrinsically motivated behaviors. One of the important ways is relatedness the need to feel belongingness and connectedness with others. Ryan, Stiller, and Lynch (1994) demonstrated that the children who had more fully internalized the regulation for positive school-related behaviors were those who felt securely connected to their parents and teachers.

Another way is reinforcement of competence. “Children who are directed to perform behaviors before they are developmentally ready to master them or understand their rational would be predicted, at best, only to partially internalize the regulations, remaining either externally regulated or introjected”(Ryan & Deci, 2000, p.73). Research of Grolnick and Ryan (1989) showed greater internalization of school-related values among children whose parents were more supportive of autonomy and relatedness. Other research by Deci, Eghrari, Patrick, and Leone (1994) showed that providing a meaningful rational for an uninteresting behavior, along with supports for autonomy and relatedness, promoted its internalization and integration.

Findings demonstrated that self-regulated learners know how to adapt learning strategies; they understand their competencies in specific domains. In different types of motivation and self-regulation, external and introjected are considered relatively controlled forms of extrinsic motivation, whereas identified and integrated regulations are considered relatively autonomous.

Findings show positive relationship between more autonomous motivation or regulation and academic achievement. The identification of a common set of parenting
and classroom experience, which is linked to self-regulation and academic achievement, has been extensively studied in Euro-American countries. Some of these studies demonstrated parenting processes featuring high level of involvement, support, and monitoring, and classroom environment characterized by high level of organization, rule clarity, and academic achievement (Brody et al., 2002).

The importance of cultural factors on these variables can raise this question that whether intelligence, parenting styles and classroom environment are related to self-regulation and academic achievement in Asian countries. In other words, whether intelligence, parenting styles and classroom environment are related to academic self-regulation and, in turn, to academic achievement. Therefore, the mediating role of academic self-regulation is one of the main targets of the present investigation.

1.5 Operational definitions

Operational definition of academic achievement

Academic achievement is measured in several ways viz. grades, standard test scores and the percentage of students. In the present study, academic achievement is measured by taking the percentage of the aggregate of total marks attained by the student in all subjects at the last year’s final examination.

Operational definition of intelligence

Intelligence scores are generally taken as an objective measure of intelligence. Because intelligence is difficult to define, the definition ‘intelligence is what the intelligence test measures’ has been used.

Operational definition of parenting styles

Baumrind (1971) operationally defined parenting styles along dimensions of control, communication, demand for maturity, and nurturance. On the basis of these dimensions, she identified three distinctive types of parenting: authoritative, authoritarian, and permissive. Authoritative parents are both demanding and responsive. “They monitor and impart clear standards for their children's conduct. They are assertive, but not intrusive and restrictive. Their disciplinary methods are supportive, rather than
punitive. They want their children to be assertive as well as socially responsible, and self-regulated as well as cooperative” (Baumrind, 1991, p. 62). *Authoritarian parents* are highly demanding and directive, but not responsive. “They are obedience- and status-oriented, and expect their orders to be obeyed without explanation” (Baumrind, 1991, p. 62). These parents do not encourage verbal give-and-take and do not share decision making with their children. *Permissive parents* are more responsive than demanding. Parents place few restrictions on their children and enforce few rules; as a result, their children are permitted to make own decisions with little input from their parents.

**Operational definition of classroom environment**

Fraser et al. (1996) reviewed past works on psychosocial aspects of classroom learning environment and combined them. They believed that psychosocial aspects of classroom environment include *student cohesiveness* (the extent to which students, know, help and are supportive to one another), *teacher support* (the teacher’s support level, which helps students, relates to how much the teacher interacts with students, trusts them and is interested in students), *involvement* (the level of students’ interest in class activities, involving participating in discussion, doing additional works and enjoying the class), *investigation* (the extent to which there is emphasis on the skills and their use in problem solving), *task orientation* (the extent to which it is important to complete planned activities and to stay on the subject), *cooperation* (the extent to which students cooperate rather than compete with one another on learning tasks) and *equity* (the extent to which the teacher treats all students equally).

**Operational definition of academic self-regulation**

Academic self-regulation is defined as individual differences in the types of motivation or regulation of students in school works (Ryan & Connell, 1989). Autonomous regulation means free choice and possibility to control one’s own action, to realize one’s intentions, and to prevent unwanted events. Controlled regulation means loss of control, no choice, and results either in compliance or defiance (Ryan & Connell, 1989).