1.1 Introduction

Student performance in field practicum is critical, because the setting and the skills directly represent the real world of practice for which student is preparing. Although many factors influence student performance (Fortune, 2001; Knight, 2001; Regehr, Regehr, Leeson and Fusco, 2002), student motivation is particularly important because it can be assessed and changed (Fortune et al., 2005). If motivation is related to student performance in field, it is possible to predict students’ ability to perform well in academic and other related learning activities and thereby employ intervention strategies to improve students’ levels of motivation in learning and achievement.

Motivating students to achieve in school is a topic of great practical concern to many stakeholders like teachers, parents and governments and of great theoretical concern to researchers. New books on the topic with increasing regularity and pertinent research are proliferating at a rapid rate. Higher education institutions are beginning to provide assistance to students, especially new ones, in developing study skills and self-regulatory skills such as time management. One of the greatest challenges and opportunity of the 21st century will be for schools at all levels to focus more on assisting students to become motivated and ensure that they succeed in school (Tuckman, 1999).

Motivation is one of the most important components of learning in any educational environment (Maehr, 1984, in Miltiadou and Savvenye, 2003).

Psychologists and educators have long considered the role of motivation in student achievement and learning (Graham and Weiner, 1996). Much of the early research on student achievement and learning separated cognitive and motivational factors and pursued very distinct lines of research that did not integrate cognition and motivation. However, since 1980s, there
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has been a paradigm shift in that sustained research has focused on how motivational and cognitive factors interact and jointly influence student learning and achievement. In more informal terms, there is acknowledgment that students need both the cognitive skill and the motivational will to do well in school (Pintrich and Schunk, 2002).

The integration of motivational and cognitive factors was facilitated by the shift in motivational theories from traditional achievement motivation model to social cognitive models of motivation.

1.1.1 One of the most important assumptions of social cognitive models of motivation is that motivation is a dynamic, multifaceted phenomenon that contrasts with the quantitative view taken by traditional model of motivation. In other words, these newer social cognitive models do not assume that students are either “motivated” or “not motivated”, that student motivation can be characterized in some quantitative manner between two endpoints on a signal continuum. Social cognitive models stress that students can be motivated in multiple ways and the important issue is to understand how and why students are motivated for school achievement. This change in focus implies that teachers or school psychologists should not label students as “motivated” or “not motivated” in some global fashion. Furthermore, assessment instruments, which generate a single global “motivation”, score for students maybe misleading in terms of more multifaceted understanding of student motivation.

1.1.2 A second important assumption of social cognitive models of motivation is that motivation is not a stable trait of an individual, but is more situated, contextual and domain-specific. In other words, not only are students motivated in multiple ways, but their motivation can vary depending on the situation, context in the classroom or school. Although this assumption makes it difficult for research and assessment efforts, it means that student motivation is conceived as being intrinsically variable and dependent on the context.

This situational assumption means that student motivation probably varies as a function of subject matter domains and classroom (Bong, 2001). For example, within social cognitive model, motivation is usually assessed for a specific subject area such as mathematics, reading, science, or social
studies and in reference to a specific classroom or teacher. In some ways, this also fits with teachers and parents’ own perceptions and experiences as they find that some children are quite motivated for mathematics, whereas others hate it, and also observe these motivational differences with other subject areas as well. However, this implies that assessment instruments that assess general student motivation for school or academic may not be as useful as more domain or context specific assessment tools.

1.1.3 A third assumption concerns the central role of cognitive models of motivation. This assumption holds that it is not just the individual’s culture, demographic, or personality characteristics that influence motivation and achievement directly. It also holds that it is not only the contextual characteristics of the classroom environment that shape motivation and achievement, but rather the individual’s active regulation of his or her motivation, thinking, and behavior that mediate the relations between the person, context, and eventual achievement. That is, students’ own thoughts about their motivation and learning play a key role in mediating their engagement and subsequent achievement (Linnenbrink and Pintrich, 2002).

1.1.4 Recently, researchers have taken a primarily social cognitive approach to the study of motivation, with an emphasis on the role of students’ beliefs and strategies (Zusho & Pintrich, 2003). Self-regulation of cognitive and meta-cognitive strategies provides a good description of students’ decisions of when they will study, where they will study, what they will study, and most importantly, how they will study. However, the employment of cognitive and meta-cognitive strategies does not provide a full picture of self-regulated learning. Even though students may possess skills and strategies, they may choose not to employ them. Motivation is an important factor to self-regulated strategy use.

In the classroom, the content covered and social context vary continuously. Hence, children are frequently involved in unfamiliar learning situations. This may create ambiguity and uncertainty for some students and challenge for other students (Boekaerts, 2002). She further notes that students try to make sense of novel learning situations by referring to their motivational
beliefs. Motivational beliefs refer to the opinions, judgments and values that students hold about objects, events or subject-matter domains. Motivational beliefs act as a frame of reference that guide student’s thinking, feelings and actions in a subject area. For example, motivational beliefs about mathematics determine which strategies student think are appropriate to do specific tasks. It is noteworthy that a student’s beliefs about a domain may be dominantly favorable (optimistic) or unfavorable (pessimistic), thus providing a positive or negative context for learning. Knowledge of the students’ motivational beliefs will help us to create learning environments that are well suited to their psychological needs.

1.2. **Theoretical Frame work**

1.2.1 **Motivational beliefs**

The scientific concept of motivation has a long history. Pintrich and Schunk (1996) have noted that some early theorists have traced the concept of motivation back to Plato and Aristotle who discussed “willingness”. Nineteenth century scholars associated motivation with will, volition, or instinct, depending on how deterministic their worldview was. The theory that all behavior was instinctual lost popularity in the 1920’s, when it could not stand up to scientific scrutiny (Altman et al., 1985). The concept of volition as a source of motivation concurs with many of today’s views, but offers no insight into the process of motivation. Motivation is also one of the founding constructs of psychology. Freud discussed “trieb,” which means moving force. At the time, the term was translated as instinct but closer in meaning to “drive” or “motivation” (Pintrich and Schunk, 1996).

The Latin root of the word “motivation” means “to move”; hence, in this basic sense, the study of motivation is the study of action (Eccles and Wigfield, 2002). Although there are many motivational theories, we examine some of these theories that have developed over the years and then focus on theories that are based on academic achievement in classroom setting.
In field of psychology, motivation constitutes one of the most investigated spheres of human behaviors. The investigations on the problem of motivation in relation to learning can be traced to the early concept of “instinct”, through Thorndike epoch making, “law of effect” and a host of papers generated by the works of Hull and his followers, Tolman and others. The scope of motivational research today has grown and expanded greatly. The roots and foundations of motivation research are essentially tied up with research on learning. The much flaunted concept of “reinforcement” bears ample testimony to this.

Current theories provide a better understanding of the role of goals. Since they are based in cognitive psychology, they focus on purposeful rather than elicited behavior (Pintrich and Schunk, 1996). In addition, since the theories are related to social cognitive and social constructivist theories (Williams, 1997), they place a greater emphasis on self-efficacy and social influences.

Motivation in field of classroom learning is based on how learners think about the consequences of their behavior (motivational beliefs). Here, theory emphasizes learner goals, expectations and beliefs- in short cognition. A specific set of motivational beliefs pertains to the value students attach to a domain. Motivational beliefs also refer to the students’ opinions of the efficacy or effectiveness of learning and teaching methods. Although there are so many theories about motivation, this study focuses on those that are based on these variables. Therefore, firstly the study explains self-efficacy theory (based on self-efficacy variable), then theories focused on intrinsic value (intrinsic and extrinsic theory and goal orientation theory) then theory that integrates expectancies or self-efficacy and value (expectancy-value theory).

1.2.1. a  **Self-efficacy theory**

Bandura (1997) proposed a social cognitive theory of motivation that focused on the role of perceptions of efficacy and human functioning. Bandura defined self-efficacy as individuals’ confidence in their ability to organize and execute a given course of action to solve a problem or accomplish a task.
Bandura (2000:120) strongly emphasized that self-efficacy is the most pervading and important of psychological mechanisms of self-influence. He declares "unless people believe that they can produce desired effects and forestall undesired ones by their actions, they have little incentive to act. Whatever other factors may operate as motivation, they are rooted in the core belief that one has the power to produce desired results."

The self-efficacy process affects human functioning not only directly, but has an indirect impact on other determinants as well. Directly, the self-efficacy process starts before individuals select their choices and initiate their effort. First, people tend to weigh, evaluate, and integrate information about their perceived capabilities. Importantly, this initial stage of the process has little to do with individuals' abilities or resources per se, but rather how they perceive or believe they can use these abilities to accomplish the given task in this context. This evaluation/perception then leads to the expectations of personal efficacy. In other words, from the preceding it can be seen that self-efficacy can directly affect:

1. **Choice behaviors** such as decisions will be made based on how efficacious the person feels toward the options in, say, work assignments or even a career field.

2. **Motivational effort** such as people will try harder and give more effort on tasks where they have high self-efficacy than those where the efficacy judgment is low.

3. **Perseverance** such as those with high self-efficacy will bounce back, be resilient when meeting problems or even failure, whereas those with low self-efficacy tend to give up when obstacles appear.

4. **Facilitative thought patterns** such as efficacy judgment influence self-talks such as those with high self-efficacy might say to themselves, “I know I can figure out how to solve this problem,” whereas those with low self-efficacy might say to themselves “I know I couldn’t do this, I don’t have this kind of ability”.

5. **Vulnerability to stress** such as those with low self-efficacy tend to experience stress and burnout because they expect failure, whereas those with
high self-efficacy enter into potential stressful situations with confidence and assurance and thus are able to resist stressful reactions (Luthans, 2002). These examples of the direct impact of self-efficacy on human functioning are right in line with high-performing individuals. As if this high-performance profile is not enough, Bandura emphasizes that self-efficacy also plays a vital role in other important human performance determinants such as goal aspirations, the incentives in outcome expectations, and the perceive opportunities of a given project (Bandura, 2000). What level of goal is selected, how much effort is expended to reach the selected goal, and how one reacts/perseveres when problems are encountered in progressing toward the goal, all seem to be greatly affected by self-efficacy (Locke and Latham, 1990).

According to Bandura (1986) individuals acquire information to help them assess self-efficacy from four principal sources: a) actual experiences particularly individuals’ own performances related to past successes and failures, offer the most reliable source for assessing efficacy, (b) vicarious experiences, observation of similar peers performing a task conveys to observers that they too are capable of accomplishing that task, (c) verbal persuasion, when individuals are encouraged to believe that they possess the capabilities to perform a task, (d) physiological indexes: individuals might interpret bodily symptoms such as increased heart rate or sweating as a signal for anxiety or fear, resulting in an indication of their own lack of skills. Research has shown that self-efficacy plays a critical role in both motivation and achievement, especially in relation to learning (Pintrich and Schunk, 1996).

The second and third theory focuses on the reasons why individuals engage in different activities. Even if people are certain they can do a task, they may have no compelling reason to do it. The theories presented in this section are based on intrinsic value variable (Goal orientation and Intrinsic & extrinsic theories).
1.2.1. b **Goal orientation theory**

Goal theory is one of the most prominent theories within motivational research today. Goal theory proposes that there are two general goal orientations that concern the purposes individuals are pursuing when approaching and engaging in a task.

Goal theorists have used a variety of labels to refer to these goals including learning and performance goals (Dweck & Leggett, 1988), task and ability goals (Maehr & Midgley, 1996), task-involved and ego-involved (Nicholls, 1984), and mastery and performance goals (Ames, 1992; Elliot, 1997). Although there are slight variations in the interpretation of these goals under these various labels, they will be referred to here as mastery and performance goals for simplicity.

Mastery goals orient learners to “developing new skills, trying to understand their level of competence, or achieving a sense of mastery based on self-referenced standards” (Ames, 1992:262). In contrast, performance goals orient learners to focus on their ability and self-worth, to determine their ability by outperforming others in competitions, surpassing others in achievements or grades, and receiving public recognition for their superior performance.

In the literature on mastery and performance goals, the general theoretical assumption has been that mastery goals foster a host of adaptive motivation, cognition, and achievement outcomes, whereas performance goals generate less adaptive or even maladaptive outcomes (Ames, 1992). The logic of the argument is that when students are focused on trying to learn and understand the material and trying to improve their performance relative to their own past performance, this orientation will help them maintain their self-efficacy in the face of failure, ward off negative affect such as anxiety, lessen the probability that they will have distracting thoughts, and free up cognitive capacity, thus allowing for more cognitive engagement and achievement. In contrast, when students are concerned about trying to be the best, get higher grades than others, and do well compared to others as performance goal, there
is the possibility that this orientation will result in more negative affect or anxiety, increase the possibility of distracting and irrelevant thoughts such as worrying about how others are doing rather than focusing on the task, and that this will diminish cognitive capacity, task engagement, and performance (Linnenbrink and Pintrich, 2002).

1.2.1. c Intrinsic and extrinsic motivation theory

Intrinsic motivation is related to engaging in an activity for its own sake, for mastery and learning purposes; while extrinsic motivation is related to engaging in a task as a result of external rewards or punishments. For a student, this means a concern about grades, pleasing others, or being better than others (Pintrich et al., 1994).

On the other hand, motivation that stems from factors such as interest or curiosity is called intrinsic motivation. Intrinsic motivation is the natural tendency to seek out and conquer challenges as individuals pursue personal interests and exercise their capabilities (Deci and Ryan, 1985). When students are intrinsically motivated, they tend not to need any incentives because the activity itself is rewarding to them. In contrast, extrinsic motivation is motivation to engage in an activity as a means to an end. Students who are extrinsically motivated tend to work on tasks because they believe that participation will result in desirable outcomes such as a reward such as a good grade, or a diploma, teachers’ praise, or avoidance of punishment. Pintrich and Schunk (1996) suggested that intrinsic motivation and extrinsic motivation represent two different points of a continuum and each ranges from high to low.

The fourth theory integrates self-efficacy (expectancy) and value constructs. It’s expectancy-value theory.

1.2.1. d Expectancy-value theory

Expanding on a model devised by Atkinson in the late fifties, Eccle and Wigfield and their colleagues (e.g., Eccles, 1983; Eccle et al., 1989; Wigfield &
Eccle, 1992) offer a social cognitive expectancy-value theory of motivation. The social cognitive expectancy-model is composed of a number of relationships. Such relationships include (I) Influences from the social world (cultural milieu; socializer’s behavior; and past performances and events); (ii) cognitive processes (perceptions of social environment; and interpretations or attributions for past events); and (iii) motivational beliefs (goals interacting with task-specific self-concept and perceptions of task difficulty to create task value and expectancy). According to Pintrich and Schunk (1996) the interaction of the foregoing relationships results in achievement behavior (choice, persistence, quantity of effort, cognitive engagement, and actual performance). As with the expectancy-value model, expectancy and task value are the key predictors of achievement behavior, but a difference can be found in how expectancy and task value originate.

Pintrich (1989) based on general social cognitive models of motivation proposed three general motivation constructs: (1) expectancy, (2) value and (3) affect.

1) Expectancy refers to students’ beliefs that they can accomplish a task and it is related to the concept of self-efficacy, or how capable people judge themselves to be able to perform a task successfully (Bandura, 1977). The concept of expectancy represents the key idea that students will not choose to do a task or continue to engage in a task that they believe exceeds their capabilities, but students will take on tasks and activities that they believe they can handle (Schunk, 1991). If students expect failure, they will avoid the task, controversially if students anticipate success, they will approach the task. Expectancy is related to students’ self-efficacy and students’ confidence in their cognitive skills (Bandura & Schunk, 1981). Students’ self-efficacy is influenced by past experiences and familiarity with the task (Bandura, 1993; Schunk, 2000). Students’ perceptions of competence about personal skills and abilities are influenced by the learning environment. Positive learning environments provide nurturing experiences for student to build their
Introduction

self-confidence in their skills. Students are able to develop their skills comfortably without the fear of failure. Students develop a familiarity with the skills necessary to complete the tasks. It is familiarity with the tasks that builds students self-efficacy (Eccles & Wigfield, 1993). Expectancy motivational theory addresses the question of “Can I do this task?”

2) The Value component focuses on the reason why students engage in an academic task. Maddux, Norton and Stolberg (1986) have shown that the outcome value had a significant influence on behavioral intentions. Value beliefs are related to goal orientations (intrinsic and extrinsic) and perception of how interesting, useful and important the course content is to the student. One potential source of the drive to perform, is the incentive value of the performance. Rotter, Chance and Phares (1972) suggest that people will perform an act when the performance is likely to result in some outcome they desire, or that it is important to them. If students perceive the task as boring or too difficult, they will avoid the task. Students will approach tasks they believe are fun, require a moderate amount of effort, and are reasonably challenging. Thus the nature of the task and student perception of the importance of the task becomes key factors influencing student motivation for approaching or avoiding the task (Eccles et al., 1983).

3) The third general motivation construct is related to students’ worry and concern over the achievement assessment. Researchers generally agree that a specific degree of anxiety may motivate the student and make him/her inclined to better their academic achievement. Hence, anxiety is considered a motive for zest to learn and high academic achievement. However, high anxiety can also be one of the obstacles to academic achievement. Generally it is agreed that a certain degree of anxiety increases academic achievement, but if anxiety increases beyond a certain level the opposite happens. As mentioned Pintrich & Schunk (1996) this component related to the affective domain and identifies students’ emotional reactions to the task and self-worth evaluation. A central part of all classroom achievement is the need for students to protect their sense of worth or personal value (Covington, 1984). Students’ perception of the causes of their successes and failures influence the quality of their future
achievement. According to self-worth theory, high ability signifies worthiness. Because ability is tied to worthiness and it is related to accomplishment, then self-perception of ability are significant to the way students interpret their personal success (Midgley, Arunkumar & Urban, 1996). Self-worth theory rests upon the perception that students are motivated to learn, to establish, maintain, and promote a positive self-image (Covington, 2000).

As mentioned, students need both the motivational will and cognitive skill to do well in schools, so here; some theories have been chosen to present self-regulated learning strategy as cognitive process.

1.2.2 Self-regulated learning strategy

Learning strategies are “operations employed by the learner to aid the acquisition, storage, retrieval, and use of information...,they are specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (Oxford, 1990,p.8). Cohen (1998) specifies that learning strategies are “those processes which are consciously selected by learners and which may result in action taken to enhance the learning through the storage, retention, recall, and application of information” (p.4). Learners at all levels use strategies such as reading text repeatedly, copying notes, consulting peer, and asking instructors for clarification to actively process information and thereby influencing their mastery of material (Pintrich et al.,1993).

Defining self-regulation succinctly is not a simple task. The term self-regulation has been used quite flexibly among psychologists to encompass a diverse range of theoretical approaches within the domains of personality and social cognition. Moreover, similar but not necessarily identical terms, such as self-control and self-management are sometimes used almost interchangeably. Boekaerts, Pintrich and Zeidner (2000) trace the development of self-regulation research in personality and social psychology in 1980s and its subsequent expansion into clinical, educational, health and organizational psychology in the
1990s. They note that ‘the search for a general understanding of self-regulation has been coherent given the diversity of the field’ (p.2) and they describe the resulting growth of parallel research literature with limited communication between the different streams.

With this in mind, the study will briefly consider some definition of self-regulation from three leading researchers, then overview theoretical basic of self-regulated learning strategies.

Self-regulation refers to the self-directed process through which learners transform their mental abilities into task related skills (Zimmerman, 2001). This is the method or procedure that learners use to manage and organize their thoughts and convert them into skills used for learning.

Berk (2003) defines Self-regulation as the process of continuously monitoring progress toward a goal, checking outcomes, and redirecting unsuccessful efforts. To be self-regulated, students need to be aware of their own thought processes, motivated and to actively participate in their own learning process (Zimmerman, 2001).

According to these definitions, self-regulated learning is a way of approach to the academic tasks, which can be learned regardless of age, gender, ethnic background, actual ability level, prior knowledge, or motivation. A-part from that, it gives the students the opportunity to control their behavior, motivation and affect, and cognition in order to improve their academic learning and performance. The theoretical basics of self-regulated learning are from the cognitive Constructive theory, which has its roots in the cognitive psychology.

1.2.2. a Cognitive psychology theory

The emphasis of self-regulated learning on mental processes indicates a theoretical basis in cognitive psychology (Winn and Schnyder, 1996). A cognitive process refers to all processes by which the sensory input is transformed, reduced, elaborated, stored, recovered and used (Neisser, 1967). It represents a group of processes by which the organisms obtain knowledge of various objects of their environment and make use of this knowledge to achieve
solutions to their problems. These processes range from the simple perceptual to the more complex thinking and reasoning processes. Recognition, labeling, analysis, categorization and planning are considered some of the basic cognitive processes. These are often viewed as intellectual, and it is believed that through these processes people try to comprehend their environment and achieve solutions to a wide variety of problems that they encounter.

Historically, the emphasis on the study of cognitive processes finds it's roots in the cognitive tradition reflected in the pioneering works of Wertheimer, Tolman, Lashley, Bartlett and Freud. In one way or another, all of them were concerned with what goes on inside the “black box” of the mental processes. In latter years, great figures like Lewin, Piaget, Werner, Bruner and Witkin represented this viewpoint in their studies of cognitive development. Among others, Piaget and Witkin have been the two most influential figures. Both have proposed their theoretical frameworks to comprehend the basic processes underlying cognition, and have demonstrated the utility of the cognitive processes in adaptation of individuals to the demands of the social and cultural environments in which they carry out their day-to-day activities.

The study of cognitive processes is considered to be of great importance in the field of education. Research demonstrates that learning, retention and problem solving depend considerably on the level at which the information is processed, and on the strategies that are employed in its reception, encoding and retrieval. Promotion of effective learning, memory and problem-solving skills among students is one of the important goals of education; since pupils through strategic functioning in learning situations largely acquire these skills. Although the learning process of storage and retrieval are very important, it is needed that the learner is involved indirectly in that process. This belief has led to the next phase of cognitive theory, in which the learner is aware of learning and is actively directing it, that is constructivism theory.

1.2.2. b **Constructivism theory**

From mid 1980s, there has been a subtle paradigm shift in learning and motivation theory toward the concept of learner-centeredness, including
constructivist theory and self-regulation in learning control (Pintrich, 1995). Since then, researchers have paid more and more attention to active control by the learner. Students have been viewed as scientists who construct theories that regulate their own learning. Cognitive theorists such as Piaget, Bruner, Dienes, and Vygotsky have supported the constructivist theory (Kutz, 1991). The cognitive constructivists view learners as individuals who play an active role during their learning and recall. This theory proposes that people create their own meaning and understanding. Central to constructivism is conception of learning. In this view, learning emphasizes the process and not the product.
Learning is a process of constructing meaningful representations, of making sense of one's experiential world. In this process, students' errors are seen in a positive light and as a means of gaining insight into how they are organizing their experiential world (Von Glasersfeld, 1987). In the constructivists' instructional design paradigm, learners use insight for personal discovery. When problem solving is used as a method of learning, educators should provide for active, self-regulating, reflective learning in a responsive environment (Seels, 1989).

Bruner considers problem solving and the acquisition of knowledge as both analytical and intuitive thinking. He defines analytical thinking as characteristically preceding one explicit step at a time, with relatively full awareness of the formation and operation involved. Intuitive thinking, however, rests on the familiarity with the domain of knowledge involved with its structure and implies the act of grasping the meaning, significance, or structure of a problem or situation without explicit reliance on the analytic apparatus of one's craft (Blosser, 1973).

Motivation theorists increasingly are interested in the way in which motivation and cognition work together. On the other hand, improvement in students' motivational beliefs not only influences learning motivation, but also influences the way and the quality with which students' process information, selecting and using specific learning strategies. That is how, social cognitive theory has emerged. This theory integrates motivation and cognition.
1.2.3 **Social cognitive theory**

According to Bandura's (1986) social cognitive theory, individuals possess a self-system that enables them to exercise a measure of control over their thoughts, feelings, motivation, and actions. This self-system provides reference mechanisms and a set of sub-functions for perceiving, regulating, and evaluating behavior, which results from the interplay between the system and environmental sources of influence. As such, it serves a self-regulatory function by providing individuals with the capability to influence their own cognitive processes and actions and thus alter their environments.

How people interpret the results of their own performance achievement informs and alters their environments and their self-beliefs, which, in turn, inform and alter subsequent performance. This is the foundation of Bandura's (1986) conception of reciprocal determinism, the view that (a) personal factors in the form of cognition, affect, and biological events, (b) behavior, and (c) environmental influences create interactions that result in a triadic reciprocality. In general, Bandura provided a view of human behavior in which the beliefs that people have about themselves are key elements in the exercise of control and personal agency and in which individuals are viewed both as products and as producers of their own environments and of their social systems.

Bandura (1986) noted that through the process of self-reflection, individuals are able to evaluate their experiences and thought processes. According to this view, what people know, the skills they possess, or what they have previously accomplished are not always good predictors of subsequent attainments because the beliefs they hold about their capabilities powerfully influence the ways in which they will behave. Consequently, how people behave is both mediated by their beliefs about their capabilities and can often be better predicted by these beliefs than by the results of their previous performances. This does not mean that people can accomplish tasks beyond their capabilities simply by believing that they can, for competent functioning requires harmony between self-beliefs on the one hand and possessed skills
and knowledge on the other. Rather, it means that self-perceptions of capability help determine what individuals do with the knowledge and skills they have.

More important, self-efficacy beliefs are critical determinants of how well knowledge and skills are acquired in the first place.

The process of creating and using these self-beliefs is an intuitive one. Individuals engage in a behavior, interpret the results of their actions, use these interpretations to create and develop beliefs about their capability to engage in subsequent behaviors in similar domains, and behave in concert with the beliefs created. In school, for example, the beliefs that students develop about their academic capabilities help determine what they do with the knowledge and skills they have learned. Consequently, their academic performance is in part the result of what they come to believe that they have accomplished and can accomplish. This helps explain why students' academic performance may differ markedly when they have similar ability. Researchers have suggested that these self-beliefs may play a mediation role in relation to cognitive engagement and that enhancing them might lead to increased use of cognitive strategies that, in turn, lead to improved performance (Pintrich and De Groot, 1990). As above mentioned human functioning involved reciprocal interactions between behaviors, environmental variables, and personal factors (cognition). Cognitive processes are influenced by the development of intellect that informs behaviors. Cognitively, the development of intellect moves the student from a state of “other-regulation” to internal, self-regulation. Environmentally, the social climate provides components such as teachers and peers from whom students can seek assistance (Bandura, 1986). The capacity for students to self-regulate increases as the student develops the capacity to self-motivation and sustains appropriate cognition and motivation until the goal is attained. Behaviorally, the gradual acquisition of appropriate student strategies and attitudes provide the structure for self-regulatory behaviors. The student must actively participate in evaluating the effectiveness of his or her use of behaviors and strategies, and be willing to make necessary changes. Bandura's theory communicates the
importance of self-efficacy (a cognitive determinant) and the environment in the development and use of self-regulation. “Social cognitive theory focuses on how people acquire strategies, beliefs, and emotions through their interactions with and observations of others” (Pintrich & Schunk, 1996, p. 195). Social influences such as modeling, social comparison, conformity and compliance seem to affect motivation through self-efficacy, while other social influences, such as social facilitation, social loafing, and cooperative learning seem to affect motivation directly (Pintrich & Schunk, 1996). This view of self-belief as a mediating construct in human behavior is consistent with those of numerous scholars and theorists who have argued that the potent evaluative nature of beliefs makes them a filter through which new phenomena are interpreted and subsequent behavior mediated (Abelson, 1979; Calderhead and Robson, 1991; Dewey, 1933; Goodman, 1988; cited by Pajares, 1996).

In summary, the theoretical framework for conceptualizing students’ motivation in this study is an adoption of a general expectancy-value theory of motivation (Eccles, 1983; Pintrich and De Groot, 1990). The model proposes that there are three motivational components that may be linked to the three different components of self-regulated learning; a) expectancy component which concerns the students’ beliefs about their abilities to perform the tasks (can I do the task?), b) value component, which refers to the students goals and belief about the importance and interest of the tasks (why do I do this task?), and finally c) an affective component; which refers to the students emotional responses to the task (how do I fee while performing this task?) (Pintrich and De Groot, 1990). The relation between expectation and achievement proceeds via cognitive and meta-cognitive strategy use. Also, in view of Pintrich and De Groot (1990), self-regulated learning includes students’ meta-cognitive strategies for planning, monitoring and modifying their cognition. Students’ management and control of their effort on classroom academic tasks has been proposed as another important component. For example, capable
students who persist at a difficult task or block out destructors (i.e., noisy classmates) maintain their cognitive engagement in the task, enabling them to perform better. A third important aspect of self-regulated learning that some researchers have included in their conceptualization is the actual cognitive strategies that students use to learn, remember, and understand the material. These three components constituted our working definition of self-regulated learning in this study. This study shows that expectancy, value, and affects influence performance via cognitive and meta-cognitive strategy use.
Introduction

**Motivational Processes**  
(Motivational beliefs)
- Self-efficacy beliefs
- Task value beliefs
- Goal orientation
- Intrinsic value
- Affect

**Personal Characteristics**
- Age
- Gender
- Ethnicity
- Prior knowledge

**Classroom Context**
- Academic tasks
- Reward structures
- Instructional methods
- Instructor behavior

**Cognitive Processes**  
(Self-regulated learning strategy)
- Cognitive Strategies
- Self-regulatory strategies

**Outcomes**
- Choice
- Effort
- Persistence
- Achievement
Figure 1.1 A general model of motivation and self-regulated learning (Pintrich and Schunk, 2002)
1.3 The present study model

Figure 1.1 displays the original model of achievement motivation and learning that forms the basis of this study. This model proposes that certain personal characteristics such as age, gender, ethnicity, and prior knowledge, along with classroom contextual factors, help to shape how an individual approaches, engages, and responds to an achievement task, which in turn influences students’ level of cognitive processing and, ultimately, outcomes such as choice, effort, persistence, and academic achievement. In line with the social cognitive perspective of motivation, this model also assumes that the relationships between the various components are reciprocal and, thus, can mutually influence one another. For example, researchers have demonstrated in numerous studies how one’s prior academic successes and failures can influence future levels of engagement and motivation (Pintrich and Schunk, 2002).

For the purposes of this study, the following components were selected: three components of motivational beliefs (self-efficacy, intrinsic value, and test anxiety), two components of self-regulated learning strategies (cognitive strategy and self-regulation), one component of the outcomes (academic achievement) and one component from personal characteristic (gender). Parents’ education is also considered as an additional component in this study.

In terms of motivational beliefs (motivational processes), this study focuses on three motivational components: Self-efficacy, intrinsic value, and test anxiety.

**Self-efficacy** is a major component of Bandura’s (1986) social cognitive theory. Self-efficacy is one of more important motivational beliefs for student achievement, which concerns beliefs about capabilities to do a task or activity. More specifically, self-efficacy has been defined as individuals’ beliefs about their performances capabilities in a particular context or a specific task or domain (Bandura, 1997).

An expectancy component or self-efficacy of student motivation has
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been conceptualized in a variety of ways in motivational literature such as perceived competence, attribution style, and control beliefs, but the basic construct involves students’ beliefs that they are able to perform the task and that they are responsible for their own performance. (Pintrich and De Groot, 1990).

Although the role of self-efficacy has been studied in a variety of domains including mental health and behavior such as coping with depression or smoking cessation, business management, and athletic performance, a number of educational psychologists have examined how efficacy is related to behavior in elementary and secondary schools’ academic setting (Bandura, 1997; Eccles et al., 1998; Pintrich, 2000). In the educational domain, Schunk (1989; 1991) has been the leading theorist and researcher regarding the role of student self-efficacy in classroom setting.

In particular, self-efficacy has been positively related to higher levels of achievement and learning as well as wide variety of adaptive academic outcomes such as higher levels of effort and increased persistence on difficult tasks in both experimental and correlation studies involving students from a variety of age groups (Pintrich and Schunk, 2002). Students who have more positive self-efficacy beliefs that is they believe they can do the task are more likely to work harder, persist, and eventually to achieve higher levels. In addition, there is evidence that students who have positive self-efficacy beliefs are more likely to choose to continue to take more difficult courses (e.g., advanced math courses) over the course of schooling (Eccles et al., 1998).

At the same time, two important requirements need to be stressed about attempts to facilitate positive self-efficacy beliefs in students. First, self-efficacy is not self-esteem and the two constructs should not be confused. Self-efficacy is a judgment of task-specific capabilities and is based on actual accomplishments and success and failure. However, self-esteem is a much more general affective evaluation of the self. The
second relates to the issue of inaccuracy in self-efficacy beliefs. The generalization about the positive link between self-efficacy and achievement may suggest that self-efficacy should always be as high as possible. However, it seems that it is more adaptive to have self-efficacy beliefs that are relatively accurate or calibrated to actual accomplishments (Bandura, 1997). For example, a novice mountain climber should have self-efficacy beliefs that match his actual skills, or are a little higher than actual skills, but not so overly positive that he attempts a climb that is well beyond his capabilities. In the latter case, serious injury or even death could result from having overly positive beliefs about his capabilities for mountain climbing. In the same manner, students should not over estimate or underestimate their capabilities for schoolwork, rather they should have fairly accurate, but optimistic beliefs about their efficacy to accomplish school work. This implies that teachers and school personnel should attempt to foster positive, but accurate, self-efficacy beliefs (Linnenbrink and Pintrich, 2002).

Another component of motivational beliefs is **intrinsic value**. In the original model, two subcomponents which are task value and goal orientation are referred as a single intrinsic value in this model. Intrinsic value involves students’ goal for the task and their beliefs about importance and interest of the task. Although this component has been conceptualized in a variety of ways (e.g., learning vs. performance goals, intrinsic vs. extrinsic orientation, task value, and intrinsic interest), these motivational component essentially concerns students’ reasons for doing a task. Research suggests that students with a motivational orientation involving goals of mastery, learning, and challenge, as well as beliefs that the task is interesting and important, will engage in more cognitive strategy use, more meta-cognitive activity, and more effective effort, and behavioral responses that accompany concern about possible negative consequences or failure of an exam or similar evaluation management (e.g., Ames and Archer, 1988; Meece, Blumenfeld and Hoyle, 1988; Nolen, 1988, cited by Pintrich and De Groot, 1990).
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The value of a task to an individual includes the importance of doing well on the task (attainment value), the usefulness of the task for future goals (utility value) and what must be done to engage in the task (cost value) (Eccles, 1983; Wigfield, 1994a). The value of a task affects the tasks chosen, and the ones that are avoided (Wigfield and Eccles, 1992). Eccles (1983) first used the value in expectancy-value theory, and Deci and Ryan (1985) used the concept of intrinsic versus extrinsic motivation in self-determination theory.

The third motivational component concerns student’s affective or emotional reactions to the task. The important issue for students involves the question “How do I feel about this task?” Again, there are a variety of affective reactions that might be relevant (e.g., anger, pride, guilt), but in a school-learning context one of the most important reaction seems to be test anxiety (Wigfield and Eccles, 1989). Test anxiety has been shown to be related to perceptions of competence (e.g., Nicholls, 1976), but it can be theoretically and empirically distinct from self-efficacy and intrinsic value.

According to Stober and Pekrun (2004) first studies relating to test anxiety were conducted as early as 1914 by Folin, Demis, and Smilie. The concept began to be investigated under its own name since 1952, when Mandler and Sarason in 1952 published a series of studies on test anxiety and how it relates to performance.

Sarason (1960) believes that the reaction of the test-anxious child to actual test and test like situations in the classroom reflects his experiences in psychological or interpersonally similar situations in his home both before and after the beginning of formal schooling.

There exists broad research to the phenomenon of test anxiety. As mentioned by Zeidner (1998), test anxiety as a scientific construct refers to the set of phenomenological, physiological, and behavioral responses that accompany concern about possible negative consequences or failure on an
exam or similar evaluative situation. Learning motivation and test anxiety may mutually affect each other; moreover test anxiety may come along with avoidance and cognitive interference. Most notably, the motive to avoid failure or fear of failure is often cited as a major characteristic of test anxious students.

Test anxiety, which is a situation-specific form of trait anxiety, consists of two major components, worry and emotionality. Both worry and emotionality reduce the achievement of test-anxious students in intelligence tests and learning tasks. Thoughts of worry distract the individual’s attention from the task, and intense emotional reactions lead to mistakes and cause repression that blocks memory (Spielberger and Sarason, 1978).

Although the other two motivational components (self-efficacy and intrinsic value) generally show simple, positive, and linear relations with the components of self-regulated learning, the results for test anxiety are not as straightforward. For example, Benjamin et al. (1981) has shown that although high anxious students seem to be as effortful and persistent as low-anxious students, they appear very ineffective and inefficient learners who often did not use appropriate cognitive strategies for achievement. On the other words, other research suggested that high-anxious children were not persistent or avoid difficult task (Hill and Wigfield, 1984). Accordingly, test anxiety was related to the two components of self-regulated learning in our study.

In terms of self-regulated learning strategies (cognitive processes), we were mainly concerned with students’ self-reported use of specific cognitive strategies and self-regulatory strategies. Cognitive strategies are defined as the thoughts in which students are engaged in while studying (Payne, 1992). However, they may also refer to specific behaviors in which students engage whilst trying to assimilate new knowledge (Garcia and Pintrich, 1994). Often, more than one cognitive strategy is used with
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others, depending on the learner and his or her scheme for learning. In fact, research indicates that successful learners use numerous strategies.

What are the most essential strategies to teach? This is determined, in large part, by assessing what successful, efficient learners do. It has been found that they use numerous strategies across subjects and tasks, such as cognitive strategies. An attempt to identify the most essential strategies by which students should learn is as impossible task; it depends on the needs of the learner and the requirements of the curriculum. However, students’ use of the following strategies often leads to improved student performance (Beckman, 2002)

Although many cognitive strategies have been identified, three appear to be of particular importance for academic learning and performance: rehearsal, elaboration and organization (Pintrich, et al., 1993).

• Rehearsal: Basic rehearsal strategies commonly involve reciting or naming items to be learned. These strategies are best used for simple tasks and activation of information in working memory rather than acquisition of new information in long-term memory. This assumption is that these strategies influence the attention and encoding processes, but do not appear to help students construct internal connections among information or integrate the information with prior knowledge.

• Elaboration: This strategy helps student to store information into long-term memory by building internal connections between items to be learned. Some of the strategies include paraphrasing, summarizing, creating and connecting new information with prior knowledge.

• Organization: This strategy helps students to select appropriate information and also construct connections among information learned. Organization strategies include clustering, outlining and selecting main ideas (Pintrich et al., 1991).

Both organization and elaboration have been characterized as “deep” processing strategies. That is, effective use of these strategies has been shown to result in longer retention and deeper understanding, of new
information. Rehearsal has been identified as a “surface” processing strategy because it is associated with short-term retention and recall rather than deeper conceptual understanding (Pintrich and Schunk, 1996).

**Self-regulatory/ or meta-cognitive strategies** can be defined as those strategies that help students focus on planning, monitoring, and controlling their cognition. Such strategies can take the form of self-testing, monitoring of ones understanding of course content or repairing one’s understanding by re-reading or doing more problems (Pintrich, 2000).

Self-regulation techniques are widely used. Successful people and learners use self-regulation to effectively accomplish a task. They will regulate different strategies and then monitor the effectiveness of that strategy while evaluating and determining the next course of action. Generally, successful learners already utilize various forms of self-regulation. Instruction in the use of self-regulation is typically directed towards students who are not currently using such techniques, and consequently are not successful in educational settings. Through the use of strategies and self-regulation, performance can be greatly improved. The use of self-regulation techniques assists students in performing tasks more effectively and independently.

For example, successful learners will constantly check their comprehension. When successful learners read a passage, and realize that they do not understand what they have read, they will go back and reread, and question or summarize what they need to understand. On the other hand, when students with learning disabilities read a passage, and realize that they do not understand what they have read, they tend to shut down, or just continue to read because they do not recognize the goal of reading the passage (Reid, 1996).

Students with learning disabilities tend to be passive learners, often failing to evaluate and monitor their own learning, in order to compensate. They allow others to regulate their learning or relying on the assistance of others to successfully complete a task. They lack these essential executive
control functions, which are necessary to complete complex academic tasks independently.

In general, studies show that the following characteristics differentiate students who self-regulate what they learn from those who do not (Corno, 2001; Weinstein, Husman and Dierking, 2000; Zimmerman, 2002):

1) They are familiar with and know how to use a series of cognitive strategies such as repetition, elaboration and organization, which help them to attend to, transform, organize, elaborate and recover information.

2) They know how to plan, control and direct their mental processes toward the achievement of personal goals (meta-cognition).

3) They show a set of motivational beliefs and adaptive emotions, such as a high sense of academic self-efficacy, the adoption of learning goals, the development of positive emotions towards tasks (e.g. joy, satisfaction, enthusiasm), as well as capacity to control and modify these, adjusting them to the requirements of the task and of the specific learning situation.

4) They plan and control the time and effort to be used on tasks, and they know how to create and structure favorable learning environments, such as finding a suitable place to study and help seeking from teachers and classmates when they have difficulties.

5) To the extent that the context allows it, they show greater efforts to participate in the control and regulation of academic tasks, classroom climate and structure (e.g. how one will be evaluated, task requirements, the design of class assignments, organization of work teams).

6) They are able to put into play a series of volitional strategies, aimed at avoiding external and internal distractions, in order to maintain their concentration, effort and motivation while performing academic tasks.

In this study, self-regulation was constructed from meta-cognitive strategies and effort management that the student used.

Despite the implication of conscious awareness in the definition of meta-cognition above, some researchers argue that meta-cognition may be unconscious. Whether unconscious or not, however, this study supports
the value of appropriate meta-cognition in promoting academic learning and performance.

According to Pintrich et al. (1993), three meta-cognitive strategies of planning, monitoring and regulating make particularly important contributions to student’s self-management.

- Planning refers to such activities as setting goals for studying, scanning a text before reading, and conducting task analyses. These activities assist student to activate appropriate prior and strategic knowledge and make the comprehension and organization of material easier (Pintrich and Schrauben, 1992).

- Monitoring is reflected in such activities as tracking attention during reading and listening, self-testing during learning to assess understanding, monitoring time elapsed during examinations, and assessing retention and recall after a learning “event” as mentioned by Pintrich and Schrauben (1992). The essential focus of these monitoring activities however, is on attention and comprehension (Montague and Bos, 1990). Monitoring activities alert a student on breakdown in attention and comprehension. As such; they are a pre-requisite for regulation.

- Regulation involves implementing behaviors designed to counter difficulties identified when monitoring. For example, students may slow their reading speed when confronted with a difficult passage, increase their writing speed in an examination, re-read a passage, or formulate a new outline of course material (Pintrich and Schrauben, 1992). Regulation, then typically refers to students attempts to rectify deficits in attention and comprehension. When students initiate regulatory behavior they are said to be self-regulators (Zimmerman, 1990).

Effort management strategies

Besides self-regulation of cognition and meta-cognition, students must be able to a) manage and regulate their time and their study environments, b) monitor their effort, c) learn from peers, and d) seek help and support from peers and instructors (Pintrich and De Groot, 1990). These effort management strategies enable students to manage their environment and the available resources.
In personal characteristic, the study compared gender differences in motivational processes and cognitive processes. As Wigfield and Eccles (2002) noted, although there is evidence that sex differences in achievement have declined in recent years, there are still differences in the level of involvement of men and women in science and technology courses and careers. Therefore, the goal of the study was to examine the research-based literature for patterns of gender differences on people’s presentation of learning programs.

Not all learning happens in school, some of it takes place at home. Parents’ level of education, an index of social context, has both physical and psychological aspects and thus may exert both direct and indirect influences on child outcomes (Hortacsu, 1995). So, the study was concerned about the influence of parents’ education on motivational and cognitive processes and outcomes.

1.4 Need of the study

Why do some students excel academically while other students struggle to pass in a certain class? What drives some students to actually learn and appreciate the course material? Why do some students study and others do not? In short, what are the determinants of academic success? Indeed, the question is straightforward. The answer, however, is far from simple. In the domain of science, from the research on science instruction and schooling practices to the research on conceptual change, investigators have proffered numerous explanations to this exact question. While we do not deny the importance of such accounts, it is our contention that such explanations nevertheless ignores one crucial aspect of the learning process; that is, motivation (Zusho and Pintrich, 2003).

The question on how motivation facilitates learning and how it enhances performance has been important point of departure in research over the past decades (Covington, 2000). But, achievement outcomes have been regarded as a function of two characteristics, skill and will (McCombs
and Marzano, 1990), and these must be considered separately because possessing the will alone may not insure success if the skill is lacking. However, in spite of this large database of knowledge on the relationship between motivations, cognition and performance, many questions remain unanswered.

However, studies which incorporate these aspects (i.e. motivation, cognition, and performance), are scarce in India. Most educators agree that effective learning involves the ability to self-regulate a variety of feelings and actions associated with learning processes (Meece, 1994; Schunk, 1991). In particular, the ability to activate and appropriately apply a variety of cognitive and meta-cognitive strategies in order to acquire specific content has been strongly implicated in the quality of students’ academic performance and the extent of their achievement.

Despite this, cognitive models have proven less useful for explaining a) why students may or may not, particularly in “real life” classroom situations, activate strategies during tasks, and b) why students fail to transfer relevant strategies from one task or situation to another (Pintrich and Schrauben, 1992). In other words, cognitive models are less useful in explaining why students may not expend effort to activate and/or transfer strategies. This is particularly important because the activation and transfer of strategies requires effort (Carr et al., 1991)

However, recent research indicates that strategy activation is also depending upon a variety of motivational variables. Hence, student’s level of cognitive engagement the extent to which students activates and transfer prior knowledge and strategies is a function of both motivational and cognitive working together (Pintrich and Schrauben, 1992).

Despite this, interaction of motivational and cognitive factors in explaining students’ cognitive engagement and subsequent academic performance and achievement has been largely avoided or ignored. This is true even as we have seen a long history in psychological research of models, which have emphasized the motivated, purposive nature of behavior and cognition (Tolman, 1932, quoted by Pintrich and Schunk,
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1996). With some exceptions it has, until recently, generally been more common to explain students’ performance and achievement in either motivational or cognitive terms rather than through a combination of both. Examining the interaction of motivational and cognitive variables, however, should help explain more fully the functioning of students’ cognitive processes and the effect these have on students’ achievement (Pintrich and Schrauben, 1992).

Despite these comments, researchers have begun to explain students’ cognitive engagement, and subsequent academic performance and achievement, as a product of interacting motivational and cognitive variables. Although a resurgence of this type of research is still quite recent, there is growing empirical evidence that students’ academic performance and achievement can be more accurately attributed to the interaction of motivational and cognitive variables, rather than by either class of variables alone. Moreover, there is growing evidence that certain psychological constructs directly influence the quality of both students’ cognition and their motivation. Example of these constructs include students self-efficacy, control beliefs, goal orientation, and task value beliefs (Pintrich et al., 1993).

The present study is located within this developing body of research. In particular, the present research examines interactions between students’ motivational beliefs, their patterns of strategy use, and the effect these have on students’ academic achievement. With studies from social cognitive theory, we can conclude that we live in a world of relationships. One can no more separate the influence of parents, peers or teachers from motivation than influence of the goals themselves. Therefore, in this study, personal characteristics of students (gender), and levels of education of parents were considered.
1.5 **Statement of the problem**

A study of relationship between motivational beliefs (self-efficacy, intrinsic value, test anxiety) and self-regulated strategies (cognitive strategy use and self-regulation) and academic achievement of school students.

1.6 **Objectives of the study**

1. To find out whether significant relationships exist between motivational believes components (self-efficacy, intrinsic value, test anxiety) and self-regulated learning components (cognitive strategy use and self-regulation) of students.

2. To find out whether motivational beliefs components and self-regulated learning components influence academic achievement of students.

3. To find out whether gender differences exist in motivational beliefs and self-regulated learning components of student.

4. To find out whether parents' education influence motivational beliefs and self-regulated learning components of student.

1.7 **Research questions of the study**

To realize the purpose of the study, the following research questions were formulated:

1. Is there a significant relationship between motivational belief components (self-efficacy, intrinsic value, and test anxiety), and self-regulated learning components (cognitive strategy use and self-regulation) among students?
a) Is there a relationship between self-efficacy and self-regulated learning components?

b) Is there a relationship between intrinsic value and self-regulated learning components?

c) Is there a relationship between test anxiety and self-regulated learning components?

2. Do motivational belief components (self-efficacy, intrinsic values, and test anxiety) influence academic achievement?

a) Does self-efficacy as a motivational component influence academic achievement?

b) Does intrinsic value as a motivational component influence academic achievement?

c) Does test anxiety as a motivational component influence academic achievement?

3. Do self-regulated learning components (cognitive strategy use, self-regulation) influence academic achievement?

a) Does cognitive strategy use as a self-regulated learning components influence academic achievement?

b) Does self-regulation as a self-regulated learning components influence academic achievement?

4. Do motivational beliefs components differ in boys and girls?

a) Does self-efficacy component differ in boys and girls?

b) Does intrinsic value component differ in boys and girls?
c) Does test anxiety component differ in boys and girls?

5. Do self-regulated learning components differ in boys and girls?

a) Does cognitive strategy component differ in boys and girls?

b) Does self-regulation component differ in boys and girls?

6. Is their an influence of parents’ education on their children’s motivational beliefs components?

a) Is their an influence of parents’ education on their children’s self-efficacy?

b) Is their an influence of parents’ education on their children’s intrinsic value?

c) Is their an influence of parents’ education on their children’s test anxiety?

7. Is their an influence of parents’ education on their children’s self-regulated learning components?

a) Is their an influence of parents’ education on their children’s cognitive strategy use?

b) Is their an influence of parents’ education on their children’s self-regulation?

1.8 Definitions of significant terms of the study

- **Motivational beliefs** are based on how learners think about the consequences of their behavior. In this study motivational beliefs consists of three components: self-efficacy, intrinsic value and test anxiety.

1) **Self-efficacy:**

Self-efficacy is defined as students’ judgments of their capabilities to perform a task, as well as their beliefs about their ability in the classroom.
2) **Intrinsic value:**

The second motivational component is intrinsic value. Intrinsic value involves students’ goal for the task and their beliefs about importance and interest of the task.

3) **Test anxiety**

The last motivational component is test anxiety. Test anxiety is a general worry and negative emotions about doing well in class.

- **Self-regulated learning strategies** are concerned with students’ self-reported use of cognitive strategies and self-regulatory strategies. In this study, self-regulated learning strategies consists two components: cognitive strategy use and self-regulation.

1) **Cognitive strategy**

Cognitive strategies that students use to learn, remember, and understand the material. In this study, three cognitive strategies were used rehearsal, elaboration and organization.

2) **Self-regulation**

Self-regulatory strategies (meta-cognitive strategies) can be defined as those strategies that help students focus on planning, monitoring, and controlling their cognition.

- **Academic achievement** refers to average score of three academic tests during the year and final examination results for mathematics in students of VIII standard in 2004-2005.
1.9 Assumptions

In this study, we are assuming that teachers’ score of examination is not biased and it is reasonable. Students exactly focus on questions and answer to them truthfully. Students in English-Medium schools are like other students in Pune city.

1.10 Significance of the study

- This study can be used to help teachers to enhance students’ attitudes or beliefs in their own capability to propel engagement in the learning process.

- The research study can also be referred by instructional designers or curriculum specialists for using self-efficacy beliefs of students in designing learning materials for eighth standard students.

- The research study can help in identifying learners’ perceptions, goals and organizational skills, which is invaluable in helping educators to know how best to design courses in such a way that they address motivational components of learners even before a course begins.

- It would help educators to know about motivational constructs and self-regulated learning of students for preventing failure.

- This study is important in that it addresses educators’ concerns about improving students’ achievement through changing their patterns of beliefs and behaviors which subsequently improves their well being.

- Teachers can teach students about different cognitive strategies and when and how they can use them in setting individual goals, formulate strategies of attaining them and become self-regulated learners.
1.10 Limitations of the study

Although the present study provided ecologically valid empirical evidence for the importance of considering both motivation and self-regulated learning components in our models of classroom academic performance, there are however several limitations to these findings:

1. The present study is confined only to English medium schools focusing on VIII grade of students of Pune city.

2. All the student motivation and cognitive components were measured with a self-report instrument. Other measures, such as thinking aloud protocols, diary-method, observation or structured interviews are not used.