CHAPTER-I

INTRODUCTION
In the last two decades, an approach to the study of motivation has emerged that focuses on specific cognitive and affective mediators of behavior, in contrast to more general traits or motives. This "social-cognitive" approach grants goal-oriented motivation its own role in shaping cognition, emotion, and behavior, rather than reducing goal-directed behavior to cold-blooded information processing or to an enactment of a personality or trait. Long before the current emphasis on social-cognitive mediators, scholars such as Lewin (1935, 1936) and Heider (1958a, b) developed rich models of motivated behavior, which integrated preferences and affect as well as beliefs and inferences as determinants of individuals' judgments and behavior. Lewin's field theory of action explains behavior in terms of internal and external forces in the action field, which provides directionality to the individual's activity. Lewin's model of person and environmental forces spawned the expectancy and value models that have been immensely influential in the motivational psychology ever since.

Task-motivation may be the outcome of quite complex cognitive processes. Kluger and DeNisi (1996) distinguished three possible mechanisms generally relevant to incentive and motivation studies:

1. **Task-motivation processes:**

   Homeostatic processes may operate to determine the level of effort the person deems necessary to attain success, provided that increased effort is perceived as influencing performance.

2. **Task-learning processes:**

   The person may actively search for new task strategies, especially when effort-regulation fails to maintain performance to the desired standards.

3. **Meta-task processes:**

   Theories of self-regulation (e.g. Carver & Scheier, 1990; Wells & Mathews, 1994) propose that people monitor their attainment of goals such as maintaining self-esteem, a process that requires the engagement of specific processes and attentional resources. Motivational signals may divert the attention from the task to these meta-task processes, as the person evaluates the self-relevance of their performance and its context. This process tends to be detrimental, especially when the task is demanding. Beliefs that a goal is attainable tend to increase motivation.
Blumberg and Pringle's (1982) theory of work performance identified three factors determining work performance. The first is capacity (C), which refers to all the basic characteristics of person that promote good performance, such as intelligence, learned skills and physical fitness. The second is willingness (W), referring to motivational and attitudinal factors which may allow the person to use their capacities to full advantage, or, alternatively, hinder them in fulfilling their potential. The third factor, opportunity (O), refers to the physical and social environment provided by the organization. Performance reflects the interaction of these three factors (Fig.1).

\[ \text{Performance} = f(O \times C \times W) \]

Apply the theory to academic achievement performance, it may be said that academic achievement performance is the function of C x W x O, where C represents students' ability to learn and to achieve, their intelligence, self-efficacy, self-esteem, goal orientation and locus of control etc., W represents willingness to learn and to achieve i.e. motivational and attitudinal factors and O represents the opportunity being provided to learn i.e. the enriched environment which facilitates learning and enhances academic achievement.

Unveiling the complex determinants of academic achievement is one of the recurrent themes to be noticed in the educational research. What is the key to academic success has been one of the perennial questions that have engaged the attention of teachers, parents, counselors and administrators
The earliest arguments adduced by psychologists were in terms of intelligence, which was considered chiefly responsible for determining academic success. Therefore, school personnel generally based their prediction of academic achievement solely on the basis of intelligence test scores. The construct of academic motivation is multifaceted in that it is influenced by a number of social, situational and personality variables. By now it has been firmly established that achievement in schools and colleges is not only influenced by intelligence but also by various affective and non-intellectual personality variables.

GOAL ORIENTATION:

According to Locke and Latham (1990), goals are usually defined in terms of the performance standards to be attained and researchers investigate the impact of variables such as goal specificity, goal difficulty and goal acceptance on goal attainment. Another major line of research, however, has identified the higher level more superordinate classes of goals that influence individuals.

Goal orientation is the construct originating in the educational literature that suggests that individuals hold either a learning (mastery) or performance orientation toward tasks (Dweck, 1986). Dweck postulates the existence of two opposing motivational orientations (Dweck, 1989; Dweck & Leggett, 1988), a learning goal orientation and a performance goal orientation. Learning goal oriented persons try to improve their competencies, want to understand new ideas, discover new concepts, etc. Performance goal oriented persons, on the other hand, want to have their competencies confirmed. They strive towards positive judgements of their achievements and actively try to avoid negative evaluations. For example, a learning goal oriented student would gear his/her efforts regarding mathematics towards understanding the topics at hand, while a performance goal oriented student would direct his/her energy towards attaining a positive evaluation of his/her abilities in the form of getting a good grade. An important behavior pattern which finds itself under the influence of motivational orientation is the manner with which negative feedback is dealt with. While a performance goal oriented student would see no reason to continue with a topic for which he/she has received numerous negative assessments - the domain is obviously one for which
he/she can not exhibit any competence - a learning goal oriented student would look at negative feedback as a source of information indicating what he/she can/must improve in order to reach his/her learning goal. Goal orientation has emerged as the predominant approach to achievement motivation (Elliot & Harackiewicz, 1996).

**Table-1.1: THEORIES OF INTELLIGENCE AND ACHIEVEMENT GOALS**

<table>
<thead>
<tr>
<th>Goals</th>
<th>Learning Goals</th>
<th>Performance Goals</th>
<th>Illustrative References</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Competence Increase</td>
<td>Competence Judgment</td>
<td></td>
</tr>
<tr>
<td>3. Errors</td>
<td>Natural, useful</td>
<td>failure</td>
<td>3. Brophy &amp; Good, 1974; Covington &amp; Berry, 1976; Pappert, 1980</td>
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<tr>
<td></td>
<td>(Becoming smarter)</td>
<td>looking smart.</td>
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<td></td>
<td>about ability</td>
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<tr>
<td></td>
<td>Ability.</td>
<td></td>
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<td></td>
<td>judgment</td>
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Table-1.1 outlines the two types of achievement goals and different tendencies that appear to foster. First learning and performance goal oriented individuals hold different implicit theories about the controllability of personal attributes such as intellectual ability (Dweck, 1986). In contrast individuals
with a performance goal orientation tend to hold an entity theory about their ability; they view ability as fixed, uncontrollable personal attribute. Individuals with a learning goal orientation tend to hold an incremental theory about their ability; they view ability as a malleable attribute that can be developed through effort and experience. Second, Duda and Nicholls (1992) found that individuals differ in their beliefs about the cause of success. A learning goal orientation is associated with a belief that effort is the cause of success, and a performance goal orientation is associated with a belief that high ability is the cause of success. Third, goal orientation influences how individuals view effort expenditures (Ames, 1992). With a learning goal orientation there is a belief that efforts lead to success.

Dweck and Elliott (1983) have developed a model which represents the integration and elaboration of the motivational processes and the fundamental components involved in formation of achievement expectancies. Figure 1.2 portrays the affective and cognitive processes potentially involved in the (1.) instigation, (2.) direction, (3.) maintenance and (4.) reinforcement of achievement oriented activity.

Figure-1.2: Achievement Motivation: Proposed Processes
A learning goal orientation, thereby, offers a better motivationally protective mechanism which insures persistence at a task even after experiencing a bout of failure. In the development of a learning goal, according to Dweck, a decisive role is played by a person's implicit personality theory, and predominantly within the context of achievement theory of one's own talent (Dweck, 1989). Persons employing a modification theory of their own intelligence believe that they can build up or even lose their competencies. Those following an entity theory believe, in contrast, that their intelligence is stable, in other words that their abilities can not be improved on. Therefore, a person employing an entity theory of his/her abilities would see little sense in pursuing a learning goal i.e. improving his/her competence, since he/she believes that his/her talent level is stable and new things are unlearnable.

A necessary condition for the development of a learning goal is that the person must be convinced that he can improve upon his abilities. Of course one cannot expect an automatic association - one can believe that one's abilities can be improved in several areas without bringing along a high level of interest in these topics. Only when a commitment to the topic exists, according to Dweck, should this association be observable? As far as she is concerned, the motivational orientation specified by the implicit personality theory plays an important role in the attribution of success and failure, the extent of which also can influence motivation (Dweck & Leggett, 1988).

Persons employing a modification theory and therefore a learning goal orientation should tend strongly to make variable attributions, especially to effort. A variable attribution works to promote motivation since for a person who sees his/her successes/failures as being stable; there is no occasion to undertake measures to repeat the success, avoid the failure the next time (fig. 1.3).
Figure-I.3 Hierarchy in the goal structure.

Three-level goal hierarchies of (A) a child who holds a performance goal and (B) a child who holds a learning goal. For the child with the performance goal, performing well creates the sense of having a high level of the ability that's relevant to the task, which contributes to the overall sense of self-esteem. For the child with the learning goal, performing well (eventually, though not necessarily right away) provides evidence of gaining the ability, which contributes to the overall sense of self-esteem.

Furthermore, a learning goal oriented person should be less likely to display the behavior patterns which fall into the category of helplessness. A learning orientation is characterized by a desire to increase one's task competence, whereas a performance goal orientation reflects a desire to do well and to be positively evaluated by others (Farr, Hofmann, & Ringenbach, 1993). Learning and performance goal orientations have been theorized to be traits, although they have been thought to be situationally manipulable (Duda & Nicholls, 1992; Dweck, 1989).

Nicholls (Duda & Nicholls, 1992; Nicholls, et al., 1985, 1990) has suggested that students pursue three goals—task oriented, ego oriented, and work avoidance goals. Students adopt a task orientation when they are interested in attaining mastery or competence while an ego orientation involves striving to establish one's superiority over others and to demonstrate greater ability. A work avoidance goal is defined as trying not to work hard. Pintrich (Pintrich, 1989; Pintrich & Garcia, 1991) has suggested that goals may be characterized by an intrinsic desire (mastery) to learn or an extrinsic reason (good grades). While there are many different levels given to the goals students pursue, there is an underlying commonality: students pursue learning because of the enjoyment and satisfaction they derive from acquiring skill and
knowledge, or as a means of attaining social acceptance by demonstrating competence.

Individuals who possess a high learning goal orientation are thought to believe that their abilities are malleable and thus approach task with the intention of developing their skills and abilities. Individuals with a high performance goal orientation, on the other hand, view their capacities as fixed and approach tasks with the sole intention of performing well (Dweck & Leggett, 1988; Farr et al., 1993). Kanfer (1990) has suggested that individuals viewing intelligence as fixed (consistent with a high performance goal orientation) are likely to have lower self-efficacy than those viewing intelligence as malleable (consistent with a high learning goal orientation). This is true, in part, because any mistake or less than perfect performance will be interpreted as indicating failure and lower non-malleable ability (Dweck, 1989). Individuals with a higher learning goal orientation are more likely to interpret a past experience, even if it is a failure, as something positive and from which they can learn. In a learning environment, individuals are likely to make mistakes and for performance oriented people these mistakes are often construed as failures.

In research on achievement motivation, goal theory has emerged as the predominant explanation of students' motivation and behavior. Seifert (1995) focused upon identifying goals students pursue and subsequent behaviors associated with each goal and reported that much of the understanding of how goals are related to students' motivational characteristics and behaviors comes from the use of factor analytic and correlational techniques. Seifert suggested that cluster analysis may be a more fruitful way of examining the interaction of goals, possible multiple goal pursuits, and students' characteristics.

Most studies examining students' goal pursuits have employed correlation and regression techniques to determine how scores on each motivation goal scale affect scores on other construct scales (e.g. Duda & Nicholls, 1992; Meece et al., 1988; Nicholls et al., 1985; Nolen, 1988; Pintrich & De Groot, 1990). Typically, these studies involved having students respond to a series of items, thought to comprise a set of scales. These items are either factor analysed or are subjected to internal consistency, calculations to obtain a measure of the adequacy of the scale. Finally, Pearson's correlation
coefficients are computed to determine the relationship between constructs. Some researchers (e.g., Meece et al., 1988) have proceeded one step further and constructed structural equation models. While providing important information about possible influences each type of goal may have on various constructs, correlation and regression techniques tend to ignore the possible interactions of goals. That is, students may be pursuing multiple goals, and these goals may not interact in a strictly additive way, as might be suggested by a regression analysis (Pintrich, 1989).

Much of the research in this area has been inconsistent, occasionally using manipulations but discussing trait implications (Button, Mathieu & Zajac, 1996; Kraiger, Ford, & Salas, 1993). When goal orientation has been manipulated it has rarely been measured and when measurement has occurred, it is not always clear what has been assessed. It is also not clear if learning and performance goal orientations are two factors or if they are actually two ends of a continuum (Farr et al., 1993). Button et al. (1996) had suggested that they are two distinct factors.

Students' attributions for failure are also important influences on motivation (Weiner, 1985). When students have a history of failure in school, it is particularly difficult for them to sustain the motivation to keep trying. Students who believe that their poor performance is caused by factors out of their control are unlikely to see any reason to hope for an improvement. In contrast, if students attribute their poor performance to a lack of important skills or to poor study habits, they are more likely to persist in the future. The implications for teachers revolve around the importance of understanding what students believe about the reasons for their academic performance. Teachers can unknowingly communicate a range of attitudes about whether ability is fixed or modifiable and their expectations for individual students through their instructional practices (Graham, 1990).

While attribution theory focuses on the reasons students perceive for their successes and failures in school, goal theory focuses on the reasons or purposes students perceive for achieving (e.g., Ames, 1992; Maehr & Midgley, 1991; Midgley, 1993). While different researchers define the constructs slightly differently, two main goal orientations are generally discussed. These are task goals and ability goals. A task goal orientation
represents the belief that the purpose of achieving is personal improvement and understanding. Students with a task goal orientation focus on their own progress in mastering skills and knowledge, and they define success in those terms. An ability goal orientation represents the belief that the purpose of achieving is the demonstration of ability (or, alternatively, the concealment of a lack of ability). Students with an ability goal orientation focus on appearing competent, often in comparison to others, and define success accordingly. Studies of students' goal orientations generally find that the adoption of task goals is associated with more adaptive patterns of learning than is the adoption of ability goals, including the use of more effective cognitive strategies, a willingness to seek help when it is needed, a greater tendency to engage in challenging tasks, and more positive feelings about school and oneself as a learner (Anderman & Maehr, 1994; Ryan, Hicks, & Midgley, 1997).

Task goal orientation is related to positive educational outcomes for students, the question then arises as to how such an orientation can be fostered. Recent studies suggest that the policies and practices in classrooms and schools influence students' goal orientations (Ames & Archer, 1988; Maehr & Midgley, 1991). Motivation is a theoretical concept that accounts for why people choose to engage in particular behaviors at particular times. There are physiological and psychological factors that account for the arousal, direction and persistence of behavior. As it relates to achievement, motivation theories may explain it as the need to succeed, or the need to avoid failure (Davis & Palladino, 2000). Mastery goal orientation is defined as a desire to achieve outcomes derived from the actual process of learning, such as feelings of satisfaction and competence or actual intellectual development. This is related to intrinsic motivation which is derived from factors that are inherent in task completion and engagement in the cognitive operations that are part of the task. Extrinsic motivation comes from things such as praise, grades or external rewards. Motivation is also related to levels of persistence and strategy use when difficulties arise. Past research has demonstrated that students who are intrinsically motivated, are more persistent, more deeply involved, and show more adaptive cognitive and achievement outcomes than those that are extrinsically motivated (Wolters, 1998).
Beck (2000) identifies several theories of human motivation as it pertains to job performance, and would also pertain to college academic performance. However, it is currently accepted that motivation involves emotions, experiences, and abilities, that these things differ in every individual, and that they can change over time. Many aspects of interpersonal relationships have potential to influence academic motivation. Wentzel (1998) suggests that interpersonal relationships that provide students with a sense of belongingness can be powerful motivators of interest in school. However, parents, teachers, and peers all correlated with positive aspects of motivation. Additionally, research shows that perceived social and emotional support from parents has been related positively to perceived competence, a sense of relatedness to peers, and academic effort and interest, as has family cohesion (Wentzel, 1999).

Scholars are increasingly accepting that overall adjustment and success in school requires a willingness and ability to meet social challenges along with the academic ones. Society in general expects students to develop social and moral competencies as well as intellectual. Students who were academically successful reported that achieving social goals was as important as well as academic goals (Wentzel, 1998). Social goals are self reported efforts to behave in prosocial and socially responsible ways. Unlike academic goal orientations that reflect reasons why students try to achieve academically, these goals reflect desires to achieve a particular social outcome. Student reports of prosocial and responsibility goal pursuit have been related to pursuit of academic goals to learn and to get good grades, good behavior in classroom, and academic performance.

LOCUS OF CONTROL:

The social learning theory of Rotter (1966) has generated a great deal of interest and research for the development of the internal-external locus of control construct. When an individual perceives that an event or behavior is contingent upon his or her own behavior or one’s relatively permanent characteristics, this belief is termed internal control. If on the other hand, the individual interprets a reinforcement as not being entirely contingent upon his or her own action, but the result of chance, fate, or luck: or it may be
perceived as under the control of powerful others and unpredictable because of the complexity of forces surrounding the individual, this belief is termed external locus of control (Rotter, 1966).

An individual's locus of control (LOC) plays a very significant role in directing and motivating his or her behaviors. Locus of control may have clear effects on a number of variables and situations throughout life, as well as one's strategies and abilities in coping with stress. The phrase "locus of control" refers to the psychological construct that describes people's perceptions about the reason why events occur (Cohen, Swerdlik, & Phillips, 1996). That is, examines the extent to which individuals feel that they are generally in control of what happens to them in their lives. An individual's beliefs and attitudes regarding control over personal successes and failures are vitally important concepts to consider when studying one's actions and performance; a person's locus of control manifests great influence in directing and motivating behavior. It is "apparent that locus of control plays a mediating role in determining whether persons become involved in the pursuit of achievement. . . . Individuals must entertain some hope that their efforts can be effective before they can make the sacrifices that are prerequisites for achievement" (Lefcourt, 1982, p. 81). The typical behavior someone displays can ultimately be broken down to this factor -- the person's belief regarding his or her ability to control his or her own world. The individual's locus of control can conceivably have clear effects on a number of variables in life, such as scholastic performance and achievement, occupational success, psychological diagnoses, and marital adjustment.

The ability and capacity to deal with the stresses and challenges encountered in life can be greatly affected by a person's feelings of control and efficacy in life. Since locus of control involves an individual's perceptions regarding control over events in the future, it logically follows that the locus of control construct is directly related to one's coping abilities and efforts (Ganellen & Blaney, 1984). In addition, as Lefcourt (1982) points out, "evidence has been found that resourcefulness and resilience in the encounters with stressful experience reflect the beliefs held by individuals that they are
responsible agents who are at least partially responsible for what befalls them" (p. 102).

Those who take personal responsibility for their behaviors and resulting consequences and generally believe that they are in control of their life are said to have an internal locus of control and are called "internalizers" (Rincover, 1997). Internalizers are believed to have higher levels of inquisitiveness, more developed problem-solving abilities, and a greater resistance to the influences and control of others than those who do not have an internal locus of control (Agarwal & Misra, 1986; Lefcourt, 1982). Conversely, those who generally believe that the events of life essentially happen to them without their control and feel victim to fate or luck are said to have an external locus of control and are termed "externalizers" (Rincover, 1996). These persons prefer to conform to the norms of society and are characterized by a higher vulnerability to stress and victimization (Drwal & Wiechnik, 1984; Singh, 1984). It should be noted, though, that, as Lefcourt (1982) points out, people are not totally internalizers or externalizers. The terms are used as expressive short cuts and are not meant to imply that perception of control is necessarily a trait or a typology. The perception of control is a process—an individual's more common tendencies to expect events to be contingent or noncontingent upon his or her actions. Lefcourt (1992) maintains that it is a durable construct and has had a major impact; it has come to be studied more in depth and with a greater appreciation for the diverse and complex effects of context on outcome behavior. It is important to realize that locus of control is not a static personality trait, but rather an individual's dynamic way of understanding his or her world.

Attributional Orientation:

A significant relevant concept in relation to locus of control is that of casual attribution (Weiner, 1974). Locus of control can also be stated in terms of causal attribution. A person who attributes outcome to internal "causes" (ability, effort, commitment etc.) is an internal, and one who attributes it to external causes (luck, difficult situation, powerful others etc.) is an external. However, Weiner (1974) suggested another dimension of causal attribution, that of stability-variability. Thus, there are four categories of factors to which
outcomes can be attributed: internal stable (e.g. ability), internal variable (e.g. effort), external stable (e.g. task difficulty), and external variable (e.g. effort). Weiner proposed, and confirmed through research, that these causal explanations or attributions have different consequences in relation of desirable outcome (e.g. success), or undesirable outcome (e.g. failure). According to him persistence in achievement activity will result if a person attributes positive outcomes to stable (universal and permanent) and negative outcomes to variable (temporary and specific) factors. Interactions between locus of control and causal attributions may produce certain behavioural orientations (Pareek, 2002).

Table-1.2: Locus of control, Attribution and Behavioural Modes.

<table>
<thead>
<tr>
<th>Locus of control</th>
<th>Stability/ Variability</th>
<th>Determination</th>
<th>Result Mode</th>
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<tbody>
<tr>
<td>Internality</td>
<td>Personable Stable</td>
<td>Individual Ability</td>
<td>Supermanship</td>
</tr>
<tr>
<td></td>
<td>Personable Variable</td>
<td>Effort</td>
<td>Self-determination</td>
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<tr>
<td></td>
<td>Personable Stable + Variable</td>
<td>Personal Strengths</td>
<td>Self-directedness</td>
</tr>
<tr>
<td>Group Stable</td>
<td>Group Variable</td>
<td>Race/ Caste</td>
<td>Super-racism</td>
</tr>
<tr>
<td>Group Variable</td>
<td>Group Stable + Variable</td>
<td>Group Effort</td>
<td>Social determination</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Group Strengths</td>
<td>Social directedness</td>
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<tr>
<td>Externality</td>
<td>Human Stable</td>
<td>Social System</td>
<td>Role-taking</td>
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<td></td>
<td>Human Variable</td>
<td>Others</td>
<td>Cooperation</td>
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<tr>
<td></td>
<td>Human Stable + Variable</td>
<td>Significant Others</td>
<td>Compliance</td>
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<td>Non-human Stable</td>
<td>Non-human Variable</td>
<td>Fate</td>
<td>Fatalism</td>
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<tr>
<td>Non-human Stable</td>
<td>Non-human Stable + Variable</td>
<td>Luck/ Chance</td>
<td>Probabilism</td>
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<td></td>
<td></td>
<td>External Factors</td>
<td>Resignation</td>
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Phares (1976), in a discussion of locus of control and academic achievement, concluded that internals tended to show superior performance in comparison to their external counterparts. Studies relating locus of control to academic performance have reported significant correlation in expected directions (Chadha, 1989; Cone & Owens, 1991; Magsud & Rouhani, 1991; Nunn, Montgomery & Nunn 1986; Ogden & Trice, 1986; Trice, 1985). Klein and Keller (1990), using multiple regression techniques suggested that, next to ability, internal locus of control significantly increased the amount of post test variance explained in academic performance by about 5 percent. The general
trend in the literature suggested an advantage of holding internal rather than 
external locus of control beliefs with respect to academic performance. 
Internal locus of control has also demonstrated significant correlations with 
academic adjustment scores (Mooney, Sherman & Lo Presto, 1991) and 
achievement striving (Volkmer & Feather, 1991), although no measures of 
actual achievement were included.

There exist numerous locus of control measurement scales, each with 
a slightly different supporting theory. Two of the more often used scales are 
those developed by Rotter (1966) and Levenson (1974). Rotter's I-E Scale, one 
of the most widely used is a dichotomous forced-choice questionnaire which 
produces an "external" score; a higher score on the continuum range (0 to 23) 
indicates a higher level of externality (Rotter, 1966). No clear distinction in 
scores is made between externalizers and internalizers, though norms have 
been established to enable meaningful score comparison and interpretation 
(Engler, 1995). The theoretical basis of this scale suggests that a person's 
behavior will be differentially influenced by his or her locus of control, 
depending on the specific activities involved (e.g., academics versus physical 
fitness; Cohen, Swerdlik, & Phillips, 1996). Levenson's (1974) scale, on the 
other hand, maintains that externality is more multidimensional; it 
distinguishes between two types of externalizers, in addition to the broader 
distinction between internalizers and externalizers (Lefcourt, 1981). Type one 
externals believe that life is basically controlled by powerful others, while type 
two externalizers hold more to the influences of "fate," "chance," "luck," etc. 
Internalizers are generally defined the same across different scales. In the 
1980s Palenzuela published papers which presented a reconceptualization of 
Rotter's (1966) construct of locus of control, which clearly distinguished it 
from closely related and often confused constructs, such as self-efficacy 
beliefs and causal attributions (Palenzuela, 1988). Based on these 
reconceptualizations Palenzuela (1984, 1988) set out the development of a 
domain specific academic locus of control measure called the 
Multidimensional Academic Locus of Control scale (MALOCS). This scale 
incorporated a refined theoretical clarity and operationally featured 
multidimensionality (that is, three scales termed internal-contingency,
helplessness-non contingency and luck) and domain-specificity (i.e., academic).

It has been maintained that people with a greater internal locus of control have better scholastic success than their peers who have a more external locus of control, even those of comparable intelligence (e.g., Messer, 1972; Rincover, 1997). In a comparative analysis of 36 studies involving the relationship between locus of control and achievement, Bar-Tal and Bar-Zohar (1977) found that 31 of the 36 investigators reported finding a positive correlation between internalness and scholastic achievement. These common findings are not necessarily surprising given that internalizers are characterized by their sense of control and power over their lives; they more often meet challenges with determination and expect to do well with hard work. Conversely, externalizers may more often give up early when faced with difficulty -- fold under pressure, develop lower self-expectations, and choose easier challenges when given the choice. They may assume, if they fail, that it was simply "meant to be" that the work was beyond their ability.

It has been linked with several other variables such as academic achievement, health, and psychological adjustment (Haidt & Rodin, 1999). Internals tend to perform better on academic tasks than externals. They also have more effective coping strategies which lead to better psychological adjustment and reduces the negative health affects associated with high stress (Davis & Palladino, 2000).

SELF-EFFICACY:

Self-efficacy refers to a person's evaluation of his/her ability or competency to perform a task, reach a goal or overcome an obstacle (Bandura, 1977). Bandura's self-efficacy refers to one's beliefs about his/her ability to successfully complete a given task (Haidt & Rodin, 1999). Self-efficacy refers to learned expectations that one is capable of carrying out a behavior or producing a desired outcome in a particular situation (Bandura, 1982, 1986, 1988, 1993; Schunk, 1991). When people expect to be successful, they tend to exert greater effort and show greater persistence when faced with a challenging task- thereby increasing the likelihood of success. This is particularly true in academic realms. People high in self-efficacy regarding their scholastic ability are successful -a finding that holds true for both
students and college professors (Bandura & Schunk, 1981; Scheier & Carver, 1992; Taylor et al., 1984). Observing our prior successes and failures at a task leads to self-efficacy.

Schunk (1984) examined the idea that perceived self-efficacy is an important variable in understanding achievement behavior. Self-efficacy refers to personal judgments of one's capability to organize and implement behaviors in specific situations. Students gain information about their level of self-efficacy from self-performances, vicarious experiences, verbal persuasion, and physiological indices. In forming efficacy judgments, people take into account factors such as perceived ability, task difficulty, effort expenditure, performance aids, and outcome patterns. Even when students acquire efficacy information from self-performances, efficacy judgments are not mere reflections of those performances because educational practices differ in the type of information they convey about students' capabilities. Some experimental tests of these ideas are summarized along with their educational implications. The self-efficacy framework is compared with locus of control, attribution, and self-worth theories of achievement behavior.

The attitude that is often used in conjunction with motivation to achieve is self-efficacy, or how capable people judge themselves to be to perform a task successfully (Bandura, 1977). Bandura (1997) provides extensive evidence and documentation for the conclusion that self-efficacy is a key factor in the extent to which people can bring about significant outcomes in their lives. Specifically, there is considerable evidence to support the contention that self-efficacy beliefs contribute to academic achievement by enhancing the motivation to achieve. Tuckman and Sexton (1990) reflected a clear relationship between self-efficacy beliefs and academic productivity. Encouraging feedback was found to increase self-efficacy on the task and subsequent performance on the task. Statistical analyses showed that when performance was held constant, encouragement was seen to affect self-efficacy, but when self-efficacy was held constant, encouragement had no effect on performance. Hence, self-efficacy functioned as a mediator of performance.

Self-efficacy also comes from observation of others' success, as well as through direct reinforcement and urging from others. Finally one's sense of
self-efficacy can emerge when one is in a relatively relaxed physiological state, which actually enhances the possibility that one will succeed (Bandura, 1988).

Zimmerman (2000) stated that during the past two decades, self-efficacy has emerged as a highly effective predictor of students' motivation and learning. As a performance-based measure of perceived capability, self-efficacy differs conceptually and psychometrically from related motivational constructs, such as outcome expectations, self-concept, or locus of control. Researchers have succeeded in verifying its discriminant validity as well as convergent validity in predicting common motivational outcomes, such as students' activity choices, effort, persistence, and emotional reactions.

SELF-REGULATION:

Self-regulation is a set of principles and practices by which people monitor their own behaviors and consciously adjust those behaviors in pursuit of personal goals. It is a process in which a person consciously elects to behave in ways that, otherwise, one would be less likely to behave (Mills, 1983; Thorsen & Mahoney, 1974). The person learns to recognize situations in which his or her habits may not serve his/her best interest, and to select nonhabitual options that may even be unpleasant or unfamiliar for him/her.

Karoly (1993) defined self-regulation as those processes, internal and/or transactional, that enable an individual to guide his/her goal-directed activities over time across changing circumstances (contexts). Regulation implies modulation of thought, affect, behavior, or attention via deliberate or automated use of specific mechanisms and supportive meta skills. The processes of self-regulation are initiated when routinized activity is impeded or when goal-directedness is otherwise made salient (e.g., the appearance of challenge, the failure of habitual action patterns etc.) Self-regulation may be said to encompass up to five interrelated and interactive component phases: (1) goal selection, (2) goal cognition, (3) directional maintenance, (4) directional change or reprioritization, and (5) goal termination.

Self-regulation or self-monitoring is also related to motivation. Self-monitors manage their learning in many ways. They have adaptive learning goals and exhibit a high level of persistence in reaching their goals. Pintrich
and DeGroot (in Wolters, 1998) reported that students using greater self-monitoring strategies also reported higher levels of intrinsic motivation, self-efficacy and achievement. In further studies it was concluded that self-monitoring learners are likely to have more adaptive cognitive, motivational and achievement outcomes than those students who do not self-regulate. Self-regulated learners are characterized as highly motivated students, and as noted above, they exhibit more effort and persistence at learning tasks than those who do not self-monitor. Self-regulation refers to the relative tendency of individuals to regulate their behavior on the basis of external events such as the reactions of others or on the basis of internal factors such as their own beliefs, attitudes, and interests (Koestner, Bernieri, & Zuckerman, 1992).

The formulation of self-regulation was first developed by Synder (1974) and his colleagues (Synder, et al., 1991; Synder & Ickes, 1985). There are some similarities between self-monitoring and self-focusing (attending to internal versus external cues), refers to directing one's attention toward self as opposed to the external world, but the self-regulation is the way a person's behavior is regulated by attentional differences. Hoyle (1993) described self-monitoring in terms of differences in responses to social situations. High self-monitors analyze a social situation by referring to the public self, compare this self to social standards of behavior, and strive to alter the public self to match the situation. In contrast, low self-monitors analyze a social situation by referring to the private self, compare this self to their personal standards of behavior, then strive to alter the situation to match their private self. Snyder proposed that high self-monitors engage in role-playing because they are striving to receive positive evaluations from other people. In other words, they mold their behavior to fit their audience.

1. Self-observation (self-monitoring):

Before one can change a behavior, one needs to become aware of it. This involves monitoring the behavior. The more systematically one monitors one’s behavior, the more quickly one will become aware of what one is doing.

2. Self-evaluation (self-judgment):

The next step is to decide if what one is doing with what one wants or, more generally, one’s personal standards. Personal standards are developed from information that one gains from significant others. People do not passively absorb standards from others; rather, construct them by reflecting on those behaviors and the effects that they produce.

3. Self-reaction (self-incentive):
Self-judgments are typically accompanied by affective reactions. When one succeeds or does well, one typically experiences a negative mood or dissatisfaction. These self-reactions may lead people to set higher goals, on the other hand, or to abandon a goal, on the other.

Self-efficacy beliefs have been found to be sensitive to subtle changes in students' performance context, to interact with self-regulated learning processes, and to mediate students' academic achievement. In the last decade, the evidence compiled for the role of strategies in the motivation for achievement has been considerable, especially within the framework of self-regulated learning. Beyond believing in one's own capability and having a desire to achieve a particular outcome, being able to carry out specific strategies associated with success in a variety of fields (e.g., writers, athletes, musicians, students etc.) appears critical (Zimmerman, 1998).

Yamauchi, Kumagai and Kawasaki reported results from 2 separate regression analyses showing that perceived control and motivation were both significant predictors of self-regulated learning strategies among Japanese high school students. Rousseau and Vallerand (2000) proposed that integrating perceived control, motivation, and self-regulated learning strategies into a single motivational sequence would result in theoretical and applied benefits. Nevertheless, self-regulation has been applied in a variety of human settings and to a number of human problems, such as personality and social psychology, abnormal psychology, psychotherapy, education and learning to mention a few (Karoly, 1993). In the clinical literature, self-regulation has been referred to as self-management, while in the organizational sciences it has also been labeled self-leadership, self-influence, self-management, self-control and even substitutes for leadership (Mills, 1983). The common feature of these techniques is that "the same person is both object and subject, both the doer and the target of the action" (Kanfer, 1991). The essence of self-regulation is found in the concepts of goals, feedback and control.

Self-determination theory given by Deci and Ryan (1991), proposes that there are five types of self-regulation that can be arranged along a continuum of autonomy. From least autonomous to most autonomous these are: amotivation, external regulation, introjected regulation, identified regulation and intrinsic regulation. Amotivated behaviors are the least
autonomous because there is no sense of purpose, no expectation of reward, and no perceived opportunity to change the course of events. An example of an amotivated reason for studying is “I don’t know why I study; I don’t see what it does for me.” External regulation refers to behavior that is controlled through rewards or constraints imposed by others. “I study so that my parents don’t get angry with me.” Introjected regulation refers to behavior that has been internalized but not fully accepted as originating from self, “Because I would feel guilty if I didn’t.” The external constraints on the behavior are internalized and now act as internal constraints. If the person does not engage in that behavior, he or she will experience feelings of guilt (Ryan, 1982). Identified regulation refers to a condition in which the person realizes that the behavior is important and it ties into his or her values and goals. The person therefore, accepts the behavior as originating from self, “I choose to study because it is important to me.” Intrinsic regulation refers to behaviors that are engaged in for their own sake, for the pleasure and satisfaction derived from performing them (Deci, 1971). Students may do their homework because they find it interesting and satisfying to learn more about certain subjects.

Self-determination theory (Deci & Ryan, 1991; Ryan, 1992) proposes that autonomous forms of self-regulation can be distinguished from nonautonomous ones in three ways. First, when people have autonomous reasons for engaging in an activity, they are likely to show greater initiative and persistence than when they feel controlled or amotivated (Deci & Ryan, 1987). Second, when they engage in an activity for autonomous reasons, they are likely to experience generally positive emotions, such as interest and enjoyment. By contrast, nonautonomous forms of self-regulation are likely to be associated with negative and conflicted emotions (Ryan & Connell, 1989).

Finally, it has been shown that autonomous forms of self-regulation are associated with more integrated and consistent behaviors than other forms of self-regulation (Koestner, Bernieri, & Zuckerman, 1992; Koestner, & Zuckerman, 1993; Ryan, Koestner, & Deci, 1991).
Thus more autonomous forms of self-regulation, such as intrinsic and identified regulation, have been associated with enjoyment of academic activities and increased feelings of competence, better concentration, better grades, and more time spent on academic tasks (Ryan & Connell, 1989; Vallerand et al., 1989, 1992, 1993). In a prospective longitudinal study by Vallerand and Bissonnette (1992), higher levels of autonomy were found to be positively related to long-term persistence in academic programme learning and performance goals are treated as elements in the self-regulation process.

Borkowski et al. (1987), Bouffard-Bouchard et al. (1993), Bouffard-Bouchard and Pinard (1988), Lefebvre-Pinard and Pinard (1985), Paris, Lipson and Wixson (1983), Pintrich and DeGroot (1990) argued that metacognition refers both to the explicit knowledge individuals have about their own cognitive resources and to the deliberate self-regulation they can exercise when applying this knowledge. Interest in metacognition has led to new research on learning processes in school settings. Studies based on the information processing approach in the development of models of metacognition have particularly focused on self-regulatory processes, and have identified important components of self-regulation permitting effective management. The three major components of self-regulation identified are, Cognitive strategies, necessary to learn, memorize, understand, etc., Metacognitive strategies, allowing adequate supervision during task execution, and motivation, determining the amount of effort needed in order to execute these strategies.

Deci and Ryan (1991), Lepper and Greene (1997) confirm the over justification effect, the result of bringing people to do what they already like doing; they may then see their action as externally controlled rather than intrinsically appealing.
When people do something they enjoy, without reward or coercion, they attribute their behavior to their love of the activity. External rewards undermine intrinsic motivation by leading people to attribute their behavior to the incentive. The model supporting the task of maintaining one's actions in line with one's integrated self is called self-regulation (fig. 1.5).

Schapiro (2000) claims that dynamic self-regulation is a prerequisite for active self-regulation. The difference becomes important in relation to the questions of whether dynamic self-regulation is, in fact, the primary driver in academic achievement and if, in turn, it can be learned. Zimmerman (1990) discusses the emergence of a social cognitive perspective on self-regulation from a historical perspective and identifies unique features. Two essential characteristics of students' self-regulated academic learning have been identified: (1) their use of strategies and (2) perceptions of self-efficacy. A social cognitive model of academic self-regulated learning is proposed that integrates triadic determinants of self-regulated learning (personal, behavioral, and environmental) on the basis of a strategic control loop. When students monitor their responding and attribute outcomes to their strategies, their learning becomes self-regulated, and they display increased self-efficacy, greater intrinsic motivation, and higher academic achievement. Self-regulated learning (SRL) emphasizes how students select, organize, and create
advantageous learning environments and how they plan and control the form and amount of their own instruction. The 3 dimensions of SRL are metacognitive, behavioral, and motivational.

Zimmerman’s model of academic self-regulation (Zimmerman & Martinez-Pons, 1988) was used to identify 6 dimensions of behavior that influence learning: motivation, methods of learning, use of time, control of one’s physical and social environment, and performance. This model is unique in that it uses non-subject-matter outcomes of schooling to influence academic performance. In this model Zimmerman and Martinez-Pons suggested how teachers can help students acquire self-regulatory skills.

McCombs and Marzano (1990) presented an integrative framework for self-regulated learning in which the self is proposed as the agent for integrating will (understanding and desire) with skill (ability). The framework is translated into a real-time information-processing model in which relationships between structure and processes in SRL are clarified, and the role of the cognitive system in relation to perception, affect, and behavior is defined. This self-as-agent framework suggests that instructional interventions should be designed with specific aspects of the learner and the learning environment in mind.

Paris and Newman (1990) examined how children construct theories of their own self-competence, academic tasks, cognitive strategies, motivational effort, and social cognition in school. They focused on the developmental changes in students’ theories about learning and how students are influenced by variables in school (e.g., task difficulty, helping behavior, standards of success). Instruction conditions that promote children’s self-regulated learning are discussed. It is suggested that self-regulated learning is a desirable educational outcome that can be fostered by teachers who minimize academic competition, provide assistance during problem solving, and promote an atmosphere of collaboration in the classroom.

The relationship of personality, experience while studying, and academic performance in 208 high school students over 4 yrs was examined by Wong and Csikszentmihalyi (1991). 170 students completed the Personality Research Form, and 208 students recorded their experience via the Experience Sampling Method. Results show that controlling for ability and
work orientation predicted those who were likely to excel in school. Intrinsic motivation while studying was related to the difficulty level of courses students took over the 4 yrs in high school. Results seem to support the notion that there are 2 kinds of motivation in scholastic achievement: one directed toward long-term goals (work orientations), and the other directed toward the enjoyment of experience when one studies (intrinsic motivation while studying).

Urdan and Maeher (1995) suggest the need for further research concerning the relationship between social goals (in addition to task and ability goals) and the use of self-regulatory strategies when investigating motivational, affective, and performance constructs. Donaldson and Graham (1999) presented a model of college outcomes for adult undergraduate students to address the key elements that affect their learning and to stimulate research and theory building about adults' experience in college. The article provides a review of the literature and a comprehensive model that considers the relationships between 6 major elements related to adults' undergraduate collegiate experiences: (a) prior experiences; (b) orienting frameworks such as motivation, self-confidence, and value system; (c) adult's cognition or the declarative, procedural, and self-regulating knowledge structures and processes; (d) the "connecting classroom" as the central avenue for social engagement and for negotiating meaning for learning; (e) the life-world environment and the concurrent work, family, and community settings; and (f) the different types and levels of learning outcomes experienced by adults.

Elliot and Thrash (2001) noted that the achievement goal approach has attained prominence in the achievement motivation literature and has produced a valuable empirical yield. They argued that the precise nature of the achievement goal construct is in need of scrutiny, as is the issue of how achievement goals and their antecedents combine to produce competence-based self-regulation.

ACADEMIC ACHIEVEMENT:

The all-pervading, complex and astonishingly dynamic concept as academic achievement, with its ever-expanding domain, seriously concerns both a specialist and a layman alike, more so because it has ushered a
revolution at the present juncture, deeply influencing the socio-economic and cultural scenario in the world.

The word "academic" is related to formal education particularly involving the study of book; "achievement" is accomplishment or success in bringing about a desired end. According to Eysenck's encyclopedia of psychology (1972) "achievement" means (1) general term for the successful attainment of some goal requiring a certain effort. (2) the degree of success attained in a task, e.g. solving a test (3) the result of a certain intellectual or physical activity defined according to individual and/ or objective, prerequisites, i.e. proficiency. But the term "academic achievement" is highly controversial, for it has been used in narrower and broader sense in researches without any attempt at specification. In general academic achievement denotes the marks of students on test designed to examine the academic progress. Most of the researchers have analyzed academic achievement against this perspective because it is convenient and less time consuming. This approach is specific but narrow, for it focuses its attention upon subject areas to analyse academic achievement. In a broader sense, all changes in the academic level of the students is the academic achievement. But it is difficult to assess because its measurement is fraught with methodical weaknesses.

Different variables like, goal-orientation, locus of control, self-efficacy and self-regulation, which promote or hinder academic achievement, are of compelling urgency so as to probe deeply into the problem of academic achievement and to generate excellence in it.

Although these variables have been acclaimed by several authors, there still exist quandaries among works. Methodological and conceptual limitations suggest further work is requisite. Much of the previous research had involved children, little work is done with adult samples. It is less clear whether similar motivational pattern will be observed with adult samples. Therefore, the present investigation focused on to study whether there would be any relationship among locus of control, goal-orientation, self-efficacy, self-regulation and academic achievement among college students. As this field is still least explored and promise a fruitful enquiry on this issue, the present problem has been undertaken.
Problem:
To see the inter-relationship among locus of control, self-efficacy, goal orientation, self-regulation and academic achievement scores (measure-1 & measure-2) among first year Engineering college students.

Operational Definition of Terms used:

Locus of control: It is an individual’s view about the cause of an event.

Internal control: It refers to the perception of an event as contingent upon one’s own behavior or one’s relatively permanent characteristics.

External control: It indicates a positive or negative reinforcement following some actions of the individual perceived as not being entirely contingent upon his or her own action but the result of chance, fate, or luck: or it may be perceived as under the control of powerful others and unpredictable because of the complexity of forces surrounding the individual.

Goal orientation: It is an individual’s tendency to orientation toward the goal.

Learning goal orientation: It is characterized by a desire to increase one’s task competence.

Performance goal orientation: It reflects a desire to do well and to be positively evaluated by others.

Self-efficacy: A sense that one is competent and effective distinguished from self-esteem, a sense of self-worth.

Self-regulation: The human being’s capacity to exert influence over his or her own behavior.

Academic achievement: It refers to the level of proficiency attained in scholastic or academic task. In the present context academic achievement
scores were taken at two times, first at the entry point to the engineering course and second at the time of successful completion of first year engineering course.

AIMS AND OBJECTIVES:

The study aims to achieve the following objectives:

1. To study the relationship of internal locus of control and external locus of control (helplessness and luck) with self-efficacy, goal orientation (learning and performance), self-regulation strategies and academic achievement scores (measure-1 & measure-2).

2. To study the relationship of self-efficacy with goal orientation (learning and performance), self-regulation strategies and academic achievement scores (measure-1 & measure-2).

3. To find out the relationship of self-efficacy with self-regulation strategies and academic achievement scores (measure-1 & measure-2).

4. To find out the relationship of self-regulation strategies with academic achievement scores (measure-1 & measure-2).

5. To find out the relative contribution of locus of control, self-efficacy, goal orientation, and self-regulation strategies in academic achievement scores (measure-1 & measure-2).

Hypotheses:

1. (A.) The internal locus of control would be positively related with self-efficacy, learning goal orientation, self-regulation strategies and academic achievement scores (measure-1 & measure-2).

(B.) The external locus of control viz. helplessness as well as luck would be negatively related with internality, self-efficacy, learning goal orientation, self-regulation strategies and academic achievement scores (Measure-1 & Measure-2) and positively related with performance goal orientation.

2. Self-efficacy would be positively related with learning goal orientation, self-regulation strategies and academic achievement scores (measure-1 & measure-2).
3. Learning goal orientation would be positively related with self-regulation strategies and academic achievement scores (measure-1 & measure-2).
4. Performance goal orientation would be negatively related with internal locus of control, self-efficacy, learning goal orientation, self-regulation strategies and academic achievement scores (measure-1 & measure-2).
5. Self-regulation would be positively related with academic achievement scores (measure-1 & measure 2).
6. The academic achievement scores of measure-1, i.e. marks obtained in class X and XII examination would be positively related with academic achievement scores of measure-2, i.e. marks obtained in first year B.Sc. engineering examination.
7. Relative contribution of self-regulation strategies would be most remarkable as compared to internal locus of control, self-efficacy and learning goal orientation toward academic achievement scores (measure-1 & measure-2).

JUSTIFICATION OF THE PROBLEM:
Considerable research has shown a decline in motivation and performance for many children as they move from elementary school into middle school (Eccles & Midgley, 1989). Often it has been assumed that this decline is largely caused by physiological and psychological changes associated with puberty and, therefore, is somewhat inevitable. This assumption has been challenged, however, by research that demonstrates that the nature of motivational change on entry to middle school depends on characteristics of the learning environment in which students find themselves (Midgley, 1993).

A considerable amount of research over the past decade has demonstrated the relationship between goal orientation and the affective, cognitive, and behavioral reactions of individuals in achievement settings such as the classroom and athletics (e.g., Duda & Nicholls, 1992, Dweck & Leggett, 1988). More recent research has shown that goal orientation has important implications in training and employment contexts as well (e.g., Kozlowski et
Researches done over children of preschools and middle classes had established that goal orientation has a consistent, direct relationship with a number of outcomes, including self-efficacy, feedback seeking, learning and performance. Some uses of the goal construct are even more focused than those just discussed. They deal with the nature of the goal a person has in mind in undertaking effort at some particular task. Often these applications are specific to performance or achievement domains. An example comes from the work of Dweck and her collaborators (Dweck, 1996; Dweck & Leggett, 1988; Elliott & Dweck, 1988). Much of this work focuses on children, but its themes are easily generalized to adult behavior. Students enter classes with prior subject matter knowledge, skills related to new knowledge acquisition, and motivational tendencies that predispose them to different degrees of engagement in the learning process. Achievement goals (or goal orientation) refer to the motivational basis of learning, i.e. the purpose for which learning is undertaken. Learning and performance goal orientations are important because of their associations with the characteristic patterns of how individuals interpret and respond to achievement situations. Individuals with a learning goal orientation, in contrast to performance goal orientation tend to hold an incremental theory about their ability; they view ability as malleable attribute that can be developed through effort and experience. Effort is viewed as a means for activating current ability for task achievement and as a means for developing the ability needed for future mastery.

However, what is less well known is whether and how motivational traits like goal orientation interact with other individual difference variables, such as, locus of control, self-efficacy, self-regulation to influence achievement outcomes.

This research would be of importance as it would suggest students the ways to enhance their self-regulatory behavior and consequently their academic performance. This research looks at how these variables may influence academic achievement.